



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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

E-Mail: siting.council@ct.gov

www.ct.gov/csc

VIA ELECTRONIC MAIL

May 31, 2018

Mike Gentile
Site Acquisition
Centerline Communications, LLC
95 Ryan Drive, Suite 1
Raynham, MA 02767

RE: **EM-CING-152-180410** - New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 45 Fargo Road, Waterford, Connecticut.

Dear Mr. Gentile:

The Connecticut Siting Council (Council) is in receipt of your email correspondence of May 25, 2018 and May 30, 2018 submitted in response to the Council's April 24, 2018 and May 29, 2018 notifications of incomplete request for exempt modification with regard to the above-referenced matter.

The two submissions render the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman
Executive Director

MB/CMW/jmb



From: Michael Gentile [mailto:mgentile@clinellc.com]
Sent: Wednesday, May 30, 2018 2:35 PM
To: Barton, Jenna <Jenna.Barton@ct.gov>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>; David Ford <dford@clinellc.com>
Subject: RE: Council Second Incomplete Letter for EM- CING-152-180410-FargoRd-Waterford / AT&T SITE: CT2079

Hi Jenna and CSC:

The attached mount analysis should have been included with our last correspondence. My apologies. Let us know if this is sufficient to release an approval/acknowledgement.

Thank you,
Mike Gentile
(508) 844-9813

From: Walsh, Christina
Sent: Friday, May 25, 2018 2:52 PM
To: Barton, Jenna <Jenna.Barton@ct.gov>
Subject: RE: Council Response to Extension Request - Incomplete - EM-CING-152-180410 - Fargo Rd. / CT2079

I think there is still something missing. I am going to write a second incomplete letter but we will still need this document for the file.

Thanks.

Christina Walsh
Supervising Siting Analyst
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051
Tel: 860-827-2944

www.ct.gov/csc

From: Michael Gentile [mailto:mgentile@clinellc.com]
Sent: Friday, May 25, 2018 1:39 PM
To: Fontaine, Lisa <Lisa.Fontaine@ct.gov>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>; David Ford <dford@clinellc.com>
Subject: RE: Council Response to Extension Request - Incomplete - EM-CING-152-180410 - Fargo Rd. / CT2079

Hi Lisa,

Please see the attached revised structural analysis to account for the mounts that the Council requested. If anything else is required to provide an approval for this modification, please let me know.

Thank you,
Michael Gentile



Tower Engineering Solutions

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

Structural Analysis Report

Existing 183 ft Nudd Corporation Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT01002-S

Customer Site Name: Waterford

Carrier Name: AT&T

Carrier Site ID / Name: CT2079 / Waterford

Site Location: 45 Fargo Road

Waterford, Connecticut

New London County

Latitude: 41.389339

Longitude: -72.171408

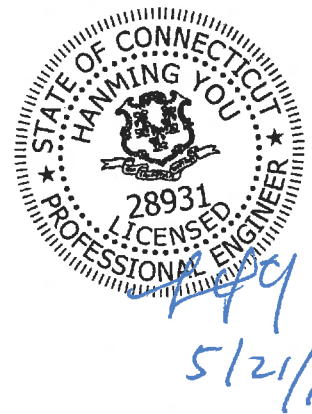
Analysis Result:

Max Structural Usage: 72.1% [Pass]

Max Foundation Usage: 36.0% [Pass]

Additional Usage Caused by Mount Modification: 0.72%

Report Prepared By: Mariana Franco





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Max Foundation Usage: 36.0% [Pass]

Additional Usage Caused by Mount Modification: 0.72%

Report Prepared By: Mariana Franco

Introduction

The purpose of this report is to summarize the analysis results on the 183 ft Nudd Corporation 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 rigorous analysis was performed in accordance with the requirements and stipulations of the ANSI/TIA/EIA 222-G. 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.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 135.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 105.0$ mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2012 IBC / 2016 Connecticut State Building Code
Exposure Category:	B
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_5 = 0.164g$, $S_1 = 0.059g$

This structural analysis is based upon the tower being classified as a Structure Class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

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" 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			
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			
-	143.0	3	Powerwave - 7770.00 - Panel	Low Profile Platform	(12) 1 1/4" (2) 3/4" DC (1) 7/16" Fiber	AT&T
-		2	KMW - AM-X-CD-16-65-00T- Panel			
-		2	Andrew - SBNH-1D6565C - Panel			
-		2	Powerwave - P65-17-XLH-RR - Panel			
-		6	ADC Cleargain 850-1900 TMA			
-		6	Ericsson RRUS 11-RRU			
-		3	Powerwave LGP13519 Diplexer			
-		3	CSS DBC-750 Diplexers			
-		1	Ray cap DC6-48-60-18-8F			

*(3) 1 5/8" transmission lines were considered outside of the pole shafts.

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
16	143.0	1	Quintel QS46512-2 - Panel	Low Profile Platform w/ SitePro 1 Handrail Kit (P/N HRK 14-U) and (6) 2-1/2" std. mast pipes.	(12) 1 5/8" Coax (2) 3/4" DC (1) 5/16" Fiber	AT&T
17		1	Cci OPA-65R-LCUU-H4 - Panel			
18		2	Cci TPA-65R-LCUUUU-H8 - Panel			
19		2	Cci OPA-65R-LCUU-H8 - Panel			
20		3	Cci DTMABP7819VG12A TMA			
21		3	Kaelus DBC0061F1V51-2 - Diplexer			
22		3	Ericsson RRUS 32 B2			
23		3	Powerwave 7770 - Panel			
24		3	ADC ClearGain 850-1900 Dual Band - TMA			
25		3	Ericsson RRUS 11			
26		3	Css DBC-750			
27		1	Raycap DC6-48-60-18-8F			

All transmission lines are considered running inside of 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	Anchor Bolts	Base Plate
Max. Usage:	72.1%	63.1%	39.5%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4863.3	37.7	60.9

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-G for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.0947 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-G 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 and/or 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 Ratio 72.07% at 0.0ft

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

Code: EIA/TIA-222-G
Exposure: B
Gh: 1.1

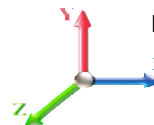
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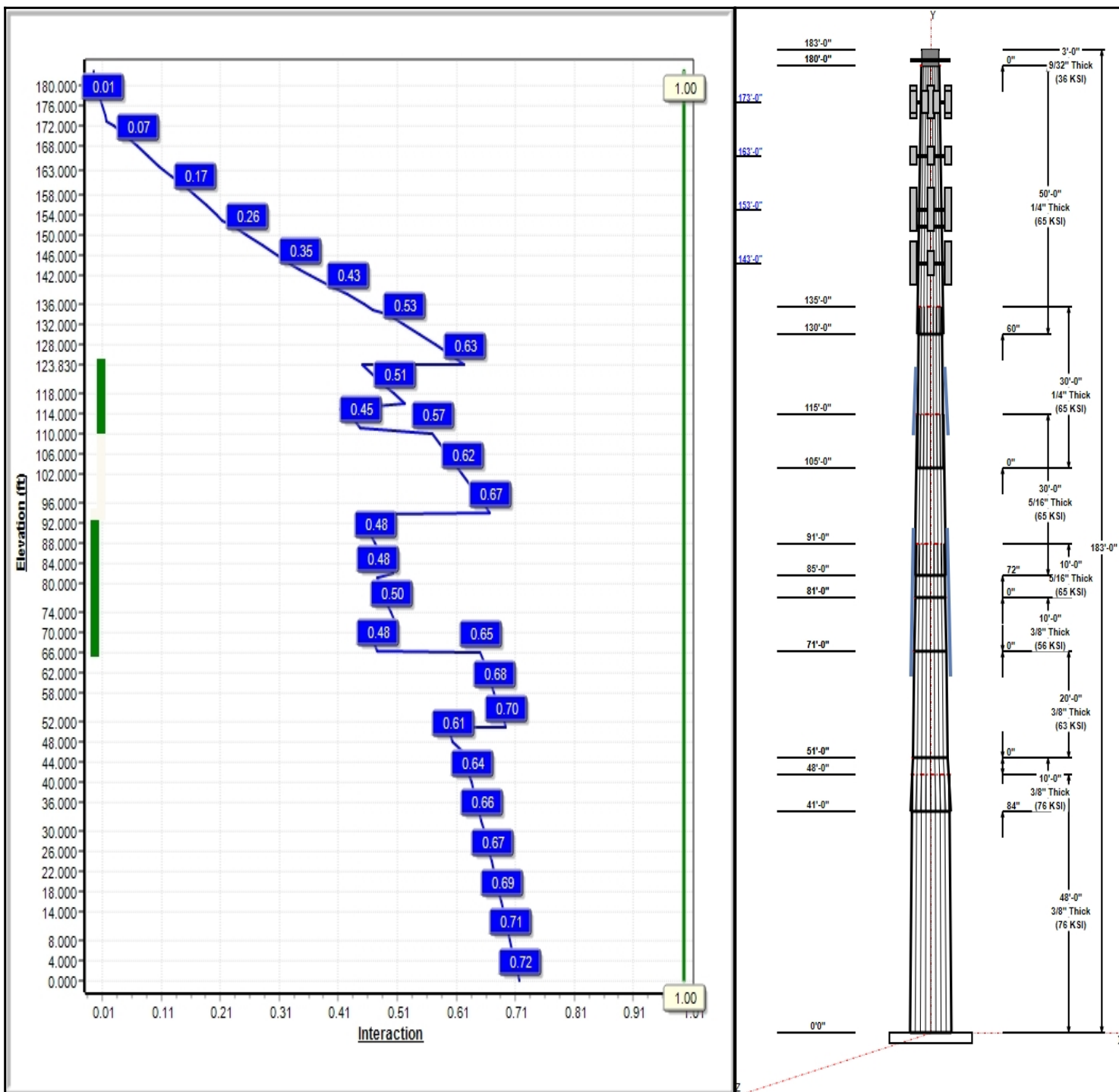
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 105 mph Wind



Iterations: 30

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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: 0.00000

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Shaft Properties

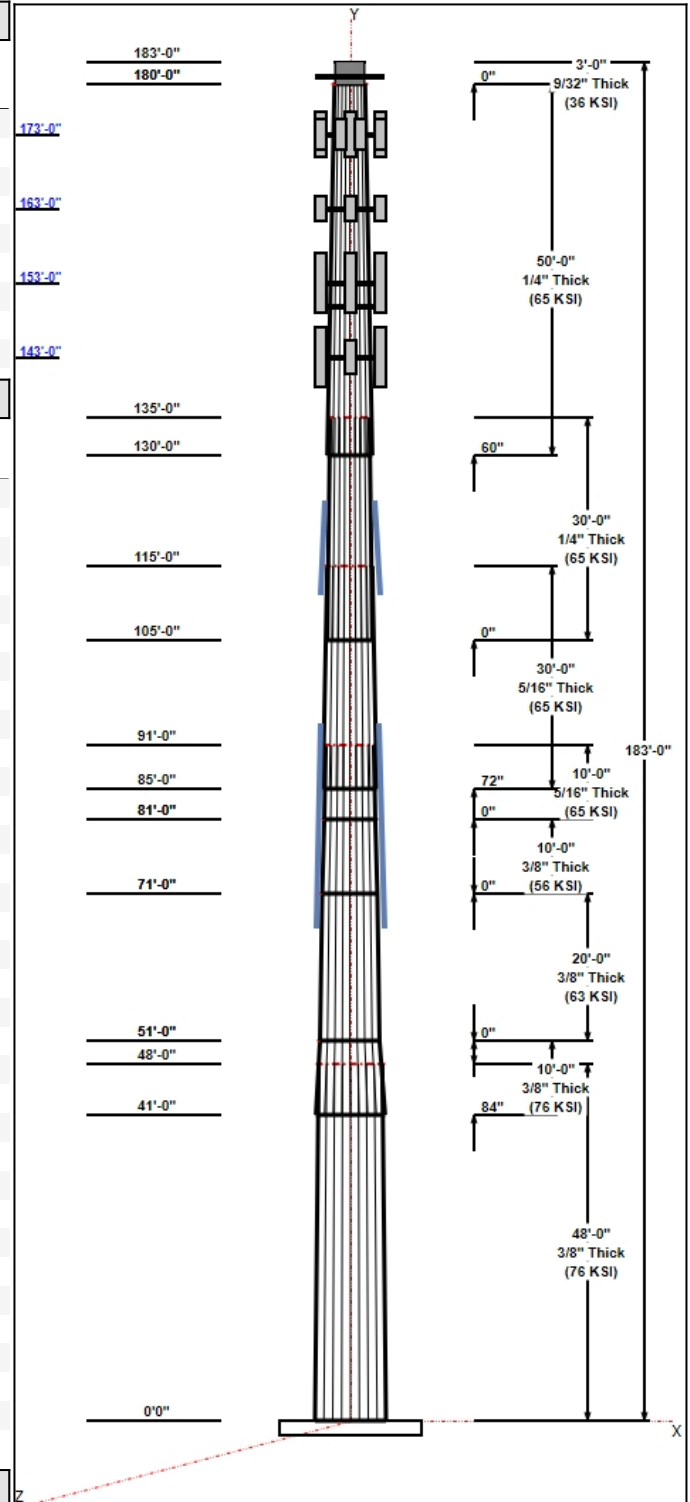
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	53.20	64.50	0.375		0.23542	76
2	10.00	53.24	55.60	0.375	Slip	0.23542	76
3	20.00	48.53	53.24	0.375	Butt	0.23542	63
4	10.00	46.18	48.53	0.375	Butt	0.23542	56
5	10.00	43.83	46.18	0.313	Butt	0.23542	65
6	30.00	38.80	45.87	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	1	Low Profile	Verizon
173.00	173.00	4	LPA-80080-4CF-EDIN-0	Verizon
173.00	173.00	2	APL866513-42T0	Verizon
173.00	173.00	6	HBXX-6517DS-VTM	Verizon
173.00	173.00	3	LNx-6514DS-VTM	Verizon
173.00	173.00	3	RRH2X60-AWS	Verizon
173.00	173.00	3	RRH2x60-700U	Verizon
173.00	173.00	3	RRH2x60-1900	Verizon
173.00	173.00	2	DB-T1-6Z-8AB-OZ	Verizon
163.00	163.00	3	LLPX310R	Clearwire
163.00	163.00	1	Low Profile	Clearwire
163.00	163.00	3	DAP Head	Clearwire
153.00	153.00	1	Low Profile Platform-flat	T-Mobile
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	LNx-6515DS	T-Mobile
153.00	153.00	3	KRY 112 144/1	T-Mobile
153.00	153.00	3	S11B12	T-Mobile
150.00	150.00	1	Low Profile	Verizon
143.00	143.00	1	HRK14	AT&T
143.00	143.00	3	Powerwave 7770.00	AT&T
143.00	143.00	1	Low Profile	AT&T
143.00	143.00	3	850-1900 Dual Band	AT&T
143.00	143.00	3	RRUS 11	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	1	QS46512-2	AT&T
143.00	143.00	1	OPA-65R-LCUU-H4	AT&T
143.00	143.00	2	TPA-65R-LCUUUU-H8	AT&T
143.00	143.00	2	OPA-65R-LCUU-H8	AT&T
143.00	143.00	3	DTMABP7819VG12A	AT&T
143.00	143.00	3	DBC0061F1V51-2	AT&T
143.00	143.00	3	RRUS 32 B2	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



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	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
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 5/8" Coax	AT&T
0.00	143.00	Inside	3/4" DC	AT&T
0.00	143.00	Inside	5/16" 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 (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 105 mph Wind	4863.3	37.7	61.0
0.9D + 1.6W 105 mph Wind	4803.0	37.7	45.7
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1219.4	9.4	95.0
1.2D + 1.0E	241.3	1.8	61.0
0.9D + 1.0E	238.1	1.8	45.8
1.0D + 1.0W 60 mph Wind	985.5	7.7	50.8

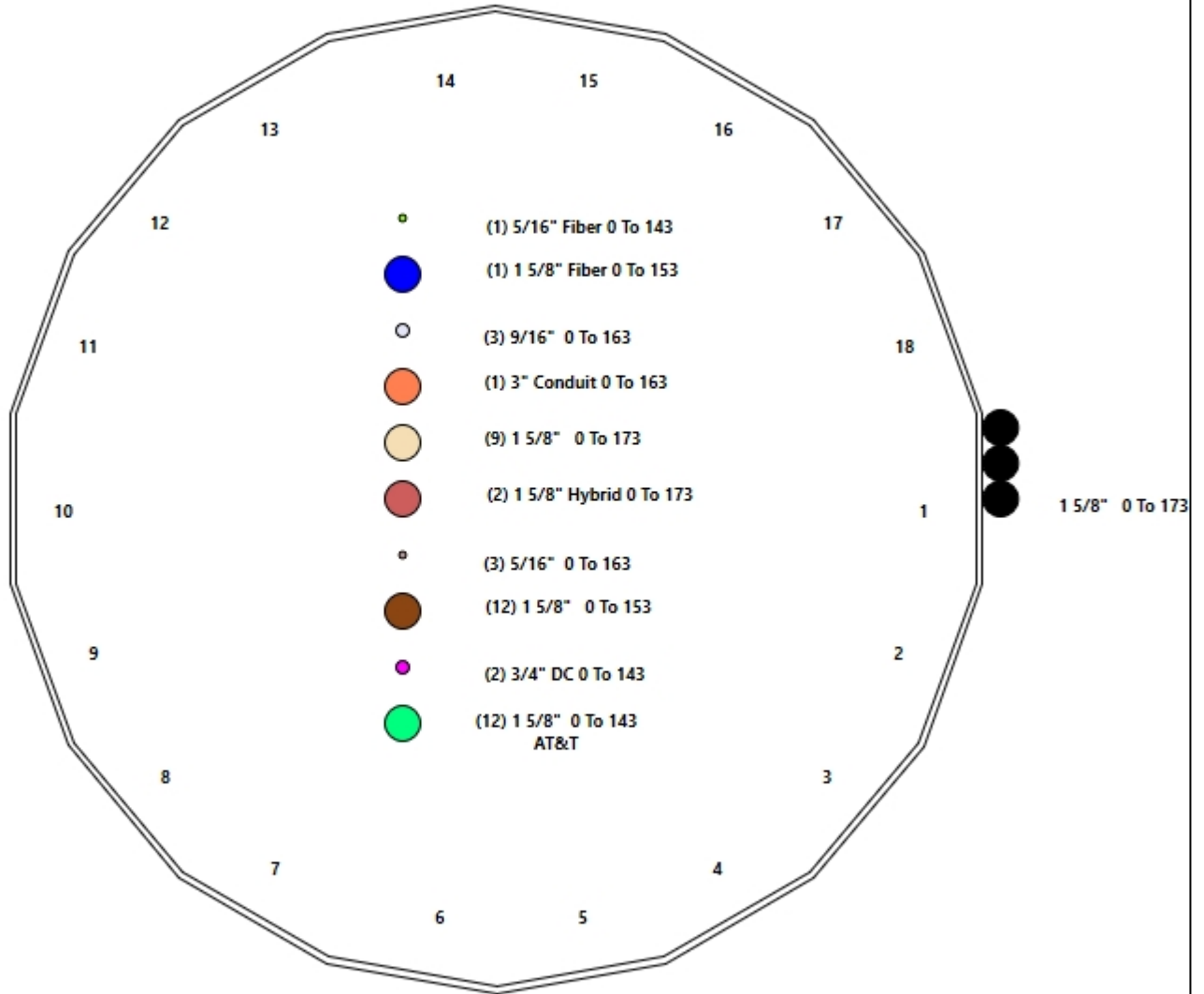
Structure: CT01002-S-SBA - Coax Line Placement

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

5/21/2018



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Shaft Properties

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	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	28.92	172.00	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	148.26	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	141.98	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	129.43	46.18	81.00	54.52	14452.3	20.30	123.1	0.235417
5	46.18	81.00	45.49	12093.11	24.65	147.78	43.83	91.00	43.16	10325.0	23.32	140.2	0.235417
6	45.87	85.00	45.18	11844.89	24.47	146.77	38.80	115.00	38.18	7145.58	20.48	124.1	0.235417
7	38.80	105.0	30.59	5744.14	25.96	155.21	34.09	135.00	24.99	3130.27	20.98	136.3	0.235417
8	35.77	130.0	28.18	4493.04	23.82	143.08	24.00	180.00	18.85	1343.02	15.52	96.00	0.235417
9	24.00	180.0	20.94	1473.63	0.00	85.41	24.00	183.00	20.94	1473.63	0.00	85.41	0.000000

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Fu (ksi)	Offset (in)	Intermediate Connectors		Termination Connectors			
							Spacing (in)	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		

Load Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	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	181.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2833.73	39.996	1.00	0.00	0.00
2	173.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2827.72	39.915	1.00	0.00	0.00
3	173.00	LPA-80080-4CF-EDIN-0	4	12.00	2.61	1.00	129.28	3.521	1.00	0.00	0.00
4	173.00	APL866513-42T0	2	15.70	4.05	0.93	126.47	5.940	0.93	0.00	0.00
5	173.00	HBXX-6517DS-VTM	6	40.70	8.55	0.77	219.47	11.511	0.77	0.00	0.00
6	173.00	LNX-6514DS-VTM	3	33.10	8.09	0.80	210.32	10.926	0.80	0.00	0.00
7	173.00	RRH2X60-AWS	3	60.00	3.50	0.76	148.54	4.301	0.76	0.00	0.00
8	173.00	RRH2x60-700U	3	50.00	2.48	0.93	124.64	3.655	0.93	0.00	0.00
9	173.00	RRH2x60-1900	3	19.50	1.51	0.90	80.48	2.069	0.90	0.00	0.00
10	173.00	DB-T1-6Z-8AB-OZ	2	44.00	4.80	1.00	190.17	5.687	1.00	0.00	0.00
11	163.00	LLPX310R	3	28.60	4.30	0.69	119.66	5.974	0.69	0.00	0.00
12	163.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2819.84	39.809	1.00	0.00	0.00
13	163.00	DAP Head	3	42.00	1.88	1.00	89.27	3.037	1.00	0.00	0.00
14	153.00	Low Profile Platform-flat	1	1200.00	25.00	1.00	2249.20	45.984	1.00	0.00	0.00
15	153.00	AIR 21, 1.3M, B2A B4P	3	91.50	6.09	0.86	260.79	7.190	0.86	0.00	0.00
16	153.00	AIR 21, 1.3M, B4A B2P	3	90.40	6.09	0.86	259.69	7.190	0.86	0.00	0.00
17	153.00	LNX-6515DS	3	49.80	11.47	0.80	279.81	14.743	0.80	0.00	0.00
18	153.00	KRY 112 144/1	3	11.00	0.41	0.70	21.80	0.886	0.70	0.00	0.00
19	153.00	S11B12	3	55.00	2.94	0.71	122.55	4.157	0.71	0.00	0.00
20	150.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2808.91	39.662	1.00	0.00	0.00
21	143.00	HRK14	1	352.36	10.13	1.00	768.53	19.983	1.00	0.00	0.00
22	143.00	Powerwave 7770.00	3	35.00	5.50	0.73	169.38	6.560	0.73	0.00	0.00
23	143.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2802.67	39.577	1.00	0.00	0.00
24	143.00	850-1900 Dual Band	3	5.50	0.52	0.66	17.09	1.048	0.66	0.00	0.00
25	143.00	RRUS 11	3	50.70	2.52	0.67	139.37	3.168	0.67	0.00	0.00
26	143.00	DBC-750	3	4.80	0.51	1.00	14.42	1.037	1.00	0.00	0.00
27	143.00	DC6-48-60-18-8F	1	31.80	1.47	1.00	93.33	2.167	1.00	0.00	0.00
28	143.00	QS46512-2	1	27.30	5.55	0.96	195.54	14.338	0.96	0.00	0.00
29	143.00	OPA-65R-LCUU-H4	1	57.00	5.94	0.79	214.71	6.967	0.79	0.00	0.00
30	143.00	TPA-65R-LCUUUU-H8	2	75.00	13.30	0.83	385.41	14.938	0.83	0.00	0.00
31	143.00	OPA-65R-LCUU-H8	2	95.00	12.75	0.79	375.65	14.349	0.79	0.00	0.00
32	143.00	DTMABP7819VG12A	3	19.20	1.14	0.67	44.60	1.906	0.67	0.00	0.00
33	143.00	DBC0061F1V51-2	3	25.40	0.43	1.00	39.87	0.714	1.00	0.00	0.00
34	143.00	RRUS 32 B2	3	53.00	2.74	0.67	140.49	3.465	0.67	0.00	0.00
Totals:			82	12,093.56			28,451.84				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	183.00	(1) Safety Cable	0.00	Outside
0.00	183.00	(1) Step bolts (ladder)	0.00	Outside
0.00	173.00	(3) 1 5/8" Coax	0.00	Outside
0.00	173.00	(9) 1 5/8" Coax	0.00	Inside
0.00	173.00	(2) 1 5/8" Hybrid	0.00	Inside
0.00	163.00	(1) 3" Conduit	0.00	Inside
0.00	163.00	(3) 5/16" Coax	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)		
0.00	163.00	(3) 9/16" Coax		0.00						
0.00	153.00	(12) 1 5/8" Coax		0.00						
0.00	153.00	(1) 1 5/8" Fiber		0.00						
0.00	143.00	(12) 1 5/8" Coax		0.00						
0.00	143.00	(2) 3/4" DC		0.00						
0.00	143.00	(1) 5/16" Fiber		0.00						
110.0	125.00	(3) C6X10.5 Reinforcing plate		0.00						
65.00	95.00	(6) C6X10.5 Reinforcing plate		0.00						

Shaft Section Properties

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	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)	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)
0.00		0.3750	64.500	76.322	39651.3	28.92	172.00	76	76	0.0				
2.00		0.3750	64.029	75.762	38784.3	28.70	170.74	76	76	517.5				
4.00		0.3750	63.558	75.201	37930.0	28.47	169.49	76	76	513.7				
6.00		0.3750	63.087	74.641	37088.4	28.25	168.23	76	77	509.9				
8.00		0.3750	62.617	74.080	36259.3	28.03	166.98	76	77	506.1				
10.00		0.3750	62.146	73.520	35442.6	27.81	165.72	76	77	502.3				
12.00		0.3750	61.675	72.960	34638.3	27.59	164.47	76	78	498.4				
14.00		0.3750	61.204	72.399	33846.3	27.37	163.21	76	78	494.6				
16.00		0.3750	60.733	71.839	33066.4	27.15	161.96	76	78	490.8				
18.00		0.3750	60.262	71.279	32298.6	26.93	160.70	76	79	487.0				
20.00		0.3750	59.792	70.718	31542.8	26.70	159.44	76	79	483.2				
22.00		0.3750	59.321	70.158	30798.9	26.48	158.19	76	79	479.4				
24.00		0.3750	58.850	69.597	30066.7	26.26	156.93	76	80	475.6				
26.00		0.3750	58.379	69.037	29346.3	26.04	155.68	76	80	471.7				
28.00		0.3750	57.908	68.477	28637.4	25.82	154.42	76	80	467.9				
30.00		0.3750	57.437	67.916	27940.1	25.60	153.17	76	80	464.1				
32.00		0.3750	56.967	67.356	27254.2	25.38	151.91	76	81	460.3				
34.00		0.3750	56.496	66.795	26579.6	25.15	150.66	76	81	456.5				
36.00		0.3750	56.025	66.235	25916.2	24.93	149.40	76	81	452.7				
38.00		0.3750	55.554	65.675	25263.9	24.71	148.14	76	82	448.9				
40.00		0.3750	55.083	65.114	24622.7	24.49	146.89	76	82	445.0				
41.00	Bot - Section 2	0.3750	54.848	64.834	24306.2	24.38	146.26	76	82	221.1				
42.00		0.3750	54.612	64.554	23992.4	24.27	145.63	76	82	443.3				
44.00		0.3750	54.142	63.993	23373.0	24.05	144.38	76	83	880.9				
46.00		0.3750	53.671	63.433	22764.3	23.83	143.12	76	83	873.3				
48.00	Top - Section 1	0.3750	53.950	63.765	23124.1	23.96	143.87	76	83	865.7				
50.00		0.3750	53.479	63.205	22519.7	23.74	142.61	76	83	432.1				
51.00	Top - Section 2	0.3750	53.244	62.925	22221.6	23.62	141.98	76	83	214.6				
51.00	Bot - Section 3	0.3750	53.244	62.925	22221.8	23.62	141.98	63	72					
52.00		0.3750	53.009	62.645	21926.3	23.51	141.36	63	72	213.6				
54.00		0.3750	52.538	62.084	21343.1	23.29	140.10	63	72	424.4				
56.00		0.3750	52.067	61.524	20770.3	23.07	138.85	63	72	420.6				
58.00		0.3750	51.596	60.964	20207.9	22.85	137.59	63	73	416.8				
60.00		0.3750	51.125	60.403	19655.8	22.63	136.33	63	73	413.0				
62.00		0.3750	50.654	59.843	19113.8	22.41	135.08	63	73	409.2				
64.00		0.3750	50.184	59.283	18581.8	22.19	133.82	63	73	405.4				
66.00		0.3750	49.713	58.722	18059.8	21.96	132.57	63	74	401.5				
66.17	RB1	0.3750	49.673	58.675	18015.9	21.95	132.46	63	74	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	74	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	74	393.9	18.48	6352.5	6352.5	126.0
71.00	Top - Section 3	0.3750	48.536	57.321	16797.8	21.41	129.43	63	74	195.5	18.48	6295.6	6295.6	63.0
71.00	Bot - Section 4	0.3750	48.535	57.320	16797.1	21.41	129.43	56	67					
72.00		0.3750	48.300	57.040	16552.0	21.30	128.80	56	67	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	68	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	68	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	68	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	68	374.8	18.48	5795.0	5795.0	126.0
81.00	Top - Section 4	0.3750	46.181	54.518	14452.3	20.30	123.15	56	68	186.0	18.48	5740.7	5740.7	63.0
81.00	Bot - Section 5	0.3125	46.181	45.494	12093.1	24.36	147.78	65	72					
82.00		0.3125	45.946	45.261	11907.9	24.51	147.03	65	73	154.4	18.48	5686.6	5686.6	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)
84.00		0.3125	45.475	44.794	11543.1	24.25	145.52	65	73	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	73	152.0	18.48	5526.0	5526.0	63.0
86.00		0.3125	45.004	44.327	11185.8	23.98	144.01	65	73	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	74	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	74	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	74	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	74	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	74	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	74	24.9				
96.00		0.3125	43.275	42.612	9937.5	23.01	138.48	65	74	291.6				
98.00		0.3125	42.805	42.145	9614.3	22.74	136.97	65	75	288.4				
100.00		0.3125	42.334	41.678	9298.2	22.48	135.47	65	75	285.2				
102.00		0.3125	41.863	41.211	8989.2	22.21	133.96	65	75	282.1				
104.00		0.3125	41.392	40.744	8687.0	21.94	132.45	65	76	278.9				
106.00		0.3125	40.921	40.277	8391.8	21.68	130.95	65	76	483.9				
108.00		0.3125	40.450	39.810	8103.2	21.41	129.44	65	76	478.2				
110.00		0.3125	39.980	39.343	7821.4	21.15	127.93	65	77	472.4				
111.17	RB2	0.3125	39.704	39.070	7659.6	20.99	127.05	65	77	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	77	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	77	461.0	9.24	1881.3	1881.3	63.0
115.00	Top - Section 6	0.3125	38.802	38.176	7145.6	20.48	124.17	65	77	130.3	9.24	2083.9	2083.9	31.5
115.00	Bot - Section 7	0.2500	38.802	30.590	5744.1	25.60	155.21	65	71					
116.00		0.2500	38.567	30.403	5639.6	25.79	154.27	65	71	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	71	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	72	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	72	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	73	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	73	16.7				
126.00		0.2500	36.212	28.535	4662.6	24.13	144.85	65	73	195.5				
128.00		0.2500	35.742	28.162	4481.9	23.80	142.97	65	73	192.9				
130.00	Bot - Section 8	0.2500	35.271	27.788	4305.9	23.47	141.08	65	74	190.4				
132.00		0.2500	34.800	27.414	4134.5	23.13	139.20	65	74	378.4				
134.00		0.2500	34.329	27.041	3967.8	22.80	137.32	65	75	373.3				
135.00	Top - Section 7	0.2500	34.594	27.251	4061.0	22.99	138.38	65	74	184.7				
136.00		0.2500	34.358	27.064	3978.1	22.82	137.43	65	75	92.4				
138.00		0.2500	33.888	26.691	3815.6	22.49	135.55	65	75	182.9				
140.00		0.2500	33.417	26.317	3657.6	22.16	133.67	65	75	180.4				
142.00		0.2500	32.946	25.943	3504.0	21.83	131.78	65	76	177.8				
143.00		0.2500	32.711	25.757	3428.9	21.66	130.84	65	76	88.0				
144.00		0.2500	32.475	25.570	3354.8	21.49	129.90	65	76	87.3				
146.00		0.2500	32.004	25.196	3209.9	21.16	128.02	65	77	172.7				
148.00		0.2500	31.533	24.823	3069.2	20.83	126.13	65	77	170.2				
150.00		0.2500	31.063	24.449	2932.7	20.50	124.25	65	77	167.7				
152.00		0.2500	30.592	24.075	2800.3	20.17	122.37	65	78	165.1				
153.00		0.2500	30.356	23.889	2735.7	20.00	121.43	65	78	81.6				
154.00		0.2500	30.121	23.702	2672.0	19.83	120.48	65	78	81.0				
156.00		0.2500	29.650	23.328	2547.6	19.50	118.60	65	78	160.0				
158.00		0.2500	29.179	22.955	2427.2	19.17	116.72	65	79	157.5				
160.00		0.2500	28.708	22.581	2310.6	18.84	114.83	65	79	154.9				
162.00		0.2500	28.238	22.207	2197.8	18.51	112.95	65	80	152.4				
163.00		0.2500	28.002	22.021	2142.8	18.34	112.01	65	80	75.2				
164.00		0.2500	27.767	21.834	2088.7	18.17	111.07	65	80	74.6				
166.00		0.2500	27.296	21.460	1983.3	17.84	109.18	65	80	147.3				
168.00		0.2500	26.825	21.087	1881.5	17.51	107.30	65	81	144.8				
170.00		0.2500	26.354	20.713	1783.3	17.18	105.42	65	81	142.2				
172.00		0.2500	25.883	20.339	1688.5	16.85	103.53	65	82	139.7				
173.00		0.2500	25.648	20.153	1642.4	16.68	102.59	65	82	68.9				
174.00		0.2500	25.413	19.966	1597.2	16.51	101.65	65	82	68.3				
176.00		0.2500	24.942	19.592	1509.2	16.18	99.77	65	82	134.6				
178.00		0.2500	24.471	19.219	1424.5	15.85	97.88	65	83	132.1				

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)
180.00	Top - Section 8	0.2500	24.000	18.845	1343.0	15.52	96.00	65	83	129.5				
180.00	Bot - Section 9	0.2810	24.000	20.939	1473.6	13.81	85.41	36	36					
181.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36	36	71.3				
182.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36	36	71.3				
183.00		0.2810	24.000	20.939	1473.6	0.00	85.41	36	36	71.3				
Total Weight										32498.7				2188.9

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

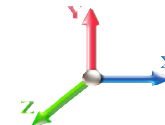


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Load Case: 1.2D + 1.6W 105 mph Wind

Iterations 30

Dead Load Factor 1.20
Wind Load Factor 1.60



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		1.00	0.70	18.769	20.65	479.47	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	18.769	20.65	475.97	0.650	0.000	2.00	10.876	7.07	233.5	0.0	621.0
4.00		1.00	0.70	18.769	20.65	472.47	0.650	0.000	2.00	10.796	7.02	231.8	0.0	616.4
6.00		1.00	0.70	18.769	20.65	468.97	0.650	0.000	2.00	10.717	6.97	230.1	0.0	611.9
8.00		1.00	0.70	18.769	20.65	465.47	0.650	0.000	2.00	10.637	6.91	228.4	0.0	607.3
10.00		1.00	0.70	18.769	20.65	461.97	0.650	0.000	2.00	10.557	6.86	226.7	0.0	602.7
12.00		1.00	0.70	18.769	20.65	458.47	0.650	0.000	2.00	10.478	6.81	225.0	0.0	598.1
14.00		1.00	0.70	18.769	20.65	454.97	0.650	0.000	2.00	10.398	6.76	223.3	0.0	593.5
16.00		1.00	0.70	18.769	20.65	451.47	0.650	0.000	2.00	10.318	6.71	221.5	0.0	589.0
18.00		1.00	0.70	18.769	20.65	447.97	0.650	0.000	2.00	10.239	6.66	219.8	0.0	584.4
20.00		1.00	0.70	18.769	20.65	444.47	0.650	0.000	2.00	10.159	6.60	218.1	0.0	579.8
22.00		1.00	0.70	18.769	20.65	440.97	0.650	0.000	2.00	10.079	6.55	216.4	0.0	575.2
24.00		1.00	0.70	18.769	20.65	437.47	0.650	0.000	2.00	9.999	6.50	214.7	0.0	570.7
26.00		1.00	0.70	18.769	20.65	433.97	0.650	0.000	2.00	9.920	6.45	213.0	0.0	566.1
28.00		1.00	0.70	18.769	20.65	430.47	0.650	0.000	2.00	9.840	6.40	211.3	0.0	561.5
30.00		1.00	0.70	18.785	20.66	427.15	0.650	0.000	2.00	9.760	6.34	209.7	0.0	556.9
32.00		1.00	0.71	19.134	21.05	427.58	0.650	0.000	2.00	9.681	6.29	211.9	0.0	552.4
34.00		1.00	0.73	19.469	21.42	427.73	0.650	0.000	2.00	9.601	6.24	213.8	0.0	547.8
36.00		1.00	0.74	19.789	21.77	427.64	0.650	0.000	2.00	9.521	6.19	215.6	0.0	543.2
38.00		1.00	0.75	20.097	22.11	427.34	0.650	0.000	2.00	9.442	6.14	217.1	0.0	538.6
40.00		1.00	0.76	20.394	22.43	426.83	0.650	0.000	2.00	9.362	6.09	218.4	0.0	534.1
41.00	Bot - Section 2	1.00	0.77	20.538	22.59	426.51	0.650	0.000	1.00	4.651	3.02	109.3	0.0	265.3
42.00		1.00	0.77	20.680	22.75	426.14	0.650	0.000	1.00	4.695	3.05	111.1	0.0	532.0
44.00		1.00	0.78	20.957	23.05	425.29	0.650	0.000	2.00	9.330	6.06	223.7	0.0	1057.1
46.00		1.00	0.79	21.225	23.35	424.27	0.650	0.000	2.00	9.250	6.01	224.6	0.0	1047.9
48.00	Top - Section 1	1.00	0.80	21.485	23.63	423.12	0.650	0.000	2.00	9.170	5.96	225.4	0.0	1038.8
50.00		1.00	0.81	21.737	23.91	427.83	0.650	0.000	2.00	9.091	5.91	226.1	0.0	518.5
51.00	Top - Section 2	1.00	0.82	21.860	24.05	427.15	0.650	0.000	1.00	4.515	2.94	112.9	0.0	257.5
52.00		1.00	0.82	21.982	24.18	426.44	0.650	0.000	1.00	4.495	2.92	113.0	0.0	256.4
54.00		1.00	0.83	22.220	24.44	424.94	0.650	0.000	2.00	8.931	5.81	227.0	0.0	509.3
56.00		1.00	0.84	22.452	24.70	423.33	0.650	0.000	2.00	8.852	5.75	227.4	0.0	504.7
58.00		1.00	0.85	22.678	24.95	421.61	0.650	0.000	2.00	8.772	5.70	227.6	0.0	500.2
60.00		1.00	0.85	22.899	25.19	419.79	0.650	0.000	2.00	8.692	5.65	227.7	0.0	495.6
62.00		1.00	0.86	23.114	25.43	417.87	0.650	0.000	2.00	8.612	5.60	227.7	0.0	491.0
64.00		1.00	0.87	23.325	25.66	415.87	0.650	0.000	2.00	8.533	5.55	227.7	0.0	486.4
66.00		1.00	0.88	23.531	25.88	413.78	0.650	0.000	2.00	8.453	5.49	227.6	0.0	481.9
66.17	RB1	1.00	0.88	23.548	25.90	413.60	0.650	0.000	0.17	0.715	0.46	19.3	0.0	40.7
68.00		1.00	0.89	23.733	26.11	411.62	0.650	0.000	1.83	7.659	4.98	207.9	0.0	436.5
70.00		1.00	0.89	23.930	26.32	409.37	0.650	0.000	2.00	8.294	5.39	227.0	0.0	472.7
71.00	Top - Section 3	1.00	0.90	24.027	26.43	408.22	0.650	0.000	1.00	4.117	2.68	113.2	0.0	234.6
72.00		1.00	0.90	24.123	26.54	407.05	0.650	0.000	1.00	4.097	2.66	113.1	0.0	233.5
74.00		1.00	0.91	24.313	26.74	404.66	0.650	0.000	2.00	8.134	5.29	226.2	0.0	463.5
76.00		1.00	0.91	24.499	26.95	402.21	0.650	0.000	2.00	8.055	5.24	225.7	0.0	459.0
78.00		1.00	0.92	24.681	27.15	399.69	0.650	0.000	2.00	7.975	5.18	225.2	0.0	454.4
80.00		1.00	0.93	24.861	27.35	397.11	0.650	0.000	2.00	7.895	5.13	224.5	0.0	449.8
81.00	Top - Section 4	1.00	0.93	24.949	27.44	395.80	0.650	0.000	1.00	3.918	2.55	111.8	0.0	223.2
82.00		1.00	0.93	25.037	27.54	394.47	0.650	0.000	1.00	3.898	2.53	111.6	0.0	185.3

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



84.00	1.00	0.94	25.210	27.73	391.78	0.650	0.000	2.00	7.736	5.03	223.1	0.0	367.7
85.00 Bot - Section 6	1.00	0.94	25.295	27.82	390.41	0.650	0.000	1.00	3.838	2.49	111.1	0.0	182.4
86.00	1.00	0.95	25.380	27.92	389.03	0.650	0.000	1.00	3.871	2.52	112.4	0.0	365.5
88.00	1.00	0.95	25.547	28.10	386.22	0.650	0.000	2.00	7.682	4.99	224.5	0.0	725.3
90.00	1.00	0.96	25.711	28.28	383.37	0.650	0.000	2.00	7.603	4.94	223.6	0.0	717.6
91.00 Top - Section 5	1.00	0.96	25.793	28.37	381.92	0.650	0.000	1.00	3.771	2.45	111.3	0.0	356.0
92.00	1.00	0.96	25.873	28.46	385.92	0.650	0.000	1.00	3.752	2.44	111.0	0.0	178.3
93.83 RT1	1.00	0.97	26.019	28.62	383.24	0.650	0.000	1.83	6.814	4.43	202.8	0.0	323.8
94.00	1.00	0.97	26.033	28.64	382.99	0.650	0.000	0.17	0.630	0.41	18.8	0.0	29.9
96.00	1.00	0.98	26.190	28.81	380.01	0.650	0.000	2.00	7.364	4.79	220.6	0.0	349.9
98.00	1.00	0.98	26.345	28.98	376.98	0.650	0.000	2.00	7.284	4.73	219.5	0.0	346.1
100.00	1.00	0.99	26.497	29.15	373.91	0.650	0.000	2.00	7.204	4.68	218.4	0.0	342.3
102.00	1.00	0.99	26.648	29.31	370.80	0.650	0.000	2.00	7.125	4.63	217.2	0.0	338.5
104.00	1.00	1.00	26.796	29.48	367.65	0.650	0.000	2.00	7.045	4.58	216.0	0.0	334.7
106.00	1.00	1.00	26.942	29.64	364.46	0.650	0.000	2.00	6.967	4.53	214.8	0.0	330.9
108.00	1.00	1.01	27.086	29.79	361.23	0.650	0.000	2.00	6.887	4.48	213.6	0.0	327.0
110.00	1.00	1.02	27.229	29.95	357.96	0.650	0.000	2.00	6.807	4.43	212.4	0.0	323.2
111.17 RB2	1.00	1.02	27.311	30.04	356.03	0.650	0.000	1.17	3.711	2.41	116.0	0.0	187.3
112.00	1.00	1.02	27.369	30.11	354.66	0.650	0.000	0.83	2.616	1.70	81.9	0.0	132.1
114.00	1.00	1.03	27.508	30.26	351.32	0.650	0.000	2.00	6.248	4.06	196.6	0.0	315.6
115.00 Top - Section 6	1.00	1.03	27.577	30.33	349.64	0.650	0.000	1.00	3.293	2.14	103.9	0.0	156.4
116.00	1.00	1.03	27.645	30.41	347.94	0.650	0.000	1.00	3.273	2.13	103.5	0.0	124.5
118.00	1.00	1.04	27.780	30.56	344.53	0.650	0.000	2.00	6.487	4.22	206.2	0.0	246.8
120.00	1.00	1.04	27.914	30.71	341.09	0.650	0.000	2.00	6.407	4.16	204.6	0.0	243.7
122.00	1.00	1.05	28.046	30.85	337.62	0.650	0.000	2.00	6.328	4.11	203.0	0.0	240.7
123.83 RT2	1.00	1.05	28.166	30.98	334.42	0.650	0.000	1.83	5.720	3.72	184.3	0.0	217.5
124.00	1.00	1.05	28.177	30.99	334.12	0.650	0.000	0.17	0.528	0.34	17.0	0.0	20.1
126.00	1.00	1.06	28.306	31.14	330.58	0.650	0.000	2.00	6.168	4.01	199.7	0.0	234.6
128.00	1.00	1.06	28.434	31.28	327.02	0.650	0.000	2.00	6.089	3.96	198.1	0.0	231.5
130.00 Bot - Section 8	1.00	1.07	28.560	31.42	323.43	0.650	0.000	2.00	6.009	3.91	196.3	0.0	228.5
132.00	1.00	1.07	28.685	31.55	319.81	0.650	0.000	2.00	6.014	3.91	197.4	0.0	454.1
134.00	1.00	1.07	28.808	31.69	316.16	0.650	0.000	2.00	5.934	3.86	195.6	0.0	448.0
135.00 Top - Section 7	1.00	1.08	28.869	31.76	314.32	0.650	0.000	1.00	2.937	1.91	97.0	0.0	221.7
136.00	1.00	1.08	28.930	31.82	317.10	0.650	0.000	1.00	2.917	1.90	96.6	0.0	110.9
138.00	1.00	1.08	29.051	31.96	313.41	0.650	0.000	2.00	5.775	3.75	191.9	0.0	219.5
140.00	1.00	1.09	29.171	32.09	309.69	0.650	0.000	2.00	5.695	3.70	190.1	0.0	216.4
142.00	1.00	1.09	29.289	32.22	305.95	0.650	0.000	2.00	5.616	3.65	188.2	0.0	213.4
143.00 Appurtenance(s)	1.00	1.09	29.348	32.28	304.06	0.650	0.000	1.00	2.778	1.81	93.3	0.0	105.6
144.00	1.00	1.10	29.407	32.35	302.18	0.650	0.000	1.00	2.758	1.79	92.8	0.0	104.8
146.00	1.00	1.10	29.523	32.48	298.38	0.650	0.000	2.00	5.456	3.55	184.3	0.0	207.3
148.00	1.00	1.11	29.638	32.60	294.56	0.650	0.000	2.00	5.376	3.49	182.3	0.0	204.2
150.00 Appurtenance(s)	1.00	1.11	29.752	32.73	290.72	0.650	0.000	2.00	5.297	3.44	180.3	0.0	201.2
152.00	1.00	1.11	29.865	32.85	286.86	0.650	0.000	2.00	5.217	3.39	178.2	0.0	198.1
153.00 Appurtenance(s)	1.00	1.12	29.921	32.91	284.92	0.650	0.000	1.00	2.579	1.68	88.3	0.0	97.9
154.00	1.00	1.12	29.976	32.97	282.97	0.650	0.000	1.00	2.559	1.66	87.7	0.0	97.2
156.00	1.00	1.12	30.087	33.10	279.06	0.650	0.000	2.00	5.058	3.29	174.1	0.0	192.0
158.00	1.00	1.13	30.197	33.22	275.13	0.650	0.000	2.00	4.978	3.24	172.0	0.0	189.0
160.00	1.00	1.13	30.305	33.34	271.18	0.650	0.000	2.00	4.898	3.18	169.8	0.0	185.9
162.00	1.00	1.13	30.413	33.45	267.21	0.650	0.000	2.00	4.819	3.13	167.7	0.0	182.9
163.00 Appurtenance(s)	1.00	1.14	30.467	33.51	265.21	0.650	0.000	1.00	2.379	1.55	82.9	0.0	90.3
164.00	1.00	1.14	30.520	33.57	263.21	0.650	0.000	1.00	2.360	1.53	82.4	0.0	89.5
166.00	1.00	1.14	30.626	33.69	259.20	0.650	0.000	2.00	4.659	3.03	163.2	0.0	176.8
168.00	1.00	1.15	30.731	33.80	255.16	0.650	0.000	2.00	4.580	2.98	161.0	0.0	173.7
170.00	1.00	1.15	30.835	33.92	251.11	0.650	0.000	2.00	4.500	2.92	158.7	0.0	170.7
172.00	1.00	1.15	30.938	34.03	247.03	0.650	0.000	2.00	4.420	2.87	156.4	0.0	167.6
173.00 Appurtenance(s)	1.00	1.16	30.989	34.09	244.99	0.650	0.000	1.00	2.180	1.42	77.3	0.0	82.7
174.00	1.00	1.16	31.041	34.14	242.94	0.650	0.000	1.00	2.160	1.40	76.7	0.0	81.9

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 13
	Struct Class: II	



176.00	1.00	1.16	31.142	34.26	238.83	0.650	0.000	2.00	4.261	2.77	151.8	0.0	161.5
178.00	1.00	1.17	31.243	34.37	234.70	0.650	0.000	2.00	4.181	2.72	149.4	0.0	158.5
180.00 Top - Section 8	1.00	1.17	31.343	34.48	230.55	0.650	0.000	2.00	4.102	2.67	147.1	0.0	155.4
181.00 Appurtenance(s)	1.00	1.17	31.392	34.53	227.23	0.600	0.000	1.00	2.000	1.20	66.3	0.0	85.5
182.00	1.00	1.17	31.442	34.59	227.41	0.600	0.000	1.00	2.000	1.20	66.4	0.0	85.5
183.00	1.00	1.17	31.491	34.64	227.58	0.600	0.000	1.00	2.000	1.20	66.5	0.0	85.5
Totals:								183.00			18,722.6		37,779.9

Discrete Appurtenance Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 30

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	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	1	31.392	34.532	1.00	1.00	22.00	1800.00	0.000	0.000	1215.51	0.00	0.00	
2	173.00	LNx-6514DS-VTM	3	30.989	34.088	0.64	0.80	15.53	119.16	0.000	0.000	847.18	0.00	0.00	
3	173.00	Low Profile	1	30.989	34.088	1.00	1.00	22.00	1800.00	0.000	0.000	1199.91	0.00	0.00	
4	173.00	APL866513-42T0	2	30.989	34.088	0.74	0.80	6.03	37.68	0.000	0.000	328.69	0.00	0.00	
5	173.00	HBXX-6517DS-VTM	6	30.989	34.088	0.62	0.80	31.60	293.04	0.000	0.000	1723.55	0.00	0.00	
6	173.00	LPA-80080-4CF-EDIN-0	4	30.989	34.088	0.80	0.80	8.35	57.60	0.000	0.000	455.53	0.00	0.00	
7	173.00	RRH2X60-AWS	3	30.989	34.088	0.61	0.80	6.38	216.00	0.000	0.000	348.19	0.00	0.00	
8	173.00	RRH2x60-700U	3	30.989	34.088	0.74	0.80	5.54	180.00	0.000	0.000	301.91	0.00	0.00	
9	173.00	RRH2x60-1900	3	30.989	34.088	0.72	0.80	3.26	70.20	0.000	0.000	177.89	0.00	0.00	
10	173.00	DB-T1-6Z-8AB-OZ	2	30.989	34.088	0.80	0.80	7.68	105.60	0.000	0.000	418.88	0.00	0.00	
11	163.00	LLPX310R	3	30.467	33.513	0.55	0.80	7.12	102.96	0.000	0.000	381.83	0.00	0.00	
12	163.00	Low Profile	1	30.467	33.513	1.00	1.00	22.00	1800.00	0.000	0.000	1179.67	0.00	0.00	
13	163.00	DAP Head	3	30.467	33.513	0.80	0.80	4.51	151.20	0.000	0.000	241.94	0.00	0.00	
14	153.00	S11B12	3	29.921	32.913	0.57	0.80	5.01	198.00	0.000	0.000	263.81	0.00	0.00	
15	153.00	KRY 112 144/1	3	29.921	32.913	0.56	0.80	0.69	39.60	0.000	0.000	36.27	0.00	0.00	
16	153.00	LNx-6515DS	3	29.921	32.913	0.64	0.80	22.02	179.28	0.000	0.000	1159.70	0.00	0.00	
17	153.00	AIR 21, 1.3M, B4A B2P	3	29.921	32.913	0.69	0.80	12.57	325.44	0.000	0.000	661.93	0.00	0.00	
18	153.00	AIR 21, 1.3M, B2A B4P	3	29.921	32.913	0.69	0.80	12.57	329.40	0.000	0.000	661.93	0.00	0.00	
19	153.00	Low Profile Platform-flat	1	29.921	32.913	1.00	1.00	25.00	1440.00	0.000	0.000	1316.50	0.00	0.00	
20	150.00	Low Profile	1	29.752	32.727	1.00	1.00	22.00	1800.00	0.000	0.000	1151.99	0.00	0.00	
21	143.00	DC6-48-60-18-8F	1	29.348	32.283	0.75	0.75	1.10	38.16	0.000	0.000	56.95	0.00	0.00	
22	143.00	HRK14	1	29.348	32.283	1.00	1.00	10.13	422.83	0.000	0.000	523.24	0.00	0.00	
23	143.00	Powerwave 7770.00	3	29.348	32.283	0.55	0.75	9.03	126.00	0.000	0.000	466.62	0.00	0.00	
24	143.00	Low Profile	1	29.348	32.283	1.00	1.00	22.00	1800.00	0.000	0.000	1136.36	0.00	0.00	
25	143.00	850-1900 Dual Band	3	29.348	32.283	0.49	0.75	0.77	19.80	0.000	0.000	39.89	0.00	0.00	
26	143.00	RRUS 11	3	29.348	32.283	0.50	0.75	3.80	182.52	0.000	0.000	196.22	0.00	0.00	
27	143.00	DBC-750	3	29.348	32.283	0.75	0.75	1.15	17.28	0.000	0.000	59.27	0.00	0.00	
28	143.00	OPA-65R-LCUU-H4	1	29.348	32.283	0.59	0.75	3.52	68.40	0.000	0.000	181.79	0.00	0.00	
29	143.00	QS46512-2	1	29.348	32.283	0.72	0.75	3.99	32.76	0.000	0.000	205.98	0.00	0.00	
30	143.00	TPA-65R-LCUUUU-H8	2	29.348	32.283	0.62	0.75	16.56	180.00	0.000	0.000	855.30	0.00	0.00	
31	143.00	OPA-65R-LCUU-H8	2	29.348	32.283	0.59	0.75	15.11	228.00	0.000	0.000	780.41	0.00	0.00	
32	143.00	DTMABP7819VG12A	3	29.348	32.283	0.50	0.75	1.72	69.12	0.000	0.000	88.77	0.00	0.00	
33	143.00	DBC0061F1V51-2	3	29.348	32.283	0.75	0.75	0.97	91.44	0.000	0.000	49.97	0.00	0.00	
34	143.00	RRUS 32 B2	3	29.348	32.283	0.50	0.75	4.13	190.80	0.000	0.000	213.36	0.00	0.00	
Totals:									14,512.27						18,926.95

Total Applied Force Summary

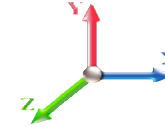
Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



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		233.53	731.37	0.00	0.00
4.00		231.82	726.79	0.00	0.00
6.00		230.10	722.21	0.00	0.00
8.00		228.39	717.64	0.00	0.00
10.00		226.68	713.06	0.00	0.00
12.00		224.97	708.48	0.00	0.00
14.00		223.26	703.91	0.00	0.00
16.00		221.55	699.33	0.00	0.00
18.00		219.84	694.76	0.00	0.00
20.00		218.13	690.18	0.00	0.00
22.00		216.42	685.60	0.00	0.00
24.00		214.71	681.03	0.00	0.00
26.00		212.99	676.45	0.00	0.00
28.00		211.28	671.87	0.00	0.00
30.00		209.75	667.30	0.00	0.00
32.00		211.91	662.72	0.00	0.00
34.00		213.84	658.14	0.00	0.00
36.00		215.55	653.57	0.00	0.00
38.00		217.08	648.99	0.00	0.00
40.00		218.42	644.41	0.00	0.00
41.00		109.28	320.49	0.00	0.00
42.00		111.07	587.16	0.00	0.00
44.00		223.68	1167.45	0.00	0.00
46.00		224.60	1158.30	0.00	0.00
48.00		225.39	1149.15	0.00	0.00
50.00		226.05	628.82	0.00	0.00
51.00		112.92	312.69	0.00	0.00
52.00		113.05	311.55	0.00	0.00
54.00		227.03	619.67	0.00	0.00
56.00		227.35	615.09	0.00	0.00
58.00		227.58	610.52	0.00	0.00
60.00		227.70	605.94	0.00	0.00
62.00		227.74	601.36	0.00	0.00
64.00		227.69	596.79	0.00	0.00
66.00		227.55	592.21	0.00	0.00
66.17		19.26	50.13	0.00	0.00
68.00		207.93	537.51	0.00	0.00
70.00		227.05	583.06	0.00	0.00
71.00		113.16	289.81	0.00	0.00
72.00		113.07	288.67	0.00	0.00
74.00		226.25	573.90	0.00	0.00
76.00		225.74	569.32	0.00	0.00
78.00		225.18	564.75	0.00	0.00
80.00		224.54	560.17	0.00	0.00
81.00		111.82	278.37	0.00	0.00
82.00		111.64	240.47	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00		223.10	478.08	0.00	0.00
85.00		111.06	237.61	0.00	0.00
86.00		112.39	420.67	0.00	0.00
88.00		224.52	835.62	0.00	0.00
90.00		223.63	827.99	0.00	0.00
91.00		111.28	411.13	0.00	0.00
92.00		111.04	233.47	0.00	0.00
93.83		202.82	424.78	0.00	0.00
94.00		18.75	39.30	0.00	0.00
96.00		220.63	460.27	0.00	0.00
98.00		219.53	456.45	0.00	0.00
100.00		218.38	452.64	0.00	0.00
102.00		217.19	448.83	0.00	0.00
104.00		215.96	445.01	0.00	0.00
106.00		202.40	441.20	0.00	0.00
108.00		201.01	437.38	0.00	0.00
110.00		199.59	433.57	0.00	0.00
111.17		115.96	251.87	0.00	0.00
112.00		81.92	177.89	0.00	0.00
114.00		196.62	425.94	0.00	0.00
115.00		103.90	211.54	0.00	0.00
116.00		103.53	179.71	0.00	0.00
118.00		206.16	357.13	0.00	0.00
120.00		204.61	354.07	0.00	0.00
122.00		203.02	351.02	0.00	0.00
123.83		184.31	318.51	0.00	0.00
124.00		17.02	29.46	0.00	0.00
126.00		199.74	344.92	0.00	0.00
128.00		198.05	341.87	0.00	0.00
130.00		196.33	338.82	0.00	0.00
132.00		197.35	564.42	0.00	0.00
134.00		195.57	558.32	0.00	0.00
135.00		97.01	276.87	0.00	0.00
136.00		96.55	166.07	0.00	0.00
138.00		191.93	329.86	0.00	0.00
140.00		190.06	326.81	0.00	0.00
142.00		188.16	323.76	0.00	0.00
143.00	(30) attachments	4947.39	3627.85	0.00	0.00
144.00		92.78	143.94	0.00	0.00
146.00		184.28	285.59	0.00	0.00
148.00		182.29	282.54	0.00	0.00
150.00	(1) attachments	1332.27	2079.49	0.00	0.00
152.00		178.24	276.44	0.00	0.00
153.00	(16) attachments	4188.41	2648.79	0.00	0.00
154.00		87.75	120.02	0.00	0.00
156.00		174.09	237.74	0.00	0.00
158.00		171.97	234.69	0.00	0.00
160.00		169.82	231.64	0.00	0.00
162.00		167.66	228.59	0.00	0.00
163.00	(7) attachments	1886.37	2167.31	0.00	0.00
164.00		82.38	108.73	0.00	0.00
166.00		163.25	215.17	0.00	0.00
168.00		161.00	212.12	0.00	0.00
170.00		158.74	209.07	0.00	0.00
172.00		156.45	206.01	0.00	0.00
173.00	(27) attachments	5879.03	2981.14	0.00	0.00
174.00		76.71	83.48	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 17



176.00	151.80	164.68	0.00	0.00
178.00	149.45	161.63	0.00	0.00
180.00	147.07	158.58	0.00	0.00
181.00	(1) attachments 1281.81	1887.08	0.00	0.00
182.00	66.40	87.08	0.00	0.00
183.00	66.51	87.08	0.00	0.00
	Totals:	37,649.58	61,010.47	0.00
			0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
2.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
2.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
4.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
4.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
4.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
6.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
6.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
6.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
8.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
8.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
8.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
10.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
10.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
10.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
12.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
12.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
12.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
14.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
14.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
14.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
16.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
16.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
16.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
18.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
18.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
18.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
20.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
22.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
22.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
22.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
24.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
24.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
24.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
26.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
26.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
26.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
28.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.66
28.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	2.50
28.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	7.49
30.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.785	0.00	0.66
30.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.785	0.00	2.50
30.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.785	0.00	7.49
32.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.134	0.00	0.66
32.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.134	0.00	2.50

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
32.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.134	0.00	7.49
34.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.469	0.00	0.66
34.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.469	0.00	2.50
34.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.469	0.00	7.49
36.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.789	0.00	0.66
36.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.789	0.00	2.50
36.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.789	0.00	7.49
38.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.097	0.00	0.66
38.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.097	0.00	2.50
38.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.097	0.00	7.49
40.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.394	0.00	0.66
40.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.394	0.00	2.50
40.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.394	0.00	7.49
41.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	20.538	0.00	0.33
41.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	20.538	0.00	1.25
41.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	20.538	0.00	3.74
42.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	20.680	0.00	0.33
42.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	20.680	0.00	1.25
42.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	20.680	0.00	3.74
44.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.957	0.00	0.66
44.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.957	0.00	2.50
44.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.957	0.00	7.49
46.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.225	0.00	0.66
46.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.225	0.00	2.50
46.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.225	0.00	7.49
48.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.485	0.00	0.66
48.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.485	0.00	2.50
48.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.485	0.00	7.49
50.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.737	0.00	0.66
50.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.737	0.00	2.50
50.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.737	0.00	7.49
51.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	21.860	0.00	0.33
51.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	21.860	0.00	1.25
51.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	21.860	0.00	3.74
52.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	21.982	0.00	0.33
52.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	21.982	0.00	1.25
52.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	21.982	0.00	3.74
54.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.220	0.00	0.66
54.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.220	0.00	2.50
54.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.220	0.00	7.49
56.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.452	0.00	0.66
56.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.452	0.00	2.50
56.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.452	0.00	7.49
58.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.678	0.00	0.66
58.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.678	0.00	2.50
58.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.678	0.00	7.49
60.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.899	0.00	0.66

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
60.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.899	0.00	2.50
60.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.899	0.00	7.49
62.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.114	0.00	0.66
62.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.114	0.00	2.50
62.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.114	0.00	7.49
64.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.325	0.00	0.66
64.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.325	0.00	2.50
64.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.325	0.00	7.49
66.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.531	0.00	0.66
66.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.531	0.00	2.50
66.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.531	0.00	7.49
66.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	23.531	0.00	0.00
66.17	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	23.548	0.00	0.06
66.17	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	23.548	0.00	0.21
66.17	1 5/8" Coax	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	23.548	0.00	0.64
66.17	C6X10.5 Reinforcing	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	23.548	0.00	0.00
68.00	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	23.733	0.00	0.60
68.00	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	23.733	0.00	2.28
68.00	1 5/8" Coax	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	23.733	0.00	6.85
68.00	C6X10.5 Reinforcing	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	23.733	0.00	0.00
70.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.930	0.00	0.66
70.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.930	0.00	2.50
70.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.930	0.00	7.49
70.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.930	0.00	0.00
71.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.027	0.00	0.33
71.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.027	0.00	1.25
71.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.027	0.00	3.74
71.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.027	0.00	0.00
72.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.123	0.00	0.33
72.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.123	0.00	1.25
72.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.123	0.00	3.74
72.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.123	0.00	0.00
74.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.313	0.00	0.66
74.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.313	0.00	2.50
74.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.313	0.00	7.49
74.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.313	0.00	0.00
76.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.499	0.00	0.66
76.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.499	0.00	2.50
76.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.499	0.00	7.49
76.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.499	0.00	0.00
78.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.681	0.00	0.66
78.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.681	0.00	2.50
78.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.681	0.00	7.49
78.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.681	0.00	0.00
80.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.861	0.00	0.66
80.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.861	0.00	2.50
80.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.861	0.00	7.49

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
80.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.861	0.00	0.00
81.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.949	0.00	0.33
81.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.949	0.00	1.25
81.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.949	0.00	3.74
81.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.949	0.00	0.00
82.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.037	0.00	0.33
82.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.037	0.00	1.25
82.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.037	0.00	3.74
82.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.037	0.00	0.00
84.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.210	0.00	0.66
84.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.210	0.00	2.50
84.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.210	0.00	7.49
84.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.210	0.00	0.00
85.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.295	0.00	0.33
85.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.295	0.00	1.25
85.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.295	0.00	3.74
85.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.295	0.00	0.00
86.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.380	0.00	0.33
86.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.380	0.00	1.25
86.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.380	0.00	3.74
86.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.380	0.00	0.00
88.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.547	0.00	0.66
88.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.547	0.00	2.50
88.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.547	0.00	7.49
88.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.547	0.00	0.00
90.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.711	0.00	0.66
90.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.711	0.00	2.50
90.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.711	0.00	7.49
90.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.711	0.00	0.00
91.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.793	0.00	0.33
91.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.793	0.00	1.25
91.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.793	0.00	3.74
91.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.793	0.00	0.00
92.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.873	0.00	0.33
92.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.873	0.00	1.25
92.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.873	0.00	3.74
92.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.873	0.00	0.00
93.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	26.019	0.00	0.60
93.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	26.019	0.00	2.28
93.83	1 5/8" Coax	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	26.019	0.00	6.85
93.83	C6X10.5 Reinforcing	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	26.019	0.00	0.00
94.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	26.033	0.00	0.06
94.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	26.033	0.00	0.21
94.00	1 5/8" Coax	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	26.033	0.00	0.64
94.00	C6X10.5 Reinforcing	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	26.033	0.00	0.00
96.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.190	0.00	0.66
96.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.190	0.00	2.50

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
96.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.190	0.00	7.49
96.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.190	0.00	0.00
98.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.345	0.00	0.66
98.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.345	0.00	2.50
98.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.345	0.00	7.49
100.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.497	0.00	0.66
100.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.497	0.00	2.50
100.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.497	0.00	7.49
102.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.648	0.00	0.66
102.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.648	0.00	2.50
102.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.648	0.00	7.49
104.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.796	0.00	0.66
104.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.796	0.00	2.50
104.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.796	0.00	7.49
106.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.942	0.00	0.66
106.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.942	0.00	2.50
106.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.942	0.00	7.49
108.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.086	0.00	0.66
108.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.086	0.00	2.50
108.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.086	0.00	7.49
110.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.229	0.00	0.66
110.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.229	0.00	2.50
110.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.229	0.00	7.49
111.17	Safety Cable	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	27.311	0.00	0.38
111.17	Step bolts (ladder)	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	27.311	0.00	1.46
111.17	1 5/8" Coax	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	27.311	0.00	4.38
111.17	C6X10.5 Reinforcing	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	27.311	0.00	0.00
112.00	Safety Cable	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	27.369	0.00	0.27
112.00	Step bolts (ladder)	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	27.369	0.00	1.04
112.00	1 5/8" Coax	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	27.369	0.00	3.11
112.00	C6X10.5 Reinforcing	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	27.369	0.00	0.00
114.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.508	0.00	0.66
114.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.508	0.00	2.50
114.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.508	0.00	7.49
114.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.508	0.00	0.00
115.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.577	0.00	0.33
115.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.577	0.00	1.25
115.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.577	0.00	3.74
115.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.577	0.00	0.00
116.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.645	0.00	0.33
116.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.645	0.00	1.25
116.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.645	0.00	3.74
116.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.645	0.00	0.00
118.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.780	0.00	0.66
118.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.780	0.00	2.50
118.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.780	0.00	7.49
118.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.780	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
120.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.914	0.00	0.66
120.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.914	0.00	2.50
120.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.914	0.00	7.49
120.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.914	0.00	0.00
122.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.046	0.00	0.66
122.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.046	0.00	2.50
122.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.046	0.00	7.49
122.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.046	0.00	0.00
123.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	28.166	0.00	0.60
123.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	28.166	0.00	2.28
123.83	1 5/8" Coax	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	28.166	0.00	6.85
123.83	C6X10.5 Reinforcing	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	28.166	0.00	0.00
124.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	28.177	0.00	0.06
124.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	28.177	0.00	0.21
124.00	1 5/8" Coax	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	28.177	0.00	0.64
124.00	C6X10.5 Reinforcing	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	28.177	0.00	0.00
126.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.306	0.00	0.66
126.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.306	0.00	2.50
126.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.306	0.00	7.49
126.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.306	0.00	0.00
128.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.434	0.00	0.66
128.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.434	0.00	2.50
128.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.434	0.00	7.49
130.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.560	0.00	0.66
130.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.560	0.00	2.50
130.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.560	0.00	7.49
132.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.685	0.00	0.66
132.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.685	0.00	2.50
132.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.685	0.00	7.49
134.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.808	0.00	0.66
134.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.808	0.00	2.50
134.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.808	0.00	7.49
135.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	0.33
135.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	1.25
135.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	3.74
136.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.930	0.00	0.33
136.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.930	0.00	1.25
136.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.930	0.00	3.74
138.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.051	0.00	0.66
138.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.051	0.00	2.50
138.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.051	0.00	7.49
140.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.171	0.00	0.66
140.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.171	0.00	2.50
140.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.171	0.00	7.49
142.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.289	0.00	0.66
142.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.289	0.00	2.50
142.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.289	0.00	7.49

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
143.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.348	0.00	0.33
143.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.348	0.00	1.25
143.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.348	0.00	3.74
144.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.407	0.00	0.33
144.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.407	0.00	1.25
144.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.407	0.00	3.74
146.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.523	0.00	0.66
146.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.523	0.00	2.50
146.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.523	0.00	7.49
148.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.638	0.00	0.66
148.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.638	0.00	2.50
148.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.638	0.00	7.49
150.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.752	0.00	0.66
150.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.752	0.00	2.50
150.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.752	0.00	7.49
152.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.865	0.00	0.66
152.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.865	0.00	2.50
152.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.865	0.00	7.49
153.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.921	0.00	0.33
153.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.921	0.00	1.25
153.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.921	0.00	3.74
154.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.976	0.00	0.33
154.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.976	0.00	1.25
154.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.976	0.00	3.74
156.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.087	0.00	0.66
156.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.087	0.00	2.50
156.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.087	0.00	7.49
158.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.197	0.00	0.66
158.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.197	0.00	2.50
158.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.197	0.00	7.49
160.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.305	0.00	0.66
160.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.305	0.00	2.50
160.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.305	0.00	7.49
162.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.413	0.00	0.66
162.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.413	0.00	2.50
162.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.413	0.00	7.49
163.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.467	0.00	0.33
163.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.467	0.00	1.25
163.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.467	0.00	3.74
164.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.520	0.00	0.33
164.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.520	0.00	1.25
164.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.520	0.00	3.74
166.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.626	0.00	0.66
166.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.626	0.00	2.50
166.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.626	0.00	7.49
168.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.731	0.00	0.66
168.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.731	0.00	2.50

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
168.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.731	0.00	7.49
170.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.835	0.00	0.66
170.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.835	0.00	2.50
170.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.835	0.00	7.49
172.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.938	0.00	0.66
172.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.938	0.00	2.50
172.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.938	0.00	7.49
173.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.989	0.00	0.33
173.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.989	0.00	1.25
173.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.989	0.00	3.74
174.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.041	0.00	0.33
174.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.041	0.00	1.25
176.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.142	0.00	0.66
176.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.142	0.00	2.50
178.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.243	0.00	0.66
178.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.243	0.00	2.50
180.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.343	0.00	0.66
180.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.343	0.00	2.50
181.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.392	0.00	0.33
181.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.392	0.00	1.25
182.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.442	0.00	0.33
182.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.442	0.00	1.25
183.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.491	0.00	0.33
183.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.491	0.00	1.25
Totals:											0.0	936.0

Calculated Forces

Structure: CT01002-S-SBA
Site Name: Waterford
Height: 183.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G
Exposure: B
Crest Height: 0.00
Site Class: D - Stiff Soil
Struct Class: II

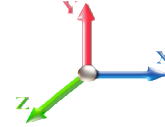
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Load Case: 1.2D + 1.6W 105 mph Wind

Iterations 30

Dead Load Factor 1.20
Wind Load Factor 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-60.99	-37.69	0.00	-4863.3	0.00	4863.30	5190.16	2595.08	13702.9	6861.66	0.00	0.000	0.000	0.721
2.00	-60.21	-37.53	0.00	-4787.9	0.00	4787.93	5174.50	2587.25	13560.7	6790.43	0.02	-0.069	0.000	0.717
4.00	-59.44	-37.37	0.00	-4712.8	0.00	4712.88	5158.51	2579.25	13418.2	6719.08	0.06	-0.139	0.000	0.713
6.00	-58.67	-37.21	0.00	-4638.1	0.00	4638.15	5142.18	2571.09	13275.4	6647.61	0.13	-0.209	0.000	0.709
8.00	-57.91	-37.05	0.00	-4563.7	0.00	4563.74	5125.52	2562.76	13132.5	6576.03	0.24	-0.280	0.000	0.706
10.00	-57.15	-36.89	0.00	-4489.6	0.00	4489.65	5108.53	2554.27	12989.4	6504.36	0.37	-0.351	0.000	0.702
12.00	-56.40	-36.73	0.00	-4415.8	0.00	4415.88	5091.21	2545.61	12846.0	6432.60	0.53	-0.422	0.000	0.698
14.00	-55.65	-36.57	0.00	-4342.4	0.00	4342.43	5073.56	2536.78	12702.6	6360.75	0.73	-0.494	0.000	0.694
16.00	-54.91	-36.41	0.00	-4269.3	0.00	4269.30	5055.57	2527.79	12559.0	6288.85	0.95	-0.567	0.000	0.690
18.00	-54.17	-36.25	0.00	-4196.4	0.00	4196.48	5037.25	2518.63	12415.3	6216.88	1.20	-0.639	0.000	0.686
20.00	-53.43	-36.09	0.00	-4123.9	0.00	4123.98	5018.60	2509.30	12271.4	6144.86	1.49	-0.713	0.000	0.682
22.00	-52.70	-35.94	0.00	-4051.7	0.00	4051.79	4999.62	2499.81	12127.5	6072.81	1.80	-0.786	0.000	0.678
24.00	-51.98	-35.78	0.00	-3979.9	0.00	3979.92	4980.31	2490.15	11983.6	6000.72	2.15	-0.861	0.000	0.674
26.00	-51.26	-35.62	0.00	-3908.3	0.00	3908.36	4960.66	2480.33	11839.6	5928.62	2.52	-0.935	0.000	0.670
28.00	-50.55	-35.47	0.00	-3837.1	0.00	3837.12	4940.68	2470.34	11695.6	5856.50	2.93	-1.010	0.000	0.666
30.00	-49.84	-35.31	0.00	-3766.1	0.00	3766.18	4920.37	2460.19	11551.6	5784.39	3.37	-1.086	0.000	0.661
32.00	-49.13	-35.15	0.00	-3695.5	0.00	3695.56	4899.73	2449.87	11407.6	5712.28	3.84	-1.162	0.000	0.657
34.00	-48.43	-34.99	0.00	-3625.2	0.00	3625.26	4878.76	2439.38	11263.6	5640.19	4.35	-1.238	0.000	0.653
36.00	-47.74	-34.82	0.00	-3555.2	0.00	3555.29	4857.45	2428.72	11119.7	5568.14	4.88	-1.315	0.000	0.649
38.00	-47.04	-34.65	0.00	-3485.6	0.00	3485.64	4835.81	2417.91	10975.9	5496.12	5.45	-1.392	0.000	0.644
40.00	-46.37	-34.47	0.00	-3416.3	0.00	3416.34	4813.84	2406.92	10832.2	5424.15	6.05	-1.470	0.000	0.640
41.00	-46.03	-34.38	0.00	-3381.8	0.00	3381.87	4802.73	2401.36	10760.3	5388.18	6.36	-1.509	0.000	0.637
42.00	-45.41	-34.30	0.00	-3347.4	0.00	3347.49	4791.54	2395.77	10688.5	5352.24	6.68	-1.549	0.000	0.635
44.00	-44.20	-34.11	0.00	-3278.8	0.00	3278.89	4768.90	2384.45	10545.1	5280.39	7.35	-1.627	0.000	0.630
46.00	-43.00	-33.91	0.00	-3210.6	0.00	3210.68	4745.94	2372.97	10401.7	5208.63	8.05	-1.706	0.000	0.626
48.00	-41.82	-33.71	0.00	-3142.8	0.00	3142.87	4759.60	2379.80	10486.7	5251.18	8.78	-1.786	0.000	0.607
50.00	-41.16	-33.50	0.00	-3075.4	0.00	3075.46	4736.50	2368.25	10343.5	5179.45	9.55	-1.866	0.000	0.603
51.00	-40.83	-33.41	0.00	-3041.9	0.00	3041.96	4724.82	2362.41	10271.9	5143.62	9.94	-1.904	0.000	0.600
51.00	-40.83	-33.41	0.00	-3041.9	0.00	3041.96	4064.30	2032.15	8835.99	4424.56	9.94	-1.904	0.000	0.698
52.00	-40.49	-33.32	0.00	-3008.5	0.00	3008.55	4053.20	2026.60	8772.35	4392.70	10.34	-1.943	0.000	0.695
54.00	-39.83	-33.13	0.00	-2941.9	0.00	2941.91	4030.83	2015.41	8645.34	4329.09	11.18	-2.020	0.000	0.690
56.00	-39.18	-32.93	0.00	-2875.6	0.00	2875.65	4008.20	2004.10	8518.66	4265.66	12.04	-2.098	0.000	0.684
58.00	-38.53	-32.74	0.00	-2809.7	0.00	2809.79	3985.33	1992.66	8392.33	4202.40	12.93	-2.176	0.000	0.679
60.00	-37.89	-32.54	0.00	-2744.3	0.00	2744.32	3962.20	1981.10	8266.38	4139.33	13.86	-2.254	0.000	0.673
62.00	-37.26	-32.34	0.00	-2679.2	0.00	2679.25	3938.82	1969.41	8140.81	4076.46	14.82	-2.332	0.000	0.667
64.00	-36.63	-32.13	0.00	-2614.5	0.00	2614.58	3915.19	1957.60	8015.64	4013.78	15.82	-2.411	0.000	0.661
66.00	-36.02	-31.91	0.00	-2550.3	0.00	2550.31	3891.31	1945.66	7890.88	3951.30	16.85	-2.490	0.000	0.655
66.17	-35.95	-31.91	0.00	-2544.8	0.00	2544.89	3889.27	1944.64	7880.29	3946.00	16.93	-2.497	0.000	0.480
68.00	-35.40	-31.71	0.00	-2486.5	0.00	2486.50	3867.19	1933.59	7766.55	3889.05	17.90	-2.550	0.000	0.474
70.00	-34.80	-31.48	0.00	-2423.0	0.00	2423.09	3842.81	1921.40	7642.66	3827.01	18.98	-2.608	0.000	0.468
71.00	-34.50	-31.37	0.00	-2391.6	0.00	2391.60	3830.52	1915.26	7580.89	3796.08	19.53	-2.638	0.000	0.465
71.00	-34.50	-31.37	0.00	-2391.6	0.00	2391.60	3467.89	1733.95	6863.13	3436.66	19.53	-2.638	0.000	0.514
72.00	-34.19	-31.27	0.00	-2360.2	0.00	2360.23	3456.29	1728.14	6806.46	3408.29	20.09	-2.667	0.000	0.511
74.00	-33.60	-31.05	0.00	-2297.6	0.00	2297.69	3432.92	1716.46	6693.50	3351.73	21.22	-2.725	0.000	0.504
76.00	-33.01	-30.83	0.00	-2235.5	0.00	2235.58	3409.33	1704.67	6581.05	3295.42	22.37	-2.783	0.000	0.497
78.00	-32.43	-30.61	0.00	-2173.9	0.00	2173.91	3385.54	1692.77	6469.11	3239.36	23.55	-2.841	0.000	0.490
80.00	-31.85	-30.39	0.00	-2112.6	0.00	2112.68	3361.54	1680.77	6357.71	3183.58	24.75	-2.899	0.000	0.483
81.00	-31.57	-30.28	0.00	-2082.3	0.00	2082.30	3349.46	1674.73	6302.21	3155.79	25.36	-2.928	0.000	0.480

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 27



81.00	-31.57	-30.28	0.00	-2082.3	0.00	2082.30	2964.88	1482.44	5593.85	2801.08	25.36	-2.928	0.000	0.452
82.00	-31.31	-30.18	0.00	-2052.0	0.00	2052.02	2956.03	1478.01	5548.33	2778.29	25.98	-2.958	0.000	0.508
84.00	-30.82	-29.96	0.00	-1991.6	0.00	1991.66	2938.12	1469.06	5457.44	2732.78	27.23	-3.023	0.000	0.499
85.00	-30.57	-29.85	0.00	-1961.7	0.00	1961.71	2929.07	1464.54	5412.08	2710.06	27.87	-3.056	0.000	0.495
86.00	-30.13	-29.74	0.00	-1931.8	0.00	1931.85	2919.96	1459.98	5366.77	2687.37	28.51	-3.089	0.000	0.486
88.00	-29.27	-29.51	0.00	-1872.3	0.00	1872.37	2901.53	1450.76	5276.32	2642.08	29.82	-3.153	0.000	0.477
90.00	-28.43	-29.26	0.00	-1813.3	0.00	1813.36	2882.84	1441.42	5186.12	2596.92	31.15	-3.217	0.000	0.468
91.00	-28.01	-29.14	0.00	-1784.1	0.00	1784.10	2898.35	1449.17	5260.87	2634.34	31.83	-3.249	0.000	0.473
92.00	-27.76	-29.04	0.00	-1754.9	0.00	1754.96	2889.01	1444.51	5215.76	2611.76	32.51	-3.281	0.000	0.455
93.83	-27.34	-28.83	0.00	-1701.8	0.00	1701.82	2871.76	1435.88	5133.38	2570.50	33.78	-3.338	0.000	0.447
93.83	-27.34	-28.83	0.00	-1701.8	0.00	1701.82	2871.76	1435.88	5133.38	2570.50	33.78	-3.338	0.000	0.447
94.00	-27.27	-28.83	0.00	-1696.9	0.00	1696.92	2870.15	1435.07	5125.73	2566.68	33.90	-3.343	0.000	0.671
96.00	-26.78	-28.63	0.00	-1639.2	0.00	1639.26	2851.02	1425.51	5035.98	2521.73	35.32	-3.436	0.000	0.660
98.00	-26.29	-28.42	0.00	-1582.0	0.00	1582.01	2831.62	1415.81	4946.52	2476.93	36.78	-3.528	0.000	0.648
100.00	-25.81	-28.22	0.00	-1525.1	0.00	1525.17	2811.97	1405.98	4857.35	2432.29	38.28	-3.620	0.000	0.637
102.00	-25.33	-28.01	0.00	-1468.7	0.00	1468.74	2792.05	1396.03	4768.51	2387.80	39.81	-3.712	0.000	0.625
104.00	-24.86	-27.81	0.00	-1412.7	0.00	1412.72	2771.87	1385.94	4680.00	2343.48	41.39	-3.803	0.000	0.612
106.00	-24.39	-27.61	0.00	-1357.1	0.00	1357.11	2751.43	1375.71	4591.84	2299.33	43.00	-3.893	0.000	0.599
108.00	-23.92	-27.42	0.00	-1301.8	0.00	1301.88	2730.72	1365.36	4504.04	2255.37	44.65	-3.984	0.000	0.586
110.00	-23.47	-27.22	0.00	-1247.0	0.00	1247.04	2709.75	1354.88	4416.62	2211.59	46.34	-4.073	0.000	0.573
111.17	-23.21	-27.10	0.00	-1215.2	0.00	1215.20	2697.36	1348.68	4365.66	2186.08	47.34	-4.125	0.000	0.451
112.00	-23.01	-27.03	0.00	-1192.7	0.00	1192.70	2688.52	1344.26	4329.60	2168.02	48.06	-4.155	0.000	0.446
114.00	-22.58	-26.82	0.00	-1138.6	0.00	1138.65	2667.03	1333.51	4242.98	2124.64	49.82	-4.225	0.000	0.433
115.00	-22.36	-26.72	0.00	-1111.8	0.00	1111.83	2656.18	1328.09	4199.83	2103.04	50.70	-4.260	0.000	0.416
115.00	-22.36	-26.72	0.00	-1111.8	0.00	1111.83	1951.15	975.57	3095.05	1549.82	50.70	-4.260	0.000	0.455
116.00	-22.16	-26.62	0.00	-1085.1	0.00	1085.12	1944.57	972.29	3065.67	1535.11	51.60	-4.294	0.000	0.527
118.00	-21.78	-26.42	0.00	-1031.8	0.00	1031.88	1931.24	965.62	3006.98	1505.73	53.41	-4.372	0.000	0.509
120.00	-21.41	-26.21	0.00	-979.04	0.00	979.04	1917.63	958.82	2948.42	1476.40	55.26	-4.449	0.000	0.491
122.00	-21.04	-26.01	0.00	-926.61	0.00	926.61	1903.77	951.88	2889.98	1447.14	57.14	-4.524	0.000	0.472
123.83	-20.73	-25.82	0.00	-879.02	0.00	879.02	1890.85	945.43	2836.64	1420.43	58.88	-4.592	0.000	0.455
123.83	-20.73	-25.82	0.00	-879.02	0.00	879.02	1890.85	945.43	2836.64	1420.43	58.88	-4.592	0.000	0.455
124.00	-20.67	-25.82	0.00	-874.63	0.00	874.63	1889.64	944.82	2831.69	1417.95	59.05	-4.598	0.000	0.629
126.00	-20.30	-25.62	0.00	-823.00	0.00	823.00	1875.25	937.63	2773.56	1388.84	60.99	-4.698	0.000	0.604
128.00	-19.93	-25.43	0.00	-771.75	0.00	771.75	1860.60	930.30	2715.62	1359.83	62.98	-4.795	0.000	0.579
130.00	-19.57	-25.24	0.00	-720.89	0.00	720.89	1845.69	922.84	2657.86	1330.91	65.01	-4.890	0.000	0.553
132.00	-18.99	-25.02	0.00	-670.42	0.00	670.42	1830.51	915.25	2600.31	1302.09	67.08	-4.982	0.000	0.526
134.00	-18.42	-24.80	0.00	-620.37	0.00	620.37	1815.07	907.53	2542.99	1273.39	69.18	-5.070	0.000	0.498
135.00	-18.13	-24.69	0.00	-595.57	0.00	595.57	1823.79	911.89	2575.21	1289.52	70.25	-5.114	0.000	0.473
136.00	-17.95	-24.60	0.00	-570.88	0.00	570.88	1816.04	908.02	2546.57	1275.18	71.32	-5.157	0.000	0.458
138.00	-17.61	-24.40	0.00	-521.67	0.00	521.67	1800.35	900.18	2489.47	1246.58	73.50	-5.235	0.000	0.429
140.00	-17.27	-24.21	0.00	-472.87	0.00	472.87	1784.41	892.20	2432.62	1218.12	75.70	-5.309	0.000	0.399
142.00	-16.94	-24.00	0.00	-424.46	0.00	424.46	1768.19	884.10	2376.04	1189.79	77.94	-5.379	0.000	0.367
143.00	-13.79	-18.74	0.00	-400.45	0.00	400.45	1759.99	879.99	2347.86	1175.68	79.07	-5.412	0.000	0.349
144.00	-13.64	-18.65	0.00	-381.71	0.00	381.71	1751.72	875.86	2319.75	1161.60	80.21	-5.445	0.000	0.337
146.00	-13.35	-18.45	0.00	-344.41	0.00	344.41	1734.98	867.49	2263.76	1133.56	82.50	-5.506	0.000	0.312
148.00	-13.07	-18.26	0.00	-307.50	0.00	307.50	1717.98	858.99	2208.08	1105.68	84.81	-5.564	0.000	0.286
150.00	-11.11	-16.74	0.00	-270.99	0.00	270.99	1700.72	850.36	2152.74	1077.97	87.15	-5.618	0.000	0.258
152.00	-10.85	-16.54	0.00	-237.51	0.00	237.51	1683.20	841.60	2097.74	1050.43	89.51	-5.667	0.000	0.233
153.00	-8.62	-12.11	0.00	-220.97	0.00	220.97	1674.33	837.17	2070.37	1036.72	90.70	-5.690	0.000	0.219
154.00	-8.50	-12.02	0.00	-208.86	0.00	208.86	1665.41	832.70	2043.10	1023.07	91.89	-5.713	0.000	0.209
156.00	-8.28	-11.83	0.00	-184.82	0.00	184.82	1647.36	823.68	1988.83	995.90	94.29	-5.755	0.000	0.191
158.00	-8.05	-11.64	0.00	-161.16	0.00	161.16	1629.04	814.52	1934.96	968.92	96.71	-5.793	0.000	0.171
160.00	-7.83	-11.45	0.00	-137.88	0.00	137.88	1610.47	805.23	1881.50	942.15	99.14	-5.828	0.000	0.151
162.00	-7.62	-11.26	0.00	-114.98	0.00	114.98	1591.63	795.82	1828.46	915.59	101.58	-5.859	0.000	0.131
163.00	-5.65	-9.17	0.00	-103.71	0.00	103.71	1582.11	791.06	1802.10	902.39	102.81	-5.874	0.000	0.119
164.00	-5.55	-9.08	0.00	-94.55	0.00	94.55	1572.53	786.27	1775.86	889.25	104.04	-5.887	0.000	0.110
166.00	-5.35	-8.89	0.00	-76.39	0.00	76.39	1553.17	776.58	1723.71	863.13	106.51	-5.910	0.000	0.092

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 28
	Struct Class: II	



168.00	-5.15	-8.71	0.00	-58.61	0.00	58.61	1533.54	766.77	1672.03	837.26	108.98	-5.929	0.000	0.073
170.00	-4.96	-8.54	0.00	-41.18	0.00	41.18	1513.65	756.83	1620.83	811.62	111.47	-5.944	0.000	0.054
172.00	-4.77	-8.36	0.00	-24.11	0.00	24.11	1493.50	746.75	1570.13	786.23	113.96	-5.955	0.000	0.034
173.00	-2.41	-2.20	0.00	-15.75	0.00	15.75	1483.33	741.66	1544.98	773.64	115.20	-5.958	0.000	0.022
174.00	-2.34	-2.12	0.00	-13.55	0.00	13.55	1473.09	736.54	1519.95	761.10	116.45	-5.961	0.000	0.019
176.00	-2.19	-1.95	0.00	-9.31	0.00	9.31	1452.41	726.20	1470.30	736.24	118.94	-5.965	0.000	0.014
178.00	-2.05	-1.78	0.00	-5.41	0.00	5.41	1427.85	713.93	1417.60	709.85	121.44	-5.968	0.000	0.009
180.00	-1.90	-1.62	0.00	-1.85	0.00	1.85	1400.09	700.05	1362.74	682.38	123.93	-5.969	0.000	0.004
180.00	-1.90	-1.62	0.00	-1.85	0.00	1.85	678.42	339.21	662.23	396.30	123.93	-5.969	0.000	0.007
181.00	-0.16	-0.15	0.00	-0.23	0.00	0.23	678.42	339.21	662.23	396.30	125.18	-5.969	0.000	0.001
182.00	-0.08	-0.08	0.00	-0.08	0.00	0.08	678.42	339.21	662.23	396.30	126.43	-5.969	0.000	0.000
183.00	0.00	-0.07	0.00	0.00	0.00	0.00	678.42	339.21	662.23	396.30	127.68	-5.969	0.000	0.000

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

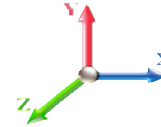


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Load Case: 0.9D + 1.6W 105 mph Wind

Iterations 30

Dead Load Factor 0.90
Wind Load Factor 1.60



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		1.00	0.70	18.769	20.65	479.47	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	18.769	20.65	475.97	0.650	0.000	2.00	10.876	7.07	233.5	0.0	465.8
4.00		1.00	0.70	18.769	20.65	472.47	0.650	0.000	2.00	10.796	7.02	231.8	0.0	462.3
6.00		1.00	0.70	18.769	20.65	468.97	0.650	0.000	2.00	10.717	6.97	230.1	0.0	458.9
8.00		1.00	0.70	18.769	20.65	465.47	0.650	0.000	2.00	10.637	6.91	228.4	0.0	455.5
10.00		1.00	0.70	18.769	20.65	461.97	0.650	0.000	2.00	10.557	6.86	226.7	0.0	452.0
12.00		1.00	0.70	18.769	20.65	458.47	0.650	0.000	2.00	10.478	6.81	225.0	0.0	448.6
14.00		1.00	0.70	18.769	20.65	454.97	0.650	0.000	2.00	10.398	6.76	223.3	0.0	445.2
16.00		1.00	0.70	18.769	20.65	451.47	0.650	0.000	2.00	10.318	6.71	221.5	0.0	441.7
18.00		1.00	0.70	18.769	20.65	447.97	0.650	0.000	2.00	10.239	6.66	219.8	0.0	438.3
20.00		1.00	0.70	18.769	20.65	444.47	0.650	0.000	2.00	10.159	6.60	218.1	0.0	434.9
22.00		1.00	0.70	18.769	20.65	440.97	0.650	0.000	2.00	10.079	6.55	216.4	0.0	431.4
24.00		1.00	0.70	18.769	20.65	437.47	0.650	0.000	2.00	9.999	6.50	214.7	0.0	428.0
26.00		1.00	0.70	18.769	20.65	433.97	0.650	0.000	2.00	9.920	6.45	213.0	0.0	424.6
28.00		1.00	0.70	18.769	20.65	430.47	0.650	0.000	2.00	9.840	6.40	211.3	0.0	421.1
30.00		1.00	0.70	18.785	20.66	427.15	0.650	0.000	2.00	9.760	6.34	209.7	0.0	417.7
32.00		1.00	0.71	19.134	21.05	427.58	0.650	0.000	2.00	9.681	6.29	211.9	0.0	414.3
34.00		1.00	0.73	19.469	21.42	427.73	0.650	0.000	2.00	9.601	6.24	213.8	0.0	410.8
36.00		1.00	0.74	19.789	21.77	427.64	0.650	0.000	2.00	9.521	6.19	215.6	0.0	407.4
38.00		1.00	0.75	20.097	22.11	427.34	0.650	0.000	2.00	9.442	6.14	217.1	0.0	404.0
40.00		1.00	0.76	20.394	22.43	426.83	0.650	0.000	2.00	9.362	6.09	218.4	0.0	400.5
41.00	Bot - Section 2	1.00	0.77	20.538	22.59	426.51	0.650	0.000	1.00	4.651	3.02	109.3	0.0	199.0
42.00		1.00	0.77	20.680	22.75	426.14	0.650	0.000	1.00	4.695	3.05	111.1	0.0	399.0
44.00		1.00	0.78	20.957	23.05	425.29	0.650	0.000	2.00	9.330	6.06	223.7	0.0	792.8
46.00		1.00	0.79	21.225	23.35	424.27	0.650	0.000	2.00	9.250	6.01	224.6	0.0	786.0
48.00	Top - Section 1	1.00	0.80	21.485	23.63	423.12	0.650	0.000	2.00	9.170	5.96	225.4	0.0	779.1
50.00		1.00	0.81	21.737	23.91	427.83	0.650	0.000	2.00	9.091	5.91	226.1	0.0	388.8
51.00	Top - Section 2	1.00	0.82	21.860	24.05	427.15	0.650	0.000	1.00	4.515	2.94	112.9	0.0	193.1
52.00		1.00	0.82	21.982	24.18	426.44	0.650	0.000	1.00	4.495	2.92	113.0	0.0	192.3
54.00		1.00	0.83	22.220	24.44	424.94	0.650	0.000	2.00	8.931	5.81	227.0	0.0	382.0
56.00		1.00	0.84	22.452	24.70	423.33	0.650	0.000	2.00	8.852	5.75	227.4	0.0	378.6
58.00		1.00	0.85	22.678	24.95	421.61	0.650	0.000	2.00	8.772	5.70	227.6	0.0	375.1
60.00		1.00	0.85	22.899	25.19	419.79	0.650	0.000	2.00	8.692	5.65	227.7	0.0	371.7
62.00		1.00	0.86	23.114	25.43	417.87	0.650	0.000	2.00	8.612	5.60	227.7	0.0	368.3
64.00		1.00	0.87	23.325	25.66	415.87	0.650	0.000	2.00	8.533	5.55	227.7	0.0	364.8
66.00		1.00	0.88	23.531	25.88	413.78	0.650	0.000	2.00	8.453	5.49	227.6	0.0	361.4
66.17	RB1	1.00	0.88	23.548	25.90	413.60	0.650	0.000	0.17	0.715	0.46	19.3	0.0	30.6
68.00		1.00	0.89	23.733	26.11	411.62	0.650	0.000	1.83	7.659	4.98	207.9	0.0	327.4
70.00		1.00	0.89	23.930	26.32	409.37	0.650	0.000	2.00	8.294	5.39	227.0	0.0	354.5
71.00	Top - Section 3	1.00	0.90	24.027	26.43	408.22	0.650	0.000	1.00	4.117	2.68	113.2	0.0	176.0
72.00		1.00	0.90	24.123	26.54	407.05	0.650	0.000	1.00	4.097	2.66	113.1	0.0	175.1
74.00		1.00	0.91	24.313	26.74	404.66	0.650	0.000	2.00	8.134	5.29	226.2	0.0	347.7
76.00		1.00	0.91	24.499	26.95	402.21	0.650	0.000	2.00	8.055	5.24	225.7	0.0	344.2
78.00		1.00	0.92	24.681	27.15	399.69	0.650	0.000	2.00	7.975	5.18	225.2	0.0	340.8
80.00		1.00	0.93	24.861	27.35	397.11	0.650	0.000	2.00	7.895	5.13	224.5	0.0	337.4
81.00	Top - Section 4	1.00	0.93	24.949	27.44	395.80	0.650	0.000	1.00	3.918	2.55	111.8	0.0	167.4
82.00		1.00	0.93	25.037	27.54	394.47	0.650	0.000	1.00	3.898	2.53	111.6	0.0	139.0

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00	1.00	0.94	25.210	27.73	391.78	0.650	0.000	2.00	7.736	5.03	223.1	0.0	275.8
85.00 Bot - Section 6	1.00	0.94	25.295	27.82	390.41	0.650	0.000	1.00	3.838	2.49	111.1	0.0	136.8
86.00	1.00	0.95	25.380	27.92	389.03	0.650	0.000	1.00	3.871	2.52	112.4	0.0	274.1
88.00	1.00	0.95	25.547	28.10	386.22	0.650	0.000	2.00	7.682	4.99	224.5	0.0	543.9
90.00	1.00	0.96	25.711	28.28	383.37	0.650	0.000	2.00	7.603	4.94	223.6	0.0	538.2
91.00 Top - Section 5	1.00	0.96	25.793	28.37	381.92	0.650	0.000	1.00	3.771	2.45	111.3	0.0	267.0
92.00	1.00	0.96	25.873	28.46	385.92	0.650	0.000	1.00	3.752	2.44	111.0	0.0	133.7
93.83 RT1	1.00	0.97	26.019	28.62	383.24	0.650	0.000	1.83	6.814	4.43	202.8	0.0	242.9
94.00	1.00	0.97	26.033	28.64	382.99	0.650	0.000	0.17	0.630	0.41	18.8	0.0	22.4
96.00	1.00	0.98	26.190	28.81	380.01	0.650	0.000	2.00	7.364	4.79	220.6	0.0	262.4
98.00	1.00	0.98	26.345	28.98	376.98	0.650	0.000	2.00	7.284	4.73	219.5	0.0	259.6
100.00	1.00	0.99	26.497	29.15	373.91	0.650	0.000	2.00	7.204	4.68	218.4	0.0	256.7
102.00	1.00	0.99	26.648	29.31	370.80	0.650	0.000	2.00	7.125	4.63	217.2	0.0	253.8
104.00	1.00	1.00	26.796	29.48	367.65	0.650	0.000	2.00	7.045	4.58	216.0	0.0	251.0
106.00	1.00	1.00	26.942	29.64	364.46	0.650	0.000	2.00	6.967	4.53	214.8	0.0	248.1
108.00	1.00	1.01	27.086	29.79	361.23	0.650	0.000	2.00	6.887	4.48	213.6	0.0	245.3
110.00	1.00	1.02	27.229	29.95	357.96	0.650	0.000	2.00	6.807	4.43	212.4	0.0	242.4
111.17 RB2	1.00	1.02	27.311	30.04	356.03	0.650	0.000	1.17	3.711	2.41	116.0	0.0	140.5
112.00	1.00	1.02	27.369	30.11	354.66	0.650	0.000	0.83	2.616	1.70	81.9	0.0	99.1
114.00	1.00	1.03	27.508	30.26	351.32	0.650	0.000	2.00	6.248	4.06	196.6	0.0	236.7
115.00 Top - Section 6	1.00	1.03	27.577	30.33	349.64	0.650	0.000	1.00	3.293	2.14	103.9	0.0	117.3
116.00	1.00	1.03	27.645	30.41	347.94	0.650	0.000	1.00	3.273	2.13	103.5	0.0	93.4
118.00	1.00	1.04	27.780	30.56	344.53	0.650	0.000	2.00	6.487	4.22	206.2	0.0	185.1
120.00	1.00	1.04	27.914	30.71	341.09	0.650	0.000	2.00	6.407	4.16	204.6	0.0	182.8
122.00	1.00	1.05	28.046	30.85	337.62	0.650	0.000	2.00	6.328	4.11	203.0	0.0	180.5
123.83 RT2	1.00	1.05	28.166	30.98	334.42	0.650	0.000	1.83	5.720	3.72	184.3	0.0	163.2
124.00	1.00	1.05	28.177	30.99	334.12	0.650	0.000	0.17	0.528	0.34	17.0	0.0	15.1
126.00	1.00	1.06	28.306	31.14	330.58	0.650	0.000	2.00	6.168	4.01	199.7	0.0	175.9
128.00	1.00	1.06	28.434	31.28	327.02	0.650	0.000	2.00	6.089	3.96	198.1	0.0	173.6
130.00 Bot - Section 8	1.00	1.07	28.560	31.42	323.43	0.650	0.000	2.00	6.009	3.91	196.3	0.0	171.3
132.00	1.00	1.07	28.685	31.55	319.81	0.650	0.000	2.00	6.014	3.91	197.4	0.0	340.5
134.00	1.00	1.07	28.808	31.69	316.16	0.650	0.000	2.00	5.934	3.86	195.6	0.0	336.0
135.00 Top - Section 7	1.00	1.08	28.869	31.76	314.32	0.650	0.000	1.00	2.937	1.91	97.0	0.0	166.3
136.00	1.00	1.08	28.930	31.82	317.10	0.650	0.000	1.00	2.917	1.90	96.6	0.0	83.2
138.00	1.00	1.08	29.051	31.96	313.41	0.650	0.000	2.00	5.775	3.75	191.9	0.0	164.6
140.00	1.00	1.09	29.171	32.09	309.69	0.650	0.000	2.00	5.695	3.70	190.1	0.0	162.3
142.00	1.00	1.09	29.289	32.22	305.95	0.650	0.000	2.00	5.616	3.65	188.2	0.0	160.0
143.00 Appurtenance(s)	1.00	1.09	29.348	32.28	304.06	0.650	0.000	1.00	2.778	1.81	93.3	0.0	79.2
144.00	1.00	1.10	29.407	32.35	302.18	0.650	0.000	1.00	2.758	1.79	92.8	0.0	78.6
146.00	1.00	1.10	29.523	32.48	298.38	0.650	0.000	2.00	5.456	3.55	184.3	0.0	155.5
148.00	1.00	1.11	29.638	32.60	294.56	0.650	0.000	2.00	5.376	3.49	182.3	0.0	153.2
150.00 Appurtenance(s)	1.00	1.11	29.752	32.73	290.72	0.650	0.000	2.00	5.297	3.44	180.3	0.0	150.9
152.00	1.00	1.11	29.865	32.85	286.86	0.650	0.000	2.00	5.217	3.39	178.2	0.0	148.6
153.00 Appurtenance(s)	1.00	1.12	29.921	32.91	284.92	0.650	0.000	1.00	2.579	1.68	88.3	0.0	73.4
154.00	1.00	1.12	29.976	32.97	282.97	0.650	0.000	1.00	2.559	1.66	87.7	0.0	72.9
156.00	1.00	1.12	30.087	33.10	279.06	0.650	0.000	2.00	5.058	3.29	174.1	0.0	144.0
158.00	1.00	1.13	30.197	33.22	275.13	0.650	0.000	2.00	4.978	3.24	172.0	0.0	141.7
160.00	1.00	1.13	30.305	33.34	271.18	0.650	0.000	2.00	4.898	3.18	169.8	0.0	139.5
162.00	1.00	1.13	30.413	33.45	267.21	0.650	0.000	2.00	4.819	3.13	167.7	0.0	137.2
163.00 Appurtenance(s)	1.00	1.14	30.467	33.51	265.21	0.650	0.000	1.00	2.379	1.55	82.9	0.0	67.7
164.00	1.00	1.14	30.520	33.57	263.21	0.650	0.000	1.00	2.360	1.53	82.4	0.0	67.2
166.00	1.00	1.14	30.626	33.69	259.20	0.650	0.000	2.00	4.659	3.03	163.2	0.0	132.6
168.00	1.00	1.15	30.731	33.80	255.16	0.650	0.000	2.00	4.580	2.98	161.0	0.0	130.3
170.00	1.00	1.15	30.835	33.92	251.11	0.650	0.000	2.00	4.500	2.92	158.7	0.0	128.0
172.00	1.00	1.15	30.938	34.03	247.03	0.650	0.000	2.00	4.420	2.87	156.4	0.0	125.7
173.00 Appurtenance(s)	1.00	1.16	30.989	34.09	244.99	0.650	0.000	1.00	2.180	1.42	77.3	0.0	62.0
174.00	1.00	1.16	31.041	34.14	242.94	0.650	0.000	1.00	2.160	1.40	76.7	0.0	61.4

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 31
	Struct Class: II	



176.00	1.00	1.16	31.142	34.26	238.83	0.650	0.000	2.00	4.261	2.77	151.8	0.0	121.1
178.00	1.00	1.17	31.243	34.37	234.70	0.650	0.000	2.00	4.181	2.72	149.4	0.0	118.9
180.00 Top - Section 8	1.00	1.17	31.343	34.48	230.55	0.650	0.000	2.00	4.102	2.67	147.1	0.0	116.6
181.00 Appurtenance(s)	1.00	1.17	31.392	34.53	227.23	0.600	0.000	1.00	2.000	1.20	66.3	0.0	64.1
182.00	1.00	1.17	31.442	34.59	227.41	0.600	0.000	1.00	2.000	1.20	66.4	0.0	64.1
183.00	1.00	1.17	31.491	34.64	227.58	0.600	0.000	1.00	2.000	1.20	66.5	0.0	64.1
Totals:								183.00			18,722.6		28,334.9

Discrete Appurtenance Forces

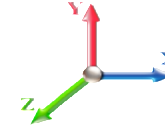
Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 30

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	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	1	31.392	34.532	1.00	1.00	22.00	1350.00	0.000	0.000	1215.51	0.00	0.00	
2	173.00	LNx-6514DS-VTM	3	30.989	34.088	0.64	0.80	15.53	89.37	0.000	0.000	847.18	0.00	0.00	
3	173.00	Low Profile	1	30.989	34.088	1.00	1.00	22.00	1350.00	0.000	0.000	1199.91	0.00	0.00	
4	173.00	APL866513-42T0	2	30.989	34.088	0.74	0.80	6.03	28.26	0.000	0.000	328.69	0.00	0.00	
5	173.00	HBXX-6517DS-VTM	6	30.989	34.088	0.62	0.80	31.60	219.78	0.000	0.000	1723.55	0.00	0.00	
6	173.00	LPA-80080-4CF-EDIN-0	4	30.989	34.088	0.80	0.80	8.35	43.20	0.000	0.000	455.53	0.00	0.00	
7	173.00	RRH2X60-AWS	3	30.989	34.088	0.61	0.80	6.38	162.00	0.000	0.000	348.19	0.00	0.00	
8	173.00	RRH2x60-700U	3	30.989	34.088	0.74	0.80	5.54	135.00	0.000	0.000	301.91	0.00	0.00	
9	173.00	RRH2x60-1900	3	30.989	34.088	0.72	0.80	3.26	52.65	0.000	0.000	177.89	0.00	0.00	
10	173.00	DB-T1-6Z-8AB-OZ	2	30.989	34.088	0.80	0.80	7.68	79.20	0.000	0.000	418.88	0.00	0.00	
11	163.00	LLPX310R	3	30.467	33.513	0.55	0.80	7.12	77.22	0.000	0.000	381.83	0.00	0.00	
12	163.00	Low Profile	1	30.467	33.513	1.00	1.00	22.00	1350.00	0.000	0.000	1179.67	0.00	0.00	
13	163.00	DAP Head	3	30.467	33.513	0.80	0.80	4.51	113.40	0.000	0.000	241.94	0.00	0.00	
14	153.00	S11B12	3	29.921	32.913	0.57	0.80	5.01	148.50	0.000	0.000	263.81	0.00	0.00	
15	153.00	KRY 112 144/1	3	29.921	32.913	0.56	0.80	0.69	29.70	0.000	0.000	36.27	0.00	0.00	
16	153.00	LNx-6515DS	3	29.921	32.913	0.64	0.80	22.02	134.46	0.000	0.000	1159.70	0.00	0.00	
17	153.00	AIR 21, 1.3M, B4A B2P	3	29.921	32.913	0.69	0.80	12.57	244.08	0.000	0.000	661.93	0.00	0.00	
18	153.00	AIR 21, 1.3M, B2A B4P	3	29.921	32.913	0.69	0.80	12.57	247.05	0.000	0.000	661.93	0.00	0.00	
19	153.00	Low Profile Platform-flat	1	29.921	32.913	1.00	1.00	25.00	1080.00	0.000	0.000	1316.50	0.00	0.00	
20	150.00	Low Profile	1	29.752	32.727	1.00	1.00	22.00	1350.00	0.000	0.000	1151.99	0.00	0.00	
21	143.00	DC6-48-60-18-8F	1	29.348	32.283	0.75	0.75	1.10	28.62	0.000	0.000	56.95	0.00	0.00	
22	143.00	HRK14	1	29.348	32.283	1.00	1.00	10.13	317.12	0.000	0.000	523.24	0.00	0.00	
23	143.00	Powerwave 7770.00	3	29.348	32.283	0.55	0.75	9.03	94.50	0.000	0.000	466.62	0.00	0.00	
24	143.00	Low Profile	1	29.348	32.283	1.00	1.00	22.00	1350.00	0.000	0.000	1136.36	0.00	0.00	
25	143.00	850-1900 Dual Band	3	29.348	32.283	0.49	0.75	0.77	14.85	0.000	0.000	39.89	0.00	0.00	
26	143.00	RRUS 11	3	29.348	32.283	0.50	0.75	3.80	136.89	0.000	0.000	196.22	0.00	0.00	
27	143.00	DBC-750	3	29.348	32.283	0.75	0.75	1.15	12.96	0.000	0.000	59.27	0.00	0.00	
28	143.00	OPA-65R-LCUU-H4	1	29.348	32.283	0.59	0.75	3.52	51.30	0.000	0.000	181.79	0.00	0.00	
29	143.00	QS46512-2	1	29.348	32.283	0.72	0.75	3.99	24.57	0.000	0.000	205.98	0.00	0.00	
30	143.00	TPA-65R-LCUUUU-H8	2	29.348	32.283	0.62	0.75	16.56	135.00	0.000	0.000	855.30	0.00	0.00	
31	143.00	OPA-65R-LCUU-H8	2	29.348	32.283	0.59	0.75	15.11	171.00	0.000	0.000	780.41	0.00	0.00	
32	143.00	DTMABP7819VG12A	3	29.348	32.283	0.50	0.75	1.72	51.84	0.000	0.000	88.77	0.00	0.00	
33	143.00	DBC0061F1V51-2	3	29.348	32.283	0.75	0.75	0.97	68.58	0.000	0.000	49.97	0.00	0.00	
34	143.00	RRUS 32 B2	3	29.348	32.283	0.50	0.75	4.13	143.10	0.000	0.000	213.36	0.00	0.00	
Totals:									10,884.20						18,926.95

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



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		233.53	548.53	0.00	0.00
4.00		231.82	545.09	0.00	0.00
6.00		230.10	541.66	0.00	0.00
8.00		228.39	538.23	0.00	0.00
10.00		226.68	534.80	0.00	0.00
12.00		224.97	531.36	0.00	0.00
14.00		223.26	527.93	0.00	0.00
16.00		221.55	524.50	0.00	0.00
18.00		219.84	521.07	0.00	0.00
20.00		218.13	517.63	0.00	0.00
22.00		216.42	514.20	0.00	0.00
24.00		214.71	510.77	0.00	0.00
26.00		212.99	507.34	0.00	0.00
28.00		211.28	503.90	0.00	0.00
30.00		209.75	500.47	0.00	0.00
32.00		211.91	497.04	0.00	0.00
34.00		213.84	493.61	0.00	0.00
36.00		215.55	490.18	0.00	0.00
38.00		217.08	486.74	0.00	0.00
40.00		218.42	483.31	0.00	0.00
41.00		109.28	240.37	0.00	0.00
42.00		111.07	440.37	0.00	0.00
44.00		223.68	875.59	0.00	0.00
46.00		224.60	868.73	0.00	0.00
48.00		225.39	861.86	0.00	0.00
50.00		226.05	471.62	0.00	0.00
51.00		112.92	234.52	0.00	0.00
52.00		113.05	233.66	0.00	0.00
54.00		227.03	464.75	0.00	0.00
56.00		227.35	461.32	0.00	0.00
58.00		227.58	457.89	0.00	0.00
60.00		227.70	454.46	0.00	0.00
62.00		227.74	451.02	0.00	0.00
64.00		227.69	447.59	0.00	0.00
66.00		227.55	444.16	0.00	0.00
66.17		19.26	37.60	0.00	0.00
68.00		207.93	403.13	0.00	0.00
70.00		227.05	437.29	0.00	0.00
71.00		113.16	217.36	0.00	0.00
72.00		113.07	216.50	0.00	0.00
74.00		226.25	430.42	0.00	0.00
76.00		225.74	426.99	0.00	0.00
78.00		225.18	423.56	0.00	0.00
80.00		224.54	420.13	0.00	0.00
81.00		111.82	208.78	0.00	0.00
82.00		111.64	180.35	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00		223.10	358.56	0.00	0.00
85.00		111.06	178.21	0.00	0.00
86.00		112.39	315.50	0.00	0.00
88.00		224.52	626.71	0.00	0.00
90.00		223.63	620.99	0.00	0.00
91.00		111.28	308.35	0.00	0.00
92.00		111.04	175.10	0.00	0.00
93.83		202.82	318.59	0.00	0.00
94.00		18.75	29.47	0.00	0.00
96.00		220.63	345.20	0.00	0.00
98.00		219.53	342.34	0.00	0.00
100.00		218.38	339.48	0.00	0.00
102.00		217.19	336.62	0.00	0.00
104.00		215.96	333.76	0.00	0.00
106.00		202.40	330.90	0.00	0.00
108.00		201.01	328.04	0.00	0.00
110.00		199.59	325.18	0.00	0.00
111.17		115.96	188.90	0.00	0.00
112.00		81.92	133.41	0.00	0.00
114.00		196.62	319.46	0.00	0.00
115.00		103.90	158.66	0.00	0.00
116.00		103.53	134.78	0.00	0.00
118.00		206.16	267.84	0.00	0.00
120.00		204.61	265.56	0.00	0.00
122.00		203.02	263.27	0.00	0.00
123.83		184.31	238.89	0.00	0.00
124.00		17.02	22.09	0.00	0.00
126.00		199.74	258.69	0.00	0.00
128.00		198.05	256.40	0.00	0.00
130.00		196.33	254.11	0.00	0.00
132.00		197.35	423.31	0.00	0.00
134.00		195.57	418.74	0.00	0.00
135.00		97.01	207.65	0.00	0.00
136.00		96.55	124.55	0.00	0.00
138.00		191.93	247.39	0.00	0.00
140.00		190.06	245.10	0.00	0.00
142.00		188.16	242.82	0.00	0.00
143.00	(30) attachments	4947.39	2720.88	0.00	0.00
144.00		92.78	107.95	0.00	0.00
146.00		184.28	214.19	0.00	0.00
148.00		182.29	211.90	0.00	0.00
150.00	(1) attachments	1332.27	1559.62	0.00	0.00
152.00		178.24	207.33	0.00	0.00
153.00	(16) attachments	4188.41	1986.60	0.00	0.00
154.00		87.75	90.01	0.00	0.00
156.00		174.09	178.31	0.00	0.00
158.00		171.97	176.02	0.00	0.00
160.00		169.82	173.73	0.00	0.00
162.00		167.66	171.44	0.00	0.00
163.00	(7) attachments	1886.37	1625.48	0.00	0.00
164.00		82.38	81.55	0.00	0.00
166.00		163.25	161.38	0.00	0.00
168.00		161.00	159.09	0.00	0.00
170.00		158.74	156.80	0.00	0.00
172.00		156.45	154.51	0.00	0.00
173.00	(27) attachments	5879.03	2235.86	0.00	0.00
174.00		76.71	62.61	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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176.00	151.80	123.51	0.00	0.00
178.00	149.45	121.22	0.00	0.00
180.00	147.07	118.93	0.00	0.00
181.00	(1) attachments 1281.81	1415.31	0.00	0.00
182.00	66.40	65.31	0.00	0.00
183.00	66.51	65.31	0.00	0.00
Totals:	37,649.58	45,757.85	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
2.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
2.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
4.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
4.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
4.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
6.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
6.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
6.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
8.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
8.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
8.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
10.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
10.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
10.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
12.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
12.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
12.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
14.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
14.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
14.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
16.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
16.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
16.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
18.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
18.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
18.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
20.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
22.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
22.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
22.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
24.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
24.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
24.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
26.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
26.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
26.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
28.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	0.49
28.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	1.87
28.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.769	0.00	5.62
30.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.785	0.00	0.49
30.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.785	0.00	1.87
30.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	18.785	0.00	5.62
32.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.134	0.00	0.49
32.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.134	0.00	1.87

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
32.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.134	0.00	5.62
34.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.469	0.00	0.49
34.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.469	0.00	1.87
34.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.469	0.00	5.62
36.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.789	0.00	0.49
36.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.789	0.00	1.87
36.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.789	0.00	5.62
38.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.097	0.00	0.49
38.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.097	0.00	1.87
38.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.097	0.00	5.62
40.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.394	0.00	0.49
40.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.394	0.00	1.87
40.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.394	0.00	5.62
41.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	20.538	0.00	0.25
41.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	20.538	0.00	0.94
41.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	20.538	0.00	2.81
42.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	20.680	0.00	0.25
42.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	20.680	0.00	0.94
42.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	20.680	0.00	2.81
44.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.957	0.00	0.49
44.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.957	0.00	1.87
44.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	20.957	0.00	5.62
46.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.225	0.00	0.49
46.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.225	0.00	1.87
46.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.225	0.00	5.62
48.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.485	0.00	0.49
48.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.485	0.00	1.87
48.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.485	0.00	5.62
50.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.737	0.00	0.49
50.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.737	0.00	1.87
50.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	21.737	0.00	5.62
51.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	21.860	0.00	0.25
51.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	21.860	0.00	0.94
51.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	21.860	0.00	2.81
52.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	21.982	0.00	0.25
52.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	21.982	0.00	0.94
52.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	21.982	0.00	2.81
54.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.220	0.00	0.49
54.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.220	0.00	1.87
54.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.220	0.00	5.62
56.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.452	0.00	0.49
56.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.452	0.00	1.87
56.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.452	0.00	5.62
58.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.678	0.00	0.49
58.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.678	0.00	1.87
58.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.678	0.00	5.62
60.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.899	0.00	0.49

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
60.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.899	0.00	1.87
60.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	22.899	0.00	5.62
62.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.114	0.00	0.49
62.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.114	0.00	1.87
62.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.114	0.00	5.62
64.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.325	0.00	0.49
64.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.325	0.00	1.87
64.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.325	0.00	5.62
66.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.531	0.00	0.49
66.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.531	0.00	1.87
66.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.531	0.00	5.62
66.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	23.531	0.00	0.00
66.17	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	23.548	0.00	0.04
66.17	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	23.548	0.00	0.16
66.17	1 5/8" Coax	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	23.548	0.00	0.48
66.17	C6X10.5 Reinforcing	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	23.548	0.00	0.00
68.00	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	23.733	0.00	0.45
68.00	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	23.733	0.00	1.71
68.00	1 5/8" Coax	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	23.733	0.00	5.14
68.00	C6X10.5 Reinforcing	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	23.733	0.00	0.00
70.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.930	0.00	0.49
70.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.930	0.00	1.87
70.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.930	0.00	5.62
70.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	23.930	0.00	0.00
71.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.027	0.00	0.25
71.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.027	0.00	0.94
71.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.027	0.00	2.81
71.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.027	0.00	0.00
72.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.123	0.00	0.25
72.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.123	0.00	0.94
72.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.123	0.00	2.81
72.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.123	0.00	0.00
74.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.313	0.00	0.49
74.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.313	0.00	1.87
74.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.313	0.00	5.62
74.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.313	0.00	0.00
76.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.499	0.00	0.49
76.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.499	0.00	1.87
76.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.499	0.00	5.62
76.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.499	0.00	0.00
78.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.681	0.00	0.49
78.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.681	0.00	1.87
78.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.681	0.00	5.62
78.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.681	0.00	0.00
80.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.861	0.00	0.49
80.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.861	0.00	1.87
80.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.861	0.00	5.62

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
80.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	24.861	0.00	0.00
81.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.949	0.00	0.25
81.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.949	0.00	0.94
81.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.949	0.00	2.81
81.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	24.949	0.00	0.00
82.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.037	0.00	0.25
82.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.037	0.00	0.94
82.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.037	0.00	2.81
82.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.037	0.00	0.00
84.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.210	0.00	0.49
84.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.210	0.00	1.87
84.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.210	0.00	5.62
84.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.210	0.00	0.00
85.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.295	0.00	0.25
85.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.295	0.00	0.94
85.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.295	0.00	2.81
85.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.295	0.00	0.00
86.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.380	0.00	0.25
86.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.380	0.00	0.94
86.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.380	0.00	2.81
86.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.380	0.00	0.00
88.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.547	0.00	0.49
88.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.547	0.00	1.87
88.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.547	0.00	5.62
88.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.547	0.00	0.00
90.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.711	0.00	0.49
90.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.711	0.00	1.87
90.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.711	0.00	5.62
90.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.711	0.00	0.00
91.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.793	0.00	0.25
91.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.793	0.00	0.94
91.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.793	0.00	2.81
91.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.793	0.00	0.00
92.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.873	0.00	0.25
92.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.873	0.00	0.94
92.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.873	0.00	2.81
92.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	25.873	0.00	0.00
93.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	26.019	0.00	0.45
93.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	26.019	0.00	1.71
93.83	1 5/8" Coax	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	26.019	0.00	5.14
93.83	C6X10.5 Reinforcing	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	26.019	0.00	0.00
94.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	26.033	0.00	0.04
94.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	26.033	0.00	0.16
94.00	1 5/8" Coax	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	26.033	0.00	0.48
94.00	C6X10.5 Reinforcing	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	26.033	0.00	0.00
96.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.190	0.00	0.49
96.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.190	0.00	1.87

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
96.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.190	0.00	5.62
96.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	26.190	0.00	0.00
98.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.345	0.00	0.49
98.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.345	0.00	1.87
98.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.345	0.00	5.62
100.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.497	0.00	0.49
100.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.497	0.00	1.87
100.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.497	0.00	5.62
102.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.648	0.00	0.49
102.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.648	0.00	1.87
102.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.648	0.00	5.62
104.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.796	0.00	0.49
104.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.796	0.00	1.87
104.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.796	0.00	5.62
106.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.942	0.00	0.49
106.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.942	0.00	1.87
106.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	26.942	0.00	5.62
108.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.086	0.00	0.49
108.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.086	0.00	1.87
108.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.086	0.00	5.62
110.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.229	0.00	0.49
110.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.229	0.00	1.87
110.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.229	0.00	5.62
111.17	Safety Cable	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	27.311	0.00	0.29
111.17	Step bolts (ladder)	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	27.311	0.00	1.10
111.17	1 5/8" Coax	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	27.311	0.00	3.29
111.17	C6X10.5 Reinforcing	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	27.311	0.00	0.00
112.00	Safety Cable	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	27.369	0.00	0.20
112.00	Step bolts (ladder)	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	27.369	0.00	0.78
112.00	1 5/8" Coax	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	27.369	0.00	2.33
112.00	C6X10.5 Reinforcing	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	27.369	0.00	0.00
114.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.508	0.00	0.49
114.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.508	0.00	1.87
114.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.508	0.00	5.62
114.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.508	0.00	0.00
115.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.577	0.00	0.25
115.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.577	0.00	0.94
115.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.577	0.00	2.81
115.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.577	0.00	0.00
116.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.645	0.00	0.25
116.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.645	0.00	0.94
116.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.645	0.00	2.81
116.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	27.645	0.00	0.00
118.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.780	0.00	0.49
118.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.780	0.00	1.87
118.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.780	0.00	5.62
118.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.780	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
120.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.914	0.00	0.49
120.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.914	0.00	1.87
120.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.914	0.00	5.62
120.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	27.914	0.00	0.00
122.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.046	0.00	0.49
122.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.046	0.00	1.87
122.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.046	0.00	5.62
122.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.046	0.00	0.00
123.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	28.166	0.00	0.45
123.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	28.166	0.00	1.71
123.83	1 5/8" Coax	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	28.166	0.00	5.14
123.83	C6X10.5 Reinforcing	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	28.166	0.00	0.00
124.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	28.177	0.00	0.04
124.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	28.177	0.00	0.16
124.00	1 5/8" Coax	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	28.177	0.00	0.48
124.00	C6X10.5 Reinforcing	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	28.177	0.00	0.00
126.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.306	0.00	0.49
126.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.306	0.00	1.87
126.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.306	0.00	5.62
126.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.306	0.00	0.00
128.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.434	0.00	0.49
128.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.434	0.00	1.87
128.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.434	0.00	5.62
130.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.560	0.00	0.49
130.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.560	0.00	1.87
130.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.560	0.00	5.62
132.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.685	0.00	0.49
132.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.685	0.00	1.87
132.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.685	0.00	5.62
134.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.808	0.00	0.49
134.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.808	0.00	1.87
134.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	28.808	0.00	5.62
135.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	0.25
135.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	0.94
135.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.869	0.00	2.81
136.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.930	0.00	0.25
136.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.930	0.00	0.94
136.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	28.930	0.00	2.81
138.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.051	0.00	0.49
138.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.051	0.00	1.87
138.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.051	0.00	5.62
140.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.171	0.00	0.49
140.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.171	0.00	1.87
140.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.171	0.00	5.62
142.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.289	0.00	0.49
142.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.289	0.00	1.87
142.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.289	0.00	5.62

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
143.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.348	0.00	0.25
143.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.348	0.00	0.94
143.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.348	0.00	2.81
144.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.407	0.00	0.25
144.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.407	0.00	0.94
144.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.407	0.00	2.81
146.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.523	0.00	0.49
146.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.523	0.00	1.87
146.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.523	0.00	5.62
148.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.638	0.00	0.49
148.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.638	0.00	1.87
148.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.638	0.00	5.62
150.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.752	0.00	0.49
150.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.752	0.00	1.87
150.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.752	0.00	5.62
152.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.865	0.00	0.49
152.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.865	0.00	1.87
152.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	29.865	0.00	5.62
153.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.921	0.00	0.25
153.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.921	0.00	0.94
153.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.921	0.00	2.81
154.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.976	0.00	0.25
154.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.976	0.00	0.94
154.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	29.976	0.00	2.81
156.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.087	0.00	0.49
156.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.087	0.00	1.87
156.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.087	0.00	5.62
158.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.197	0.00	0.49
158.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.197	0.00	1.87
158.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.197	0.00	5.62
160.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.305	0.00	0.49
160.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.305	0.00	1.87
160.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.305	0.00	5.62
162.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.413	0.00	0.49
162.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.413	0.00	1.87
162.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.413	0.00	5.62
163.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.467	0.00	0.25
163.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.467	0.00	0.94
163.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.467	0.00	2.81
164.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.520	0.00	0.25
164.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.520	0.00	0.94
164.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.520	0.00	2.81
166.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.626	0.00	0.49
166.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.626	0.00	1.87
166.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.626	0.00	5.62
168.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.731	0.00	0.49
168.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.731	0.00	1.87

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 30

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
168.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.731	0.00	5.62
170.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.835	0.00	0.49
170.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.835	0.00	1.87
170.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.835	0.00	5.62
172.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.938	0.00	0.49
172.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.938	0.00	1.87
172.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	30.938	0.00	5.62
173.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.989	0.00	0.25
173.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.989	0.00	0.94
173.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	30.989	0.00	2.81
174.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.041	0.00	0.25
174.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.041	0.00	0.94
176.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.142	0.00	0.49
176.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.142	0.00	1.87
178.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.243	0.00	0.49
178.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.243	0.00	1.87
180.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.343	0.00	0.49
180.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	31.343	0.00	1.87
181.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.392	0.00	0.25
181.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.392	0.00	0.94
182.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.442	0.00	0.25
182.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.442	0.00	0.94
183.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.491	0.00	0.25
183.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	31.491	0.00	0.94
Totals:											0.0	702.0

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



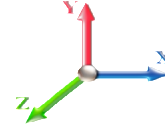
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Load Case: 0.9D + 1.6W 105 mph Wind

Iterations 30

Dead Load Factor 0.90

Wind Load Factor 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-45.73	-37.68	0.00	-4803.0	0.00	4803.02	5190.16	2595.08	13702.9	6861.66	0.00	0.000	0.000	0.709
2.00	-45.14	-37.50	0.00	-4727.6	0.00	4727.67	5174.50	2587.25	13560.7	6790.43	0.02	-0.068	0.000	0.705
4.00	-44.55	-37.32	0.00	-4652.6	0.00	4652.68	5158.51	2579.25	13418.2	6719.08	0.06	-0.137	0.000	0.701
6.00	-43.97	-37.14	0.00	-4578.0	0.00	4578.04	5142.18	2571.09	13275.4	6647.61	0.13	-0.206	0.000	0.697
8.00	-43.38	-36.96	0.00	-4503.7	0.00	4503.76	5125.52	2562.76	13132.5	6576.03	0.23	-0.276	0.000	0.694
10.00	-42.80	-36.79	0.00	-4429.8	0.00	4429.84	5108.53	2554.27	12989.4	6504.36	0.37	-0.346	0.000	0.690
12.00	-42.23	-36.61	0.00	-4356.2	0.00	4356.27	5091.21	2545.61	12846.0	6432.60	0.53	-0.417	0.000	0.686
14.00	-41.66	-36.43	0.00	-4283.0	0.00	4283.05	5073.56	2536.78	12702.6	6360.75	0.72	-0.488	0.000	0.682
16.00	-41.09	-36.26	0.00	-4210.1	0.00	4210.19	5055.57	2527.79	12559.0	6288.85	0.94	-0.559	0.000	0.678
18.00	-40.53	-36.08	0.00	-4137.6	0.00	4137.67	5037.25	2518.63	12415.3	6216.88	1.19	-0.631	0.000	0.674
20.00	-39.97	-35.91	0.00	-4065.5	0.00	4065.51	5018.60	2509.30	12271.4	6144.86	1.47	-0.703	0.000	0.670
22.00	-39.41	-35.74	0.00	-3993.6	0.00	3993.69	4999.62	2499.81	12127.5	6072.81	1.78	-0.776	0.000	0.666
24.00	-38.86	-35.57	0.00	-3922.2	0.00	3922.21	4980.31	2490.15	11983.6	6000.72	2.12	-0.849	0.000	0.662
26.00	-38.31	-35.39	0.00	-3851.0	0.00	3851.09	4960.66	2480.33	11839.6	5928.62	2.49	-0.923	0.000	0.658
28.00	-37.76	-35.22	0.00	-3780.3	0.00	3780.30	4940.68	2470.34	11695.6	5856.50	2.89	-0.997	0.000	0.653
30.00	-37.22	-35.05	0.00	-3709.8	0.00	3709.85	4920.37	2460.19	11551.6	5784.39	3.33	-1.071	0.000	0.649
32.00	-36.68	-34.88	0.00	-3639.7	0.00	3639.75	4899.73	2449.87	11407.6	5712.28	3.79	-1.146	0.000	0.645
34.00	-36.14	-34.70	0.00	-3569.9	0.00	3569.99	4878.76	2439.38	11263.6	5640.19	4.29	-1.221	0.000	0.641
36.00	-35.61	-34.52	0.00	-3500.5	0.00	3500.59	4857.45	2428.72	11119.7	5568.14	4.82	-1.297	0.000	0.636
38.00	-35.09	-34.34	0.00	-3431.5	0.00	3431.54	4835.81	2417.91	10975.9	5496.12	5.38	-1.373	0.000	0.632
40.00	-34.57	-34.15	0.00	-3362.8	0.00	3362.86	4813.84	2406.92	10832.2	5424.15	5.97	-1.449	0.000	0.627
41.00	-34.31	-34.05	0.00	-3328.7	0.00	3328.71	4802.73	2401.36	10760.3	5388.18	6.28	-1.488	0.000	0.625
42.00	-33.84	-33.97	0.00	-3294.6	0.00	3294.66	4791.54	2395.77	10688.5	5352.24	6.59	-1.527	0.000	0.623
44.00	-32.93	-33.76	0.00	-3226.7	0.00	3226.73	4768.90	2384.45	10545.1	5280.39	7.25	-1.604	0.000	0.618
46.00	-32.02	-33.56	0.00	-3159.2	0.00	3159.20	4745.94	2372.97	10401.7	5208.63	7.94	-1.682	0.000	0.613
48.00	-31.12	-33.35	0.00	-3092.0	0.00	3092.09	4759.60	2379.80	10486.7	5251.18	8.66	-1.760	0.000	0.596
50.00	-30.62	-33.14	0.00	-3025.3	0.00	3025.39	4736.50	2368.25	10343.5	5179.45	9.41	-1.838	0.000	0.591
51.00	-30.37	-33.04	0.00	-2992.2	0.00	2992.25	4724.82	2362.41	10271.9	5143.62	9.80	-1.876	0.000	0.588
51.00	-30.37	-33.04	0.00	-2992.2	0.00	2992.25	4064.30	2032.15	8835.99	4424.56	9.80	-1.876	0.000	0.684
52.00	-30.11	-32.95	0.00	-2959.2	0.00	2959.21	4053.20	2026.60	8772.35	4392.70	10.20	-1.915	0.000	0.681
54.00	-29.61	-32.74	0.00	-2893.3	0.00	2893.32	4030.83	2015.41	8645.34	4329.09	11.02	-1.990	0.000	0.676
56.00	-29.11	-32.54	0.00	-2827.8	0.00	2827.83	4008.20	2004.10	8518.66	4265.66	11.87	-2.067	0.000	0.670
58.00	-28.62	-32.33	0.00	-2762.7	0.00	2762.75	3985.33	1992.66	8392.33	4202.40	12.75	-2.143	0.000	0.665
60.00	-28.13	-32.13	0.00	-2698.0	0.00	2698.08	3962.20	1981.10	8266.38	4139.33	13.67	-2.220	0.000	0.659
62.00	-27.64	-31.92	0.00	-2633.8	0.00	2633.83	3938.82	1969.41	8140.81	4076.46	14.61	-2.297	0.000	0.653
64.00	-27.16	-31.71	0.00	-2569.9	0.00	2569.99	3915.19	1957.60	8015.64	4013.78	15.59	-2.375	0.000	0.647
66.00	-26.71	-31.48	0.00	-2506.5	0.00	2506.57	3891.31	1945.66	7890.88	3951.30	16.60	-2.453	0.000	0.641
66.17	-26.65	-31.48	0.00	-2501.2	0.00	2501.22	3889.27	1944.64	7880.29	3946.00	16.69	-2.459	0.000	0.470
68.00	-26.23	-31.28	0.00	-2443.6	0.00	2443.62	3867.19	1933.59	7766.55	3889.05	17.65	-2.512	0.000	0.465
70.00	-25.78	-31.05	0.00	-2381.0	0.00	2381.07	3842.81	1921.40	7642.66	3827.01	18.71	-2.569	0.000	0.459
71.00	-25.55	-30.94	0.00	-2350.0	0.00	2350.02	3830.52	1915.26	7580.89	3796.08	19.25	-2.598	0.000	0.456
71.00	-25.55	-30.94	0.00	-2350.0	0.00	2350.02	3467.89	1733.95	6863.13	3436.66	19.25	-2.598	0.000	0.503
72.00	-25.32	-30.84	0.00	-2319.0	0.00	2319.08	3456.29	1728.14	6806.46	3408.29	19.80	-2.626	0.000	0.500
74.00	-24.87	-30.61	0.00	-2257.4	0.00	2257.41	3432.92	1716.46	6693.50	3351.73	20.91	-2.683	0.000	0.493
76.00	-24.42	-30.39	0.00	-2196.1	0.00	2196.18	3409.33	1704.67	6581.05	3295.42	22.05	-2.741	0.000	0.487
78.00	-23.98	-30.17	0.00	-2135.3	0.00	2135.39	3385.54	1692.77	6469.11	3239.36	23.21	-2.798	0.000	0.480
80.00	-23.55	-29.94	0.00	-2075.0	0.00	2075.05	3361.54	1680.77	6357.71	3183.58	24.39	-2.855	0.000	0.473
81.00	-23.33	-29.83	0.00	-2045.1	0.00	2045.11	3349.46	1674.73	6302.21	3155.79	24.99	-2.883	0.000	0.469

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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81.00	-23.33	-29.83	0.00	-2045.1	0.00	2045.11	2964.88	1482.44	5593.85	2801.08	24.99	-2.883	0.000	0.443
82.00	-23.13	-29.73	0.00	-2015.2	0.00	2015.27	2956.03	1478.01	5548.33	2778.29	25.60	-2.912	0.000	0.497
84.00	-22.76	-29.51	0.00	-1955.8	0.00	1955.81	2938.12	1469.06	5457.44	2732.78	26.83	-2.976	0.000	0.488
85.00	-22.57	-29.40	0.00	-1926.3	0.00	1926.30	2929.07	1464.54	5412.08	2710.06	27.46	-3.008	0.000	0.484
86.00	-22.24	-29.29	0.00	-1896.9	0.00	1896.90	2919.96	1459.98	5366.77	2687.37	28.09	-3.040	0.000	0.476
88.00	-21.59	-29.06	0.00	-1838.3	0.00	1838.32	2901.53	1450.76	5276.32	2642.08	29.38	-3.104	0.000	0.467
90.00	-20.96	-28.82	0.00	-1780.2	0.00	1780.20	2882.84	1441.42	5186.12	2596.92	30.69	-3.167	0.000	0.458
91.00	-20.64	-28.70	0.00	-1751.3	0.00	1751.38	2898.35	1449.17	5260.87	2634.34	31.36	-3.198	0.000	0.463
92.00	-20.45	-28.60	0.00	-1722.6	0.00	1722.68	2889.01	1444.51	5215.76	2611.76	32.03	-3.230	0.000	0.445
93.83	-20.13	-28.39	0.00	-1670.3	0.00	1670.35	2871.76	1435.88	5133.38	2570.50	33.28	-3.285	0.000	0.437
93.83	-20.13	-28.39	0.00	-1670.3	0.00	1670.35	2871.76	1435.88	5133.38	2570.50	33.28	-3.285	0.000	0.437
94.00	-20.08	-28.38	0.00	-1665.5	0.00	1665.53	2870.15	1435.07	5125.73	2566.68	33.40	-3.291	0.000	0.656
96.00	-19.70	-28.17	0.00	-1608.7	0.00	1608.76	2851.02	1425.51	5035.98	2521.73	34.80	-3.381	0.000	0.645
98.00	-19.33	-27.96	0.00	-1552.4	0.00	1552.41	2831.62	1415.81	4946.52	2476.93	36.23	-3.472	0.000	0.634
100.00	-18.96	-27.76	0.00	-1496.4	0.00	1496.49	2811.97	1405.98	4857.35	2432.29	37.71	-3.562	0.000	0.622
102.00	-18.60	-27.55	0.00	-1440.9	0.00	1440.98	2792.05	1396.03	4768.51	2387.80	39.22	-3.652	0.000	0.611
104.00	-18.23	-27.34	0.00	-1385.8	0.00	1385.88	2771.87	1385.94	4680.00	2343.48	40.76	-3.741	0.000	0.598
106.00	-17.88	-27.14	0.00	-1331.2	0.00	1331.21	2751.43	1375.71	4591.84	2299.33	42.35	-3.830	0.000	0.586
108.00	-17.52	-26.95	0.00	-1276.9	0.00	1276.92	2730.72	1365.36	4504.04	2255.37	43.97	-3.919	0.000	0.573
110.00	-17.18	-26.75	0.00	-1223.0	0.00	1223.03	2709.75	1354.88	4416.62	2211.59	45.63	-4.007	0.000	0.560
111.17	-16.98	-26.63	0.00	-1191.7	0.00	1191.74	2697.36	1348.68	4365.66	2186.08	46.62	-4.058	0.000	0.440
112.00	-16.83	-26.55	0.00	-1169.6	0.00	1169.64	2688.52	1344.26	4329.60	2168.02	47.33	-4.087	0.000	0.435
114.00	-16.50	-26.35	0.00	-1116.5	0.00	1116.53	2667.03	1333.51	4242.98	2124.64	49.05	-4.156	0.000	0.423
115.00	-16.33	-26.24	0.00	-1090.1	0.00	1090.19	2656.18	1328.09	4199.83	2103.04	49.93	-4.190	0.000	0.407
115.00	-16.33	-26.24	0.00	-1090.1	0.00	1090.19	1951.15	975.57	3095.05	1549.82	49.93	-4.190	0.000	0.444
116.00	-16.18	-26.14	0.00	-1063.9	0.00	1063.95	1944.57	972.29	3065.67	1535.11	50.81	-4.223	0.000	0.515
118.00	-15.90	-25.94	0.00	-1011.6	0.00	1011.66	1931.24	965.62	3006.98	1505.73	52.59	-4.300	0.000	0.497
120.00	-15.61	-25.74	0.00	-959.78	0.00	959.78	1917.63	958.82	2948.42	1476.40	54.41	-4.375	0.000	0.479
122.00	-15.34	-25.53	0.00	-908.31	0.00	908.31	1903.77	951.88	2889.98	1447.14	56.26	-4.449	0.000	0.461
123.83	-15.10	-25.34	0.00	-861.58	0.00	861.58	1890.85	945.43	2836.64	1420.43	57.97	-4.515	0.000	0.444
123.83	-15.10	-25.34	0.00	-861.58	0.00	861.58	1890.85	945.43	2836.64	1420.43	57.97	-4.515	0.000	0.444
124.00	-15.05	-25.33	0.00	-857.27	0.00	857.27	1889.64	944.82	2831.69	1417.95	58.14	-4.521	0.000	0.613
126.00	-14.77	-25.14	0.00	-806.61	0.00	806.61	1875.25	937.63	2773.56	1388.84	60.05	-4.619	0.000	0.589
128.00	-14.49	-24.95	0.00	-756.33	0.00	756.33	1860.60	930.30	2715.62	1359.83	62.00	-4.714	0.000	0.565
130.00	-14.21	-24.75	0.00	-706.44	0.00	706.44	1845.69	922.84	2657.86	1330.91	64.00	-4.807	0.000	0.539
132.00	-13.77	-24.54	0.00	-656.93	0.00	656.93	1830.51	915.25	2600.31	1302.09	66.03	-4.897	0.000	0.513
134.00	-13.34	-24.32	0.00	-607.85	0.00	607.85	1815.07	907.53	2542.99	1273.39	68.10	-4.984	0.000	0.485
135.00	-13.12	-24.22	0.00	-583.53	0.00	583.53	1823.79	911.89	2575.21	1289.52	69.14	-5.027	0.000	0.460
136.00	-12.98	-24.13	0.00	-559.31	0.00	559.31	1816.04	908.02	2546.57	1275.18	70.20	-5.069	0.000	0.446
138.00	-12.72	-23.93	0.00	-511.06	0.00	511.06	1800.35	900.18	2489.47	1246.58	72.34	-5.145	0.000	0.418
140.00	-12.47	-23.73	0.00	-463.20	0.00	463.20	1784.41	892.20	2432.62	1218.12	74.51	-5.218	0.000	0.388
142.00	-12.22	-23.53	0.00	-415.74	0.00	415.74	1768.19	884.10	2376.04	1189.79	76.71	-5.286	0.000	0.357
143.00	-9.96	-18.36	0.00	-392.20	0.00	392.20	1759.99	879.99	2347.86	1175.68	77.82	-5.319	0.000	0.340
144.00	-9.85	-18.27	0.00	-373.84	0.00	373.84	1751.72	875.86	2319.75	1161.60	78.93	-5.351	0.000	0.328
146.00	-9.63	-18.07	0.00	-337.31	0.00	337.31	1734.98	867.49	2263.76	1133.56	81.19	-5.411	0.000	0.304
148.00	-9.42	-17.88	0.00	-301.16	0.00	301.16	1717.98	858.99	2208.08	1105.68	83.46	-5.468	0.000	0.278
150.00	-7.98	-16.41	0.00	-265.40	0.00	265.40	1700.72	850.36	2152.74	1077.97	85.76	-5.520	0.000	0.251
152.00	-7.78	-16.22	0.00	-232.57	0.00	232.57	1683.20	841.60	2097.74	1050.43	88.08	-5.569	0.000	0.226
153.00	-6.21	-11.86	0.00	-216.35	0.00	216.35	1674.33	837.17	2070.37	1036.72	89.25	-5.591	0.000	0.213
154.00	-6.12	-11.77	0.00	-204.49	0.00	204.49	1665.41	832.70	2043.10	1023.07	90.42	-5.613	0.000	0.204
156.00	-5.95	-11.58	0.00	-180.96	0.00	180.96	1647.36	823.68	1988.83	995.90	92.78	-5.654	0.000	0.186
158.00	-5.79	-11.40	0.00	-157.79	0.00	157.79	1629.04	814.52	1934.96	968.92	95.15	-5.692	0.000	0.167
160.00	-5.62	-11.21	0.00	-135.00	0.00	135.00	1610.47	805.23	1881.50	942.15	97.54	-5.726	0.000	0.147
162.00	-5.47	-11.03	0.00	-112.57	0.00	112.57	1591.63	795.82	1828.46	915.59	99.94	-5.757	0.000	0.127
163.00	-4.04	-8.99	0.00	-101.54	0.00	101.54	1582.11	791.06	1802.10	902.39	101.15	-5.771	0.000	0.115
164.00	-3.96	-8.90	0.00	-92.55	0.00	92.55	1572.53	786.27	1775.86	889.25	102.36	-5.784	0.000	0.107
166.00	-3.81	-8.73	0.00	-74.74	0.00	74.74	1553.17	776.58	1723.71	863.13	104.78	-5.806	0.000	0.089

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 46
	Struct Class: II	



168.00	-3.67	-8.55	0.00	-57.29	0.00	57.29	1533.54	766.77	1672.03	837.26	107.21	-5.825	0.000	0.071
170.00	-3.53	-8.38	0.00	-40.19	0.00	40.19	1513.65	756.83	1620.83	811.62	109.65	-5.840	0.000	0.052
172.00	-3.39	-8.21	0.00	-23.43	0.00	23.43	1493.50	746.75	1570.13	786.23	112.10	-5.850	0.000	0.032
173.00	-1.76	-2.13	0.00	-15.23	0.00	15.23	1483.33	741.66	1544.98	773.64	113.32	-5.854	0.000	0.021
174.00	-1.71	-2.05	0.00	-13.10	0.00	13.10	1473.09	736.54	1519.95	761.10	114.54	-5.856	0.000	0.018
176.00	-1.60	-1.88	0.00	-9.00	0.00	9.00	1452.41	726.20	1470.30	736.24	116.99	-5.860	0.000	0.013
178.00	-1.50	-1.72	0.00	-5.23	0.00	5.23	1427.85	713.93	1417.60	709.85	119.45	-5.863	0.000	0.008
180.00	-1.39	-1.57	0.00	-1.78	0.00	1.78	1400.09	700.05	1362.74	682.38	121.90	-5.864	0.000	0.004
180.00	-1.39	-1.57	0.00	-1.78	0.00	1.78	678.42	339.21	662.23	396.30	121.90	-5.864	0.000	0.007
181.00	-0.12	-0.15	0.00	-0.22	0.00	0.22	678.42	339.21	662.23	396.30	123.12	-5.864	0.000	0.001
182.00	-0.06	-0.07	0.00	-0.07	0.00	0.07	678.42	339.21	662.23	396.30	124.35	-5.864	0.000	0.000
183.00	0.00	-0.07	0.00	0.00	0.00	0.00	678.42	339.21	662.23	396.30	125.58	-5.864	0.000	0.000

Wind Loading - Shaft

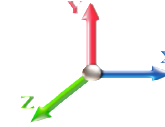
Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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		1.00	0.70	4.256	4.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	4.256	4.68	0.00	1.200	1.133	2.00	11.254	13.50	63.2	183.2	804.2
4.00		1.00	0.70	4.256	4.68	0.00	1.200	1.215	2.00	11.201	13.44	62.9	195.2	811.6
6.00		1.00	0.70	4.256	4.68	0.00	1.200	1.265	2.00	11.138	13.37	62.6	201.9	813.8
8.00		1.00	0.70	4.256	4.68	0.00	1.200	1.302	2.00	11.071	13.29	62.2	206.4	813.7
10.00		1.00	0.70	4.256	4.68	0.00	1.200	1.331	2.00	11.001	13.20	61.8	209.6	812.3
12.00		1.00	0.70	4.256	4.68	0.00	1.200	1.356	2.00	10.929	13.12	61.4	211.9	810.1
14.00		1.00	0.70	4.256	4.68	0.00	1.200	1.377	2.00	10.857	13.03	61.0	213.7	807.2
16.00		1.00	0.70	4.256	4.68	0.00	1.200	1.395	2.00	10.783	12.94	60.6	215.0	804.0
18.00		1.00	0.70	4.256	4.68	0.00	1.200	1.412	2.00	10.709	12.85	60.2	216.0	800.4
20.00		1.00	0.70	4.256	4.68	0.00	1.200	1.427	2.00	10.634	12.76	59.7	216.6	796.5
22.00		1.00	0.70	4.256	4.68	0.00	1.200	1.440	2.00	10.559	12.67	59.3	217.1	792.3
24.00		1.00	0.70	4.256	4.68	0.00	1.200	1.453	2.00	10.484	12.58	58.9	217.3	788.0
26.00		1.00	0.70	4.256	4.68	0.00	1.200	1.465	2.00	10.408	12.49	58.5	217.4	783.5
28.00		1.00	0.70	4.256	4.68	0.00	1.200	1.476	2.00	10.332	12.40	58.0	217.3	778.8
30.00		1.00	0.70	4.260	4.69	0.00	1.200	1.486	2.00	10.256	12.31	57.7	217.1	774.1
32.00		1.00	0.71	4.339	4.77	0.00	1.200	1.495	2.00	10.179	12.22	58.3	216.8	769.2
34.00		1.00	0.73	4.415	4.86	0.00	1.200	1.504	2.00	10.103	12.12	58.9	216.4	764.2
36.00		1.00	0.74	4.487	4.94	0.00	1.200	1.513	2.00	10.026	12.03	59.4	215.9	759.1
38.00		1.00	0.75	4.557	5.01	0.00	1.200	1.521	2.00	9.949	11.94	59.8	215.4	754.0
40.00		1.00	0.76	4.625	5.09	0.00	1.200	1.529	2.00	9.872	11.85	60.3	214.7	748.8
41.00	Bot - Section 2	1.00	0.77	4.657	5.12	0.00	1.200	1.533	1.00	4.907	5.89	30.2	107.2	372.5
42.00		1.00	0.77	4.689	5.16	0.00	1.200	1.537	1.00	4.951	5.94	30.6	108.4	640.4
44.00		1.00	0.78	4.752	5.23	0.00	1.200	1.544	2.00	9.844	11.81	61.8	216.1	1273.2
46.00		1.00	0.79	4.813	5.29	0.00	1.200	1.551	2.00	9.767	11.72	62.0	215.3	1263.2
48.00	Top - Section 1	1.00	0.80	4.872	5.36	0.00	1.200	1.557	2.00	9.689	11.63	62.3	214.4	1253.2
50.00		1.00	0.81	4.929	5.42	0.00	1.200	1.564	2.00	9.612	11.53	62.5	213.5	731.9
51.00	Top - Section 2	1.00	0.82	4.957	5.45	0.00	1.200	1.567	1.00	4.777	5.73	31.3	106.5	364.0
52.00		1.00	0.82	4.984	5.48	0.00	1.200	1.570	1.00	4.757	5.71	31.3	106.2	362.6
54.00		1.00	0.83	5.039	5.54	0.00	1.200	1.576	2.00	9.456	11.35	62.9	211.5	720.8
56.00		1.00	0.84	5.091	5.60	0.00	1.200	1.581	2.00	9.379	11.25	63.0	210.4	715.1
58.00		1.00	0.85	5.142	5.66	0.00	1.200	1.587	2.00	9.301	11.16	63.1	209.3	709.5
60.00		1.00	0.85	5.193	5.71	0.00	1.200	1.592	2.00	9.223	11.07	63.2	208.2	703.8
62.00		1.00	0.86	5.241	5.77	0.00	1.200	1.598	2.00	9.145	10.97	63.3	207.0	698.0
64.00		1.00	0.87	5.289	5.82	0.00	1.200	1.603	2.00	9.067	10.88	63.3	205.8	692.3
66.00		1.00	0.88	5.336	5.87	0.00	1.200	1.608	2.00	8.989	10.79	63.3	204.6	686.5
66.17	RB1	1.00	0.88	5.340	5.87	0.00	1.200	1.608	0.17	0.760	0.91	5.4	17.4	58.1
68.00		1.00	0.89	5.382	5.92	0.00	1.200	1.612	1.83	8.150	9.78	57.9	186.1	622.6
70.00		1.00	0.89	5.426	5.97	0.00	1.200	1.617	2.00	8.833	10.60	63.3	202.1	674.8
71.00	Top - Section 3	1.00	0.90	5.448	5.99	0.00	1.200	1.619	1.00	4.387	5.26	31.5	100.7	335.3
72.00		1.00	0.90	5.470	6.02	0.00	1.200	1.622	1.00	4.367	5.24	31.5	100.4	333.9
74.00		1.00	0.91	5.513	6.06	0.00	1.200	1.626	2.00	8.676	10.41	63.1	199.4	663.0
76.00		1.00	0.91	5.555	6.11	0.00	1.200	1.631	2.00	8.598	10.32	63.0	198.1	657.0
78.00		1.00	0.92	5.597	6.16	0.00	1.200	1.635	2.00	8.520	10.22	62.9	196.7	651.1
80.00		1.00	0.93	5.637	6.20	0.00	1.200	1.639	2.00	8.442	10.13	62.8	195.3	645.1
81.00	Top - Section 4	1.00	0.93	5.657	6.22	0.00	1.200	1.641	1.00	4.191	5.03	31.3	97.3	320.5
82.00		1.00	0.93	5.677	6.24	0.00	1.200	1.643	1.00	4.172	5.01	31.3	96.9	282.2

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00	1.00	0.94	5.716	6.29	0.00	1.200	1.647	2.00	8.285	9.94	62.5	192.4	560.2
85.00 Bot - Section 6	1.00	0.94	5.736	6.31	0.00	1.200	1.649	1.00	4.113	4.94	31.1	95.9	278.3
86.00	1.00	0.95	5.755	6.33	0.00	1.200	1.651	1.00	4.146	4.98	31.5	96.8	462.3
88.00	1.00	0.95	5.793	6.37	0.00	1.200	1.655	2.00	8.234	9.88	63.0	192.1	917.3
90.00	1.00	0.96	5.830	6.41	0.00	1.200	1.658	2.00	8.155	9.79	62.8	190.6	908.2
91.00 Top - Section 5	1.00	0.96	5.849	6.43	0.00	1.200	1.660	1.00	4.048	4.86	31.3	94.9	450.9
92.00	1.00	0.96	5.867	6.45	0.00	1.200	1.662	1.00	4.029	4.83	31.2	94.5	272.8
93.83 RT1	1.00	0.97	5.900	6.49	0.00	1.200	1.665	1.83	7.322	8.79	57.0	171.7	495.5
94.00	1.00	0.97	5.903	6.49	0.00	1.200	1.666	0.17	0.677	0.81	5.3	15.9	45.9
96.00	1.00	0.98	5.939	6.53	0.00	1.200	1.669	2.00	7.920	9.50	62.1	186.0	535.9
98.00	1.00	0.98	5.974	6.57	0.00	1.200	1.672	2.00	7.841	9.41	61.8	184.5	530.6
100.00	1.00	0.99	6.008	6.61	0.00	1.200	1.676	2.00	7.763	9.32	61.6	182.9	525.2
102.00	1.00	0.99	6.043	6.65	0.00	1.200	1.679	2.00	7.684	9.22	61.3	181.3	519.8
104.00	1.00	1.00	6.076	6.68	0.00	1.200	1.682	2.00	7.606	9.13	61.0	179.7	514.4
106.00	1.00	1.00	6.109	6.72	0.00	1.200	1.686	2.00	7.129	8.55	57.5	168.2	499.1
108.00	1.00	1.01	6.142	6.76	0.00	1.200	1.689	2.00	7.050	8.46	57.2	166.6	493.6
110.00	1.00	1.02	6.174	6.79	0.00	1.200	1.692	2.00	6.971	8.37	56.8	164.9	488.2
111.17 RB2	1.00	1.02	6.193	6.81	0.00	1.200	1.694	1.17	4.042	4.85	33.0	95.9	283.2
112.00	1.00	1.02	6.206	6.83	0.00	1.200	1.695	0.83	2.851	3.42	23.4	67.8	199.8
114.00	1.00	1.03	6.238	6.86	0.00	1.200	1.698	2.00	6.814	8.18	56.1	161.6	477.2
115.00 Top - Section 6	1.00	1.03	6.253	6.88	0.00	1.200	1.699	1.00	3.577	4.29	29.5	85.3	241.7
116.00	1.00	1.03	6.269	6.90	0.00	1.200	1.701	1.00	3.557	4.27	29.4	84.9	209.4
118.00	1.00	1.04	6.299	6.93	0.00	1.200	1.704	2.00	7.055	8.47	58.7	168.1	414.9
120.00	1.00	1.04	6.330	6.96	0.00	1.200	1.707	2.00	6.976	8.37	58.3	166.4	410.2
122.00	1.00	1.05	6.360	7.00	0.00	1.200	1.710	2.00	6.898	8.28	57.9	164.7	405.4
123.83 RT2	1.00	1.05	6.387	7.03	0.00	1.200	1.712	1.83	6.242	7.49	52.6	149.3	366.8
124.00	1.00	1.05	6.389	7.03	0.00	1.200	1.712	0.17	0.576	0.69	4.9	13.9	33.9
126.00	1.00	1.06	6.419	7.06	0.00	1.200	1.715	2.00	6.740	8.09	57.1	161.3	395.8
128.00	1.00	1.06	6.448	7.09	0.00	1.200	1.718	2.00	6.661	7.99	56.7	159.5	391.1
130.00 Bot - Section 8	1.00	1.07	6.476	7.12	0.00	1.200	1.720	2.00	6.582	7.90	56.3	157.8	386.3
132.00	1.00	1.07	6.504	7.15	0.00	1.200	1.723	2.00	6.588	7.91	56.6	158.2	612.2
134.00	1.00	1.07	6.532	7.19	0.00	1.200	1.726	2.00	6.509	7.81	56.1	156.4	604.4
135.00 Top - Section 7	1.00	1.08	6.546	7.20	0.00	1.200	1.727	1.00	3.225	3.87	27.9	77.8	299.4
136.00	1.00	1.08	6.560	7.22	0.00	1.200	1.728	1.00	3.205	3.85	27.8	77.3	188.2
138.00	1.00	1.08	6.588	7.25	0.00	1.200	1.731	2.00	6.352	7.62	55.2	152.8	372.3
140.00	1.00	1.09	6.615	7.28	0.00	1.200	1.733	2.00	6.273	7.53	54.8	151.0	367.5
142.00	1.00	1.09	6.642	7.31	0.00	1.200	1.736	2.00	6.194	7.43	54.3	149.2	362.6
143.00 Appurtenance(s)	1.00	1.09	6.655	7.32	0.00	1.200	1.737	1.00	3.067	3.68	26.9	74.2	179.7
144.00	1.00	1.10	6.668	7.34	0.00	1.200	1.738	1.00	3.048	3.66	26.8	73.7	178.5
146.00	1.00	1.10	6.695	7.36	0.00	1.200	1.741	2.00	6.036	7.24	53.3	145.6	352.9
148.00	1.00	1.11	6.721	7.39	0.00	1.200	1.743	2.00	5.957	7.15	52.8	143.8	348.0
150.00 Appurtenance(s)	1.00	1.11	6.746	7.42	0.00	1.200	1.745	2.00	5.879	7.05	52.4	141.9	343.1
152.00	1.00	1.11	6.772	7.45	0.00	1.200	1.748	2.00	5.800	6.96	51.8	140.1	338.2
153.00 Appurtenance(s)	1.00	1.12	6.785	7.46	0.00	1.200	1.749	1.00	2.870	3.44	25.7	69.6	167.5
154.00	1.00	1.12	6.797	7.48	0.00	1.200	1.750	1.00	2.850	3.42	25.6	69.1	166.3
156.00	1.00	1.12	6.822	7.50	0.00	1.200	1.752	2.00	5.642	6.77	50.8	136.4	328.4
158.00	1.00	1.13	6.847	7.53	0.00	1.200	1.754	2.00	5.563	6.68	50.3	134.5	323.5
160.00	1.00	1.13	6.872	7.56	0.00	1.200	1.757	2.00	5.484	6.58	49.7	132.7	318.6
162.00	1.00	1.13	6.896	7.59	0.00	1.200	1.759	2.00	5.405	6.49	49.2	130.8	313.7
163.00 Appurtenance(s)	1.00	1.14	6.909	7.60	0.00	1.200	1.760	1.00	2.673	3.21	24.4	64.9	155.2
164.00	1.00	1.14	6.921	7.61	0.00	1.200	1.761	1.00	2.653	3.18	24.2	64.4	154.0
166.00	1.00	1.14	6.945	7.64	0.00	1.200	1.763	2.00	5.247	6.30	48.1	127.0	303.8
168.00	1.00	1.15	6.968	7.67	0.00	1.200	1.765	2.00	5.168	6.20	47.5	125.1	298.8
170.00	1.00	1.15	6.992	7.69	0.00	1.200	1.767	2.00	5.089	6.11	47.0	123.2	293.9
172.00	1.00	1.15	7.015	7.72	0.00	1.200	1.769	2.00	5.010	6.01	46.4	121.3	288.9
173.00 Appurtenance(s)	1.00	1.16	7.027	7.73	0.00	1.200	1.770	1.00	2.475	2.97	23.0	60.2	142.8
174.00	1.00	1.16	7.039	7.74	0.00	1.200	1.771	1.00	2.456	2.95	22.8	59.7	141.6

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 49
	Struct Class: II	



176.00	1.00	1.16	7.062	7.77	0.00	1.200	1.773	2.00	4.852	5.82	45.2	117.4	279.0
178.00	1.00	1.17	7.085	7.79	0.00	1.200	1.775	2.00	4.773	5.73	44.6	115.5	274.0
180.00 Top - Section 8	1.00	1.17	7.107	7.82	0.00	1.200	1.777	2.00	4.694	5.63	44.0	113.6	269.0
181.00 Appurtenance(s)	1.00	1.17	7.118	7.83	0.00	1.200	1.778	1.00	2.296	2.76	21.6	56.0	141.5
182.00	1.00	1.17	7.130	7.84	0.00	1.200	1.779	1.00	2.297	2.76	21.6	56.0	141.5
183.00	1.00	1.17	7.141	7.85	0.00	1.200	1.780	1.00	2.297	2.76	21.6	56.1	141.6
Totals:								183.00			5,281.9		54,120.7

Discrete Appurtenance Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	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	1	7.118	7.830	1.00	1.00	40.00	2833.73	0.000	0.000	313.18	0.00	0.00	
2	173.00	LNx-6514DS-VTM	3	7.027	7.730	0.64	0.80	20.98	500.82	0.000	0.000	162.15	0.00	0.00	
3	173.00	Low Profile	1	7.027	7.730	1.00	1.00	39.92	2827.72	0.000	0.000	308.54	0.00	0.00	
4	173.00	APL866513-42T0	2	7.027	7.730	0.74	0.80	8.84	196.63	0.000	0.000	68.32	0.00	0.00	
5	173.00	HBXX-6517DS-VTM	6	7.027	7.730	0.62	0.80	42.54	1058.47	0.000	0.000	328.85	0.00	0.00	
6	173.00	LPA-80080-4CF-EDIN-0	4	7.027	7.730	0.80	0.80	11.27	394.32	0.000	0.000	87.10	0.00	0.00	
7	173.00	RRH2X60-AWS	3	7.027	7.730	0.61	0.80	7.84	421.33	0.000	0.000	60.63	0.00	0.00	
8	173.00	RRH2x60-700U	3	7.027	7.730	0.74	0.80	8.16	340.61	0.000	0.000	63.06	0.00	0.00	
9	173.00	RRH2x60-1900	3	7.027	7.730	0.72	0.80	4.47	253.15	0.000	0.000	34.55	0.00	0.00	
10	173.00	DB-T1-6Z-8AB-OZ	2	7.027	7.730	0.80	0.80	9.10	397.93	0.000	0.000	70.34	0.00	0.00	
11	163.00	LLPX310R	3	6.909	7.599	0.55	0.80	9.89	298.43	0.000	0.000	75.18	0.00	0.00	
12	163.00	Low Profile	1	6.909	7.599	1.00	1.00	39.81	2819.84	0.000	0.000	302.52	0.00	0.00	
13	163.00	DAP Head	3	6.909	7.599	0.80	0.80	7.29	252.82	0.000	0.000	55.38	0.00	0.00	
14	153.00	S11B12	3	6.785	7.463	0.57	0.80	7.08	342.76	0.000	0.000	52.87	0.00	0.00	
15	153.00	KRY 112 144/1	3	6.785	7.463	0.56	0.80	1.49	62.71	0.000	0.000	11.11	0.00	0.00	
16	153.00	LNx-6515DS	3	6.785	7.463	0.64	0.80	28.31	671.90	0.000	0.000	211.26	0.00	0.00	
17	153.00	AIR 21, 1.3M, B4A B2P	3	6.785	7.463	0.69	0.80	14.84	833.30	0.000	0.000	110.75	0.00	0.00	
18	153.00	AIR 21, 1.3M, B2A B4P	3	6.785	7.463	0.69	0.80	14.84	837.26	0.000	0.000	110.75	0.00	0.00	
19	153.00	Low Profile Platform-flat	1	6.785	7.463	1.00	1.00	45.98	2189.20	0.000	0.000	343.19	0.00	0.00	
20	150.00	Low Profile	1	6.746	7.421	1.00	1.00	39.66	2808.91	0.000	0.000	294.33	0.00	0.00	
21	143.00	DC6-48-60-18-8F	1	6.655	7.320	0.75	0.75	1.62	81.99	0.000	0.000	11.89	0.00	0.00	
22	143.00	HRK14	1	6.655	7.320	1.00	1.00	19.98	1191.36	0.000	0.000	146.28	0.00	0.00	
23	143.00	Powerwave 7770.00	3	6.655	7.320	0.55	0.75	10.77	529.15	0.000	0.000	78.87	0.00	0.00	
24	143.00	Low Profile	1	6.655	7.320	1.00	1.00	39.58	2802.67	0.000	0.000	289.72	0.00	0.00	
25	143.00	850-1900 Dual Band	3	6.655	7.320	0.49	0.75	1.56	44.66	0.000	0.000	11.39	0.00	0.00	
26	143.00	RRUS 11	3	6.655	7.320	0.50	0.75	4.78	448.54	0.000	0.000	34.96	0.00	0.00	
27	143.00	DBC-750	3	6.655	7.320	0.75	0.75	2.33	37.44	0.000	0.000	17.08	0.00	0.00	
28	143.00	OPA-65R-LCUU-H4	1	6.655	7.320	0.59	0.75	4.13	226.11	0.000	0.000	30.22	0.00	0.00	
29	143.00	QS46512-2	1	6.655	7.320	0.72	0.75	10.34	152.60	0.000	0.000	75.73	0.00	0.00	
30	143.00	TPA-65R-LCUUUU-H8	2	6.655	7.320	0.62	0.75	18.60	800.81	0.000	0.000	136.14	0.00	0.00	
31	143.00	OPA-65R-LCUU-H8	2	6.655	7.320	0.59	0.75	17.00	789.31	0.000	0.000	124.47	0.00	0.00	
32	143.00	DTMABP7819VG12A	3	6.655	7.320	0.50	0.75	2.87	123.41	0.000	0.000	21.03	0.00	0.00	
33	143.00	DBC0061F1V51-2	3	6.655	7.320	0.75	0.75	1.61	124.35	0.000	0.000	11.76	0.00	0.00	
34	143.00	RRUS 32 B2	3	6.655	7.320	0.50	0.75	5.22	453.26	0.000	0.000	38.24	0.00	0.00	
Totals:									28,147.51						4,091.85

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

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		63.22	938.25	0.00	0.00
4.00		62.93	947.92	0.00	0.00
6.00		62.57	951.55	0.00	0.00
8.00		62.20	952.56	0.00	0.00
10.00		61.80	952.06	0.00	0.00
12.00		61.40	950.59	0.00	0.00
14.00		60.99	948.42	0.00	0.00
16.00		60.58	945.72	0.00	0.00
18.00		60.16	942.62	0.00	0.00
20.00		59.74	939.19	0.00	0.00
22.00		59.32	935.49	0.00	0.00
24.00		58.90	931.56	0.00	0.00
26.00		58.47	927.43	0.00	0.00
28.00		58.04	923.14	0.00	0.00
30.00		57.66	918.70	0.00	0.00
32.00		58.30	914.13	0.00	0.00
34.00		58.87	909.45	0.00	0.00
36.00		59.39	904.66	0.00	0.00
38.00		59.85	899.78	0.00	0.00
40.00		60.26	894.81	0.00	0.00
41.00		30.16	445.58	0.00	0.00
42.00		30.65	713.56	0.00	0.00
44.00		61.75	1419.72	0.00	0.00
46.00		62.05	1409.97	0.00	0.00
48.00		62.31	1400.17	0.00	0.00
50.00		62.54	879.13	0.00	0.00
51.00		31.25	437.66	0.00	0.00
52.00		31.30	436.32	0.00	0.00
54.00		62.89	868.40	0.00	0.00
56.00		63.03	862.97	0.00	0.00
58.00		63.13	857.49	0.00	0.00
60.00		63.22	851.96	0.00	0.00
62.00		63.27	846.40	0.00	0.00
64.00		63.30	840.81	0.00	0.00
66.00		63.31	848.50	0.00	0.00
66.17		5.36	73.04	0.00	0.00
68.00		57.90	783.28	0.00	0.00
70.00		63.27	850.64	0.00	0.00
71.00		31.55	423.34	0.00	0.00
72.00		31.53	421.92	0.00	0.00
74.00		63.14	839.33	0.00	0.00
76.00		63.05	833.63	0.00	0.00
78.00		62.94	827.91	0.00	0.00
80.00		62.82	822.16	0.00	0.00
81.00		31.30	409.06	0.00	0.00
82.00		31.26	370.87	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00		62.52	737.65	0.00	0.00
85.00		31.14	367.08	0.00	0.00
86.00		31.50	551.11	0.00	0.00
88.00		62.96	1095.23	0.00	0.00
90.00		62.76	1086.32	0.00	0.00
91.00		31.25	539.97	0.00	0.00
92.00		31.20	361.98	0.00	0.00
93.83		57.02	658.85	0.00	0.00
94.00		5.27	61.03	0.00	0.00
96.00		62.09	700.70	0.00	0.00
98.00		61.83	681.53	0.00	0.00
100.00		61.57	676.26	0.00	0.00
102.00		61.29	670.98	0.00	0.00
104.00		61.00	665.68	0.00	0.00
106.00		57.49	650.52	0.00	0.00
108.00		57.16	645.17	0.00	0.00
110.00		56.82	639.81	0.00	0.00
111.17		33.04	382.33	0.00	0.00
112.00		23.35	270.17	0.00	0.00
114.00		56.10	646.78	0.00	0.00
115.00		29.52	326.54	0.00	0.00
116.00		29.43	294.32	0.00	0.00
118.00		58.66	584.81	0.00	0.00
120.00		58.29	580.20	0.00	0.00
122.00		57.90	575.58	0.00	0.00
123.83		52.63	522.66	0.00	0.00
124.00		4.86	48.41	0.00	0.00
126.00		57.11	557.32	0.00	0.00
128.00		56.69	543.64	0.00	0.00
130.00		56.27	538.93	0.00	0.00
132.00		56.57	765.00	0.00	0.00
134.00		56.13	757.23	0.00	0.00
135.00		27.87	375.91	0.00	0.00
136.00		27.76	264.69	0.00	0.00
138.00		55.23	525.39	0.00	0.00
140.00		54.77	520.64	0.00	0.00
142.00		54.30	515.87	0.00	0.00
143.00	(30) attachments	1054.73	8062.02	0.00	0.00
144.00		26.83	239.13	0.00	0.00
146.00		53.34	474.25	0.00	0.00
148.00		52.85	469.46	0.00	0.00
150.00	(1) attachments	346.68	3273.57	0.00	0.00
152.00		51.84	459.84	0.00	0.00
153.00	(16) attachments	865.63	5165.47	0.00	0.00
154.00		25.58	210.84	0.00	0.00
156.00		50.81	417.61	0.00	0.00
158.00		50.28	412.77	0.00	0.00
160.00		49.74	407.93	0.00	0.00
162.00		49.20	403.08	0.00	0.00
163.00	(7) attachments	457.46	3571.03	0.00	0.00
164.00		24.24	195.07	0.00	0.00
166.00		48.10	386.03	0.00	0.00
168.00		47.54	381.16	0.00	0.00
170.00		46.97	376.27	0.00	0.00
172.00		46.40	371.38	0.00	0.00
173.00	(27) attachments	1206.49	6575.07	0.00	0.00
174.00		22.81	152.25	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 53



176.00	45.23	300.32	0.00	0.00
178.00	44.64	295.38	0.00	0.00
180.00	44.04	290.42	0.00	0.00
181.00 (1) attachments	334.76	2985.97	0.00	0.00
182.00	21.61	152.28	0.00	0.00
183.00	21.65	152.32	0.00	0.00
Totals:	9,373.76	94,969.06	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	4.48
2.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	6.80
2.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	23.06
4.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	4.99
4.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	7.35
4.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	24.28
6.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	5.33
6.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	7.70
6.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	25.05
8.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	5.58
8.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	7.97
8.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	25.62
10.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	5.79
10.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	8.19
10.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	26.08
12.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	5.96
12.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	8.37
12.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	26.47
14.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	6.11
14.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	8.53
14.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	26.80
16.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	6.25
16.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	8.67
16.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	27.10
18.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	6.37
18.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	8.80
18.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	27.37
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	6.48
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	8.92
20.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	27.61
22.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	6.59
22.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	9.03
22.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	27.83
24.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	6.68
24.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	9.13
24.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	28.04
26.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	6.77
26.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	9.23
26.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	28.23
28.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	6.86
28.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	9.32
28.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.256	0.00	28.41
30.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.260	0.00	6.94
30.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.260	0.00	9.40
30.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.260	0.00	28.57
32.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.339	0.00	7.02
32.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.339	0.00	9.48

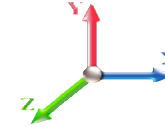
Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
32.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.339	0.00	28.73
34.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.415	0.00	7.09
34.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.415	0.00	9.55
34.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.415	0.00	28.88
36.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.487	0.00	7.16
36.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.487	0.00	9.63
36.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.487	0.00	29.03
38.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.557	0.00	7.22
38.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.557	0.00	9.70
38.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.557	0.00	29.16
40.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.625	0.00	7.28
40.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.625	0.00	9.76
40.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.625	0.00	29.29
41.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	4.657	0.00	3.66
41.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	4.657	0.00	4.90
41.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	4.657	0.00	14.68
42.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	4.689	0.00	3.67
42.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	4.689	0.00	4.91
42.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	4.689	0.00	14.71
44.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.752	0.00	7.40
44.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.752	0.00	9.89
44.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.752	0.00	29.54
46.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.813	0.00	7.46
46.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.813	0.00	9.94
46.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.813	0.00	29.65
48.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.872	0.00	7.51
48.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.872	0.00	10.00
48.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.872	0.00	29.77
50.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.929	0.00	7.56
50.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.929	0.00	10.06
50.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	4.929	0.00	29.87
51.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	4.957	0.00	3.80
51.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	4.957	0.00	5.04
51.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	4.957	0.00	14.96
52.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	4.984	0.00	3.81
52.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	4.984	0.00	5.05
52.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	4.984	0.00	14.99
54.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.039	0.00	7.66
54.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.039	0.00	10.16
54.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.039	0.00	30.08
56.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.091	0.00	7.71
56.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.091	0.00	10.21
56.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.091	0.00	30.17
58.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.142	0.00	7.76
58.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.142	0.00	10.26
58.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.142	0.00	30.27
60.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.193	0.00	7.80

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
60.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.193	0.00	10.31
60.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.193	0.00	30.36
62.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.241	0.00	7.85
62.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.241	0.00	10.35
62.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.241	0.00	30.45
64.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.289	0.00	7.89
64.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.289	0.00	10.40
64.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.289	0.00	30.54
66.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.336	0.00	7.93
66.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.336	0.00	10.44
66.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.336	0.00	30.62
66.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.336	0.00	13.32
66.17	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	5.340	0.00	0.67
66.17	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	5.340	0.00	0.89
66.17	1 5/8" Coax	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	5.340	0.00	2.60
66.17	C6X10.5 Reinforcing	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	5.340	0.00	2.26
68.00	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	5.382	0.00	7.29
68.00	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	5.382	0.00	9.59
68.00	1 5/8" Coax	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	5.382	0.00	28.09
68.00	C6X10.5 Reinforcing	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	5.382	0.00	24.46
70.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.426	0.00	8.01
70.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.426	0.00	10.52
70.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.426	0.00	30.78
70.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.426	0.00	26.82
71.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.448	0.00	4.02
71.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.448	0.00	5.27
71.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.448	0.00	15.41
71.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.448	0.00	13.43
72.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.470	0.00	4.03
72.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.470	0.00	5.28
72.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.470	0.00	15.43
72.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.470	0.00	13.46
74.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.513	0.00	8.09
74.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.513	0.00	10.60
74.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.513	0.00	30.94
74.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.513	0.00	27.00
76.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.555	0.00	8.13
76.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.555	0.00	10.64
76.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.555	0.00	31.01
76.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.555	0.00	27.08
78.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.597	0.00	8.16
78.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.597	0.00	10.68
78.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.597	0.00	31.09
78.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.597	0.00	27.17
80.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.637	0.00	8.20
80.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.637	0.00	10.72
80.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.637	0.00	31.16

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
80.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.637	0.00	27.25
81.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.657	0.00	4.11
81.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.657	0.00	5.37
81.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.657	0.00	15.60
81.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.657	0.00	13.64
82.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.677	0.00	4.12
82.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.677	0.00	5.38
82.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.677	0.00	15.61
82.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.677	0.00	13.66
84.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.716	0.00	8.27
84.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.716	0.00	10.79
84.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.716	0.00	31.30
84.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.716	0.00	27.41
85.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.736	0.00	4.14
85.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.736	0.00	5.40
85.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.736	0.00	15.66
85.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.736	0.00	13.72
86.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.755	0.00	4.15
86.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.755	0.00	5.41
86.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.755	0.00	15.68
86.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.755	0.00	13.74
88.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.793	0.00	8.33
88.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.793	0.00	10.86
88.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.793	0.00	31.43
88.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.793	0.00	27.56
90.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.830	0.00	8.37
90.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.830	0.00	10.89
90.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.830	0.00	31.49
90.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.830	0.00	27.63
91.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.849	0.00	4.19
91.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.849	0.00	5.45
91.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.849	0.00	15.76
91.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.849	0.00	13.83
92.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.867	0.00	4.20
92.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.867	0.00	5.46
92.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.867	0.00	15.78
92.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.867	0.00	13.85
93.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	5.900	0.00	7.71
93.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	5.900	0.00	10.02
93.83	1 5/8" Coax	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	5.900	0.00	28.93
93.83	C6X10.5 Reinforcing	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	5.900	0.00	25.41
94.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	5.903	0.00	0.72
94.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	5.903	0.00	0.93
94.00	1 5/8" Coax	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	5.903	0.00	2.69
94.00	C6X10.5 Reinforcing	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	5.903	0.00	2.36
96.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.939	0.00	8.46
96.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.939	0.00	10.99

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
96.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.939	0.00	31.68
96.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	5.939	0.00	13.92
98.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.974	0.00	8.49
98.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.974	0.00	11.02
98.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.974	0.00	31.74
100.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.008	0.00	8.52
100.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.008	0.00	11.05
100.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.008	0.00	31.80
102.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.043	0.00	8.55
102.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.043	0.00	11.08
102.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.043	0.00	31.86
104.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.076	0.00	8.58
104.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.076	0.00	11.11
104.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.076	0.00	31.91
106.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.109	0.00	8.60
106.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.109	0.00	11.14
106.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.109	0.00	31.97
108.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.142	0.00	8.63
108.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.142	0.00	11.17
108.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.142	0.00	32.02
110.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.174	0.00	8.66
110.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.174	0.00	11.20
110.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.174	0.00	32.08
111.17	Safety Cable	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	6.193	0.00	5.08
111.17	Step bolts (ladder)	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	6.193	0.00	6.56
111.17	1 5/8" Coax	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	6.193	0.00	18.78
111.17	C6X10.5 Reinforcing	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	6.193	0.00	10.34
112.00	Safety Cable	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	6.206	0.00	3.61
112.00	Step bolts (ladder)	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	6.206	0.00	4.66
112.00	1 5/8" Coax	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	6.206	0.00	13.33
112.00	C6X10.5 Reinforcing	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	6.206	0.00	7.34
114.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.238	0.00	8.71
114.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.238	0.00	11.26
114.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.238	0.00	32.19
114.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.238	0.00	17.73
115.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.253	0.00	4.36
115.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.253	0.00	5.64
115.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.253	0.00	16.11
115.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.253	0.00	8.88
116.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.269	0.00	4.37
116.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.269	0.00	5.64
116.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.269	0.00	16.12
116.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.269	0.00	8.89
118.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.299	0.00	8.77
118.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.299	0.00	11.31
118.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.299	0.00	32.29
118.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.299	0.00	17.81

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
120.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.330	0.00	8.79
120.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.330	0.00	11.34
120.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.330	0.00	32.34
120.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.330	0.00	17.86
122.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.360	0.00	8.82
122.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.360	0.00	11.36
122.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.360	0.00	32.39
122.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.360	0.00	17.90
123.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	6.387	0.00	8.09
123.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	6.387	0.00	10.42
123.83	1 5/8" Coax	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	6.387	0.00	29.68
123.83	C6X10.5 Reinforcing	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	6.387	0.00	16.41
124.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	6.389	0.00	0.75
124.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	6.389	0.00	0.97
124.00	1 5/8" Coax	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	6.389	0.00	2.76
124.00	C6X10.5 Reinforcing	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	6.389	0.00	1.52
126.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.419	0.00	8.87
126.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.419	0.00	11.42
126.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.419	0.00	32.49
126.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.419	0.00	8.99
128.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.448	0.00	8.89
128.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.448	0.00	11.44
128.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.448	0.00	32.53
130.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.476	0.00	8.91
130.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.476	0.00	11.47
130.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.476	0.00	32.58
132.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.504	0.00	8.94
132.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.504	0.00	11.49
132.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.504	0.00	32.63
134.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.532	0.00	8.96
134.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.532	0.00	11.52
134.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.532	0.00	32.67
135.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.546	0.00	4.49
135.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.546	0.00	5.76
135.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.546	0.00	16.35
136.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.560	0.00	4.49
136.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.560	0.00	5.77
136.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.560	0.00	16.36
138.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.588	0.00	9.01
138.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.588	0.00	11.56
138.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.588	0.00	32.76
140.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.615	0.00	9.03
140.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.615	0.00	11.59
140.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.615	0.00	32.81
142.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.642	0.00	9.05
142.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.642	0.00	11.61
142.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.642	0.00	32.85

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
143.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.655	0.00	4.53
143.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.655	0.00	5.81
143.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.655	0.00	16.44
144.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.668	0.00	4.54
144.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.668	0.00	5.82
144.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.668	0.00	16.45
146.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.695	0.00	9.10
146.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.695	0.00	11.66
146.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.695	0.00	32.94
148.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.721	0.00	9.12
148.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.721	0.00	11.68
148.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.721	0.00	32.98
150.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.746	0.00	9.14
150.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.746	0.00	11.70
150.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.746	0.00	33.02
152.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.772	0.00	9.16
152.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.772	0.00	11.72
152.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.772	0.00	33.06
153.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.785	0.00	4.59
153.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.785	0.00	5.87
153.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.785	0.00	16.54
154.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.797	0.00	4.59
154.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.797	0.00	5.87
154.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.797	0.00	16.55
156.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.822	0.00	9.20
156.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.822	0.00	11.77
156.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.822	0.00	33.14
158.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.847	0.00	9.22
158.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.847	0.00	11.79
158.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.847	0.00	33.18
160.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.872	0.00	9.24
160.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.872	0.00	11.81
160.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.872	0.00	33.22
162.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.896	0.00	9.26
162.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.896	0.00	11.83
162.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.896	0.00	33.26
163.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.909	0.00	4.64
163.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.909	0.00	5.92
163.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.909	0.00	16.64
164.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.921	0.00	4.64
164.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.921	0.00	5.92
164.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.921	0.00	16.65
166.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.945	0.00	9.30
166.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.945	0.00	11.87
166.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.945	0.00	33.34
168.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.968	0.00	9.32
168.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.968	0.00	11.89

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
168.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.968	0.00	33.37
170.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.992	0.00	9.34
170.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.992	0.00	11.91
170.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.992	0.00	33.41
172.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.015	0.00	9.36
172.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.015	0.00	11.93
172.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.015	0.00	33.45
173.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.027	0.00	4.68
173.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.027	0.00	5.97
173.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.027	0.00	16.73
174.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.039	0.00	4.69
174.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.039	0.00	5.97
176.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.062	0.00	9.40
176.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.062	0.00	11.97
178.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.085	0.00	9.42
178.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.085	0.00	11.99
180.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.107	0.00	9.43
180.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.107	0.00	12.01
181.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.118	0.00	4.72
181.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.118	0.00	6.01
182.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.130	0.00	4.73
182.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.130	0.00	6.01
183.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.141	0.00	4.73
183.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.141	0.00	6.02
Totals:											0.0	4,918.5

Calculated Forces

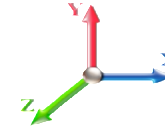
Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 29

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-94.97	-9.39	0.00	-1219.4	0.00	1219.42	5190.16	2595.08	13702.9	6861.66	0.00	0.000	0.000	0.196
2.00	-94.03	-9.35	0.00	-1200.6	0.00	1200.64	5174.50	2587.25	13560.7	6790.43	0.00	-0.017	0.000	0.195
4.00	-93.08	-9.32	0.00	-1181.9	0.00	1181.94	5158.51	2579.25	13418.2	6719.08	0.01	-0.035	0.000	0.194
6.00	-92.12	-9.28	0.00	-1163.3	0.00	1163.30	5142.18	2571.09	13275.4	6647.61	0.03	-0.052	0.000	0.193
8.00	-91.17	-9.25	0.00	-1144.7	0.00	1144.74	5125.52	2562.76	13132.5	6576.03	0.06	-0.070	0.000	0.192
10.00	-90.21	-9.21	0.00	-1126.2	0.00	1126.24	5108.53	2554.27	12989.4	6504.36	0.09	-0.088	0.000	0.191
12.00	-89.26	-9.18	0.00	-1107.8	0.00	1107.82	5091.21	2545.61	12846.0	6432.60	0.13	-0.106	0.000	0.190
14.00	-88.31	-9.14	0.00	-1089.4	0.00	1089.46	5073.56	2536.78	12702.6	6360.75	0.18	-0.124	0.000	0.189
16.00	-87.36	-9.11	0.00	-1071.1	0.00	1071.18	5055.57	2527.79	12559.0	6288.85	0.24	-0.142	0.000	0.188
18.00	-86.41	-9.07	0.00	-1052.9	0.00	1052.96	5037.25	2518.63	12415.3	6216.88	0.30	-0.160	0.000	0.187
20.00	-85.47	-9.04	0.00	-1034.8	0.00	1034.81	5018.60	2509.30	12271.4	6144.86	0.37	-0.179	0.000	0.185
22.00	-84.53	-9.00	0.00	-1016.7	0.00	1016.74	4999.62	2499.81	12127.5	6072.81	0.45	-0.197	0.000	0.184
24.00	-83.60	-8.97	0.00	-998.73	0.00	998.73	4980.31	2490.15	11983.6	6000.72	0.54	-0.216	0.000	0.183
26.00	-82.67	-8.93	0.00	-980.80	0.00	980.80	4960.66	2480.33	11839.6	5928.62	0.63	-0.235	0.000	0.182
28.00	-81.74	-8.90	0.00	-962.93	0.00	962.93	4940.68	2470.34	11695.6	5856.50	0.74	-0.253	0.000	0.181
30.00	-80.82	-8.86	0.00	-945.14	0.00	945.14	4920.37	2460.19	11551.6	5784.39	0.85	-0.272	0.000	0.180
32.00	-79.90	-8.83	0.00	-927.41	0.00	927.41	4899.73	2449.87	11407.6	5712.28	0.96	-0.291	0.000	0.179
34.00	-78.99	-8.79	0.00	-909.76	0.00	909.76	4878.76	2439.38	11263.6	5640.19	1.09	-0.311	0.000	0.178
36.00	-78.08	-8.75	0.00	-892.18	0.00	892.18	4857.45	2428.72	11119.7	5568.14	1.22	-0.330	0.000	0.176
38.00	-77.18	-8.71	0.00	-874.68	0.00	874.68	4835.81	2417.91	10975.9	5496.12	1.37	-0.349	0.000	0.175
40.00	-76.29	-8.67	0.00	-857.25	0.00	857.25	4813.84	2406.92	10832.2	5424.15	1.52	-0.369	0.000	0.174
41.00	-75.84	-8.65	0.00	-848.59	0.00	848.59	4802.73	2401.36	10760.3	5388.18	1.60	-0.379	0.000	0.173
42.00	-75.12	-8.63	0.00	-839.94	0.00	839.94	4791.54	2395.77	10688.5	5352.24	1.68	-0.389	0.000	0.173
44.00	-73.70	-8.58	0.00	-822.68	0.00	822.68	4768.90	2384.45	10545.1	5280.39	1.84	-0.408	0.000	0.171
46.00	-72.29	-8.54	0.00	-805.51	0.00	805.51	4745.94	2372.97	10401.7	5208.63	2.02	-0.428	0.000	0.170
48.00	-70.89	-8.49	0.00	-788.44	0.00	788.44	4759.60	2379.80	10486.7	5251.18	2.20	-0.448	0.000	0.165
50.00	-70.01	-8.44	0.00	-771.46	0.00	771.46	4736.50	2368.25	10343.5	5179.45	2.40	-0.468	0.000	0.164
51.00	-69.57	-8.41	0.00	-763.03	0.00	763.03	4724.82	2362.41	10271.9	5143.62	2.49	-0.478	0.000	0.163
51.00	-69.57	-8.41	0.00	-763.03	0.00	763.03	4064.30	2032.15	8835.99	4424.56	2.49	-0.478	0.000	0.190
52.00	-69.13	-8.40	0.00	-754.61	0.00	754.61	4053.20	2026.60	8772.35	4392.70	2.60	-0.487	0.000	0.189
54.00	-68.26	-8.35	0.00	-737.82	0.00	737.82	4030.83	2015.41	8645.34	4329.09	2.80	-0.507	0.000	0.187
56.00	-67.39	-8.30	0.00	-721.12	0.00	721.12	4008.20	2004.10	8518.66	4265.66	3.02	-0.526	0.000	0.186
58.00	-66.53	-8.25	0.00	-704.52	0.00	704.52	3985.33	1992.66	8392.33	4202.40	3.25	-0.546	0.000	0.184
60.00	-65.68	-8.20	0.00	-688.01	0.00	688.01	3962.20	1981.10	8266.38	4139.33	3.48	-0.565	0.000	0.183
62.00	-64.83	-8.15	0.00	-671.61	0.00	671.61	3938.82	1969.41	8140.81	4076.46	3.72	-0.585	0.000	0.181
64.00	-63.99	-8.10	0.00	-655.30	0.00	655.30	3915.19	1957.60	8015.64	4013.78	3.97	-0.605	0.000	0.180
66.00	-63.14	-8.04	0.00	-639.09	0.00	639.09	3891.31	1945.66	7890.88	3951.30	4.23	-0.625	0.000	0.178
66.17	-63.06	-8.05	0.00	-637.72	0.00	637.72	3889.27	1944.64	7880.29	3946.00	4.25	-0.626	0.000	0.131
68.00	-62.28	-7.99	0.00	-623.00	0.00	623.00	3867.19	1933.59	7766.55	3889.05	4.49	-0.640	0.000	0.129
70.00	-61.43	-7.93	0.00	-607.01	0.00	607.01	3842.81	1921.40	7642.66	3827.01	4.76	-0.654	0.000	0.128
71.00	-61.00	-7.91	0.00	-599.08	0.00	599.08	3830.52	1915.26	7580.89	3796.08	4.90	-0.662	0.000	0.127
71.00	-61.00	-7.91	0.00	-599.08	0.00	599.08	3467.89	1733.95	6863.13	3436.66	4.90	-0.662	0.000	0.140
72.00	-60.58	-7.88	0.00	-591.17	0.00	591.17	3456.29	1728.14	6806.46	3408.29	5.04	-0.669	0.000	0.139
74.00	-59.74	-7.82	0.00	-575.41	0.00	575.41	3432.92	1716.46	6693.50	3351.73	5.32	-0.684	0.000	0.137
76.00	-58.91	-7.76	0.00	-559.77	0.00	559.77	3409.33	1704.67	6581.05	3295.42	5.61	-0.698	0.000	0.136
78.00	-58.08	-7.71	0.00	-544.24	0.00	544.24	3385.54	1692.77	6469.11	3239.36	5.91	-0.713	0.000	0.134
80.00	-57.25	-7.64	0.00	-528.83	0.00	528.83	3361.54	1680.77	6357.71	3183.58	6.21	-0.727	0.000	0.132
81.00	-56.84	-7.61	0.00	-521.19	0.00	521.19	3349.46	1674.73	6302.21	3155.79	6.36	-0.734	0.000	0.131

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 63



81.00	-56.84	-7.61	0.00	-521.19	0.00	521.19	2964.88	1482.44	5593.85	2801.08	6.36	-0.734	0.000	0.123
82.00	-56.47	-7.59	0.00	-513.57	0.00	513.57	2956.03	1478.01	5548.33	2778.29	6.52	-0.742	0.000	0.139
84.00	-55.73	-7.53	0.00	-498.39	0.00	498.39	2938.12	1469.06	5457.44	2732.78	6.83	-0.758	0.000	0.136
85.00	-55.37	-7.50	0.00	-490.86	0.00	490.86	2929.07	1464.54	5412.08	2710.06	6.99	-0.766	0.000	0.135
86.00	-54.81	-7.47	0.00	-483.36	0.00	483.36	2919.96	1459.98	5366.77	2687.37	7.15	-0.774	0.000	0.133
88.00	-53.72	-7.41	0.00	-468.41	0.00	468.41	2901.53	1450.76	5276.32	2642.08	7.48	-0.791	0.000	0.131
90.00	-52.63	-7.34	0.00	-453.59	0.00	453.59	2882.84	1441.42	5186.12	2596.92	7.82	-0.807	0.000	0.128
91.00	-52.09	-7.31	0.00	-446.25	0.00	446.25	2898.35	1449.17	5260.87	2634.34	7.99	-0.815	0.000	0.129
92.00	-51.73	-7.29	0.00	-438.93	0.00	438.93	2889.01	1444.51	5215.76	2611.76	8.16	-0.823	0.000	0.125
93.83	-51.07	-7.23	0.00	-425.60	0.00	425.60	2871.76	1435.88	5133.38	2570.50	8.48	-0.837	0.000	0.122
93.83	-51.07	-7.23	0.00	-425.60	0.00	425.60	2871.76	1435.88	5133.38	2570.50	8.48	-0.837	0.000	0.122
94.00	-51.01	-7.23	0.00	-424.37	0.00	424.37	2870.15	1435.07	5125.73	2566.68	8.51	-0.838	0.000	0.183
96.00	-50.30	-7.18	0.00	-409.91	0.00	409.91	2851.02	1425.51	5035.98	2521.73	8.86	-0.861	0.000	0.180
98.00	-49.62	-7.13	0.00	-395.55	0.00	395.55	2831.62	1415.81	4946.52	2476.93	9.23	-0.884	0.000	0.177
100.00	-48.94	-7.08	0.00	-381.29	0.00	381.29	2811.97	1405.98	4857.35	2432.29	9.60	-0.907	0.000	0.174
102.00	-48.27	-7.02	0.00	-367.14	0.00	367.14	2792.05	1396.03	4768.51	2387.80	9.99	-0.930	0.000	0.171
104.00	-47.60	-6.97	0.00	-353.10	0.00	353.10	2771.87	1385.94	4680.00	2343.48	10.38	-0.953	0.000	0.168
106.00	-46.95	-6.92	0.00	-339.16	0.00	339.16	2751.43	1375.71	4591.84	2299.33	10.79	-0.976	0.000	0.165
108.00	-46.30	-6.87	0.00	-325.32	0.00	325.32	2730.72	1365.36	4504.04	2255.37	11.20	-0.998	0.000	0.161
110.00	-45.66	-6.82	0.00	-311.59	0.00	311.59	2709.75	1354.88	4416.62	2211.59	11.62	-1.021	0.000	0.158
111.17	-45.28	-6.78	0.00	-303.61	0.00	303.61	2697.36	1348.68	4365.66	2186.08	11.88	-1.034	0.000	0.124
112.00	-45.01	-6.76	0.00	-297.98	0.00	297.98	2688.52	1344.26	4329.60	2168.02	12.06	-1.041	0.000	0.123
114.00	-44.36	-6.71	0.00	-284.45	0.00	284.45	2667.03	1333.51	4242.98	2124.64	12.50	-1.059	0.000	0.120
115.00	-44.03	-6.68	0.00	-277.75	0.00	277.75	2656.18	1328.09	4199.83	2103.04	12.72	-1.067	0.000	0.116
115.00	-44.03	-6.68	0.00	-277.75	0.00	277.75	1951.15	975.57	3095.05	1549.82	12.72	-1.067	0.000	0.126
116.00	-43.74	-6.65	0.00	-271.07	0.00	271.07	1944.57	972.29	3065.67	1535.11	12.94	-1.076	0.000	0.147
118.00	-43.15	-6.60	0.00	-257.76	0.00	257.76	1931.24	965.62	3006.98	1505.73	13.40	-1.095	0.000	0.142
120.00	-42.57	-6.54	0.00	-244.56	0.00	244.56	1917.63	958.82	2948.42	1476.40	13.86	-1.115	0.000	0.137
122.00	-42.00	-6.49	0.00	-231.48	0.00	231.48	1903.77	951.88	2889.98	1447.14	14.33	-1.133	0.000	0.133
123.83	-41.47	-6.43	0.00	-219.61	0.00	219.61	1890.85	945.43	2836.64	1420.43	14.77	-1.150	0.000	0.128
123.83	-41.47	-6.43	0.00	-219.61	0.00	219.61	1890.85	945.43	2836.64	1420.43	14.77	-1.150	0.000	0.128
124.00	-41.42	-6.44	0.00	-218.51	0.00	218.51	1889.64	944.82	2831.69	1417.95	14.81	-1.152	0.000	0.176
126.00	-40.86	-6.38	0.00	-205.64	0.00	205.64	1875.25	937.63	2773.56	1388.84	15.30	-1.177	0.000	0.170
128.00	-40.32	-6.33	0.00	-192.88	0.00	192.88	1860.60	930.30	2715.62	1359.83	15.80	-1.201	0.000	0.164
130.00	-39.78	-6.28	0.00	-180.21	0.00	180.21	1845.69	922.84	2657.86	1330.91	16.31	-1.225	0.000	0.157
132.00	-39.01	-6.22	0.00	-167.65	0.00	167.65	1830.51	915.25	2600.31	1302.09	16.83	-1.248	0.000	0.150
134.00	-38.26	-6.16	0.00	-155.20	0.00	155.20	1815.07	907.53	2542.99	1273.39	17.35	-1.270	0.000	0.143
135.00	-37.88	-6.13	0.00	-149.04	0.00	149.04	1823.79	911.89	2575.21	1289.52	17.62	-1.281	0.000	0.136
136.00	-37.61	-6.11	0.00	-142.91	0.00	142.91	1816.04	908.02	2546.57	1275.18	17.89	-1.291	0.000	0.133
138.00	-37.09	-6.05	0.00	-130.69	0.00	130.69	1800.35	900.18	2489.47	1246.58	18.44	-1.311	0.000	0.125
140.00	-36.57	-6.00	0.00	-118.58	0.00	118.58	1784.41	892.20	2432.62	1218.12	18.99	-1.330	0.000	0.118
142.00	-36.05	-5.94	0.00	-106.58	0.00	106.58	1768.19	884.10	2376.04	1189.79	19.55	-1.347	0.000	0.110
143.00	-28.02	-4.70	0.00	-100.64	0.00	100.64	1759.99	879.99	2347.86	1175.68	19.83	-1.356	0.000	0.102
144.00	-27.78	-4.67	0.00	-95.94	0.00	95.94	1751.72	875.86	2319.75	1161.60	20.12	-1.364	0.000	0.098
146.00	-27.30	-4.62	0.00	-86.59	0.00	86.59	1734.98	867.49	2263.76	1133.56	20.69	-1.379	0.000	0.092
148.00	-26.83	-4.56	0.00	-77.36	0.00	77.36	1717.98	858.99	2208.08	1105.68	21.27	-1.394	0.000	0.086
150.00	-23.57	-4.14	0.00	-68.24	0.00	68.24	1700.72	850.36	2152.74	1077.97	21.86	-1.407	0.000	0.077
152.00	-23.11	-4.08	0.00	-59.97	0.00	59.97	1683.20	841.60	2097.74	1050.43	22.45	-1.420	0.000	0.071
153.00	-17.97	-3.09	0.00	-55.89	0.00	55.89	1674.33	837.17	2070.37	1036.72	22.75	-1.426	0.000	0.065
154.00	-17.76	-3.06	0.00	-52.81	0.00	52.81	1665.41	832.70	2043.10	1023.07	23.05	-1.431	0.000	0.062
156.00	-17.34	-3.00	0.00	-46.69	0.00	46.69	1647.36	823.68	1988.83	995.90	23.65	-1.442	0.000	0.057
158.00	-16.93	-2.94	0.00	-40.69	0.00	40.69	1629.04	814.52	1934.96	968.92	24.26	-1.452	0.000	0.052
160.00	-16.52	-2.88	0.00	-34.81	0.00	34.81	1610.47	805.23	1881.50	942.15	24.87	-1.460	0.000	0.047
162.00	-16.12	-2.83	0.00	-29.04	0.00	29.04	1591.63	795.82	1828.46	915.59	25.48	-1.468	0.000	0.042
163.00	-12.56	-2.28	0.00	-26.21	0.00	26.21	1582.11	791.06	1802.10	902.39	25.79	-1.472	0.000	0.037
164.00	-12.36	-2.25	0.00	-23.94	0.00	23.94	1572.53	786.27	1775.86	889.25	26.10	-1.475	0.000	0.035
166.00	-11.98	-2.19	0.00	-19.44	0.00	19.44	1553.17	776.58	1723.71	863.13	26.72	-1.481	0.000	0.030

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 64
	Struct Class: II	



168.00	-11.60	-2.14	0.00	-15.05	0.00	15.05	1533.54	766.77	1672.03	837.26	27.34	-1.486	0.000	0.026
170.00	-11.23	-2.08	0.00	-10.78	0.00	10.78	1513.65	756.83	1620.83	811.62	27.96	-1.490	0.000	0.021
172.00	-10.85	-2.02	0.00	-6.62	0.00	6.62	1493.50	746.75	1570.13	786.23	28.59	-1.493	0.000	0.016
173.00	-4.31	-0.65	0.00	-4.59	0.00	4.59	1483.33	741.66	1544.98	773.64	28.90	-1.494	0.000	0.009
174.00	-4.16	-0.62	0.00	-3.95	0.00	3.95	1473.09	736.54	1519.95	761.10	29.21	-1.494	0.000	0.008
176.00	-3.86	-0.57	0.00	-2.71	0.00	2.71	1452.41	726.20	1470.30	736.24	29.84	-1.496	0.000	0.006
178.00	-3.57	-0.52	0.00	-1.57	0.00	1.57	1427.85	713.93	1417.60	709.85	30.47	-1.496	0.000	0.005
180.00	-3.28	-0.46	0.00	-0.54	0.00	0.54	1400.09	700.05	1362.74	682.38	31.09	-1.497	0.000	0.003
180.00	-3.28	-0.46	0.00	-0.54	0.00	0.54	678.42	339.21	662.23	396.30	31.09	-1.497	0.000	0.006
181.00	-0.30	-0.05	0.00	-0.08	0.00	0.08	678.42	339.21	662.23	396.30	31.41	-1.497	0.000	0.001
182.00	-0.15	-0.03	0.00	-0.03	0.00	0.03	678.42	339.21	662.23	396.30	31.72	-1.497	0.000	0.000
183.00	0.00	-0.02	0.00	0.00	0.00	0.00	678.42	339.21	662.23	396.30	32.03	-1.497	0.000	0.000

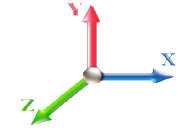
Seismic Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0E				Iterations 26
Gust Response Factor	1.10	Sds	0.17	Ss 0.16
Dead Load Factor	1.20	Seismic Load Factor	1.00	S1 0.06
Wind Load Factor	0.00	Structure Frequency	0.29	SA 0.03
				Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
2.00		517.51	0.00	0.01	0.01	4.26	
4.00		513.69	0.00	0.02	0.01	7.21	
6.00		509.88	0.00	0.03	0.02	9.35	
8.00		506.07	0.00	0.04	0.02	10.93	
10.00		502.25	0.01	0.05	0.03	12.12	
12.00		498.44	0.01	0.05	0.03	13.02	
14.00		494.62	0.01	0.06	0.03	13.69	
16.00		490.81	0.01	0.06	0.04	14.18	
18.00		487.00	0.02	0.06	0.04	14.55	
20.00		483.18	0.02	0.07	0.04	14.81	
22.00		479.37	0.03	0.07	0.04	14.99	
24.00		475.56	0.03	0.07	0.04	15.12	
26.00		471.74	0.04	0.07	0.04	15.19	
28.00		467.93	0.04	0.07	0.04	15.24	
30.00		464.11	0.05	0.07	0.04	15.26	
32.00		460.30	0.06	0.07	0.04	15.27	
34.00		456.49	0.07	0.07	0.04	15.27	
36.00		452.67	0.07	0.07	0.04	15.27	
38.00		448.86	0.08	0.07	0.04	15.26	
40.00		445.05	0.09	0.07	0.04	15.25	
41.00	Bot - Section 2	221.09	0.09	0.07	0.04	7.60	
42.00		443.32	0.10	0.07	0.04	15.31	
44.00		880.91	0.11	0.07	0.04	30.66	
46.00		873.28	0.12	0.07	0.03	30.64	
48.00	Top - Section 1	865.66	0.13	0.07	0.03	30.60	
50.00		432.05	0.14	0.07	0.03	15.38	
51.00	Top - Section 2	214.60	0.15	0.07	0.03	7.67	
52.00		213.64	0.15	0.07	0.03	7.66	
54.00		424.43	0.16	0.07	0.03	15.29	
56.00		420.61	0.18	0.07	0.03	15.21	
58.00		416.80	0.19	0.06	0.02	15.10	
60.00		412.98	0.20	0.06	0.02	14.95	
62.00		409.17	0.22	0.06	0.02	14.76	
64.00		405.36	0.23	0.06	0.02	14.51	
66.00		401.54	0.25	0.06	0.02	14.19	
66.17	RB1	33.96	0.25	0.06	0.02	1.20	
68.00		363.77	0.26	0.05	0.02	12.63	
70.00		393.92	0.28	0.05	0.01	13.33	
71.00	Top - Section 3	195.53	0.28	0.05	0.01	6.51	
72.00		194.57	0.29	0.05	0.01	6.36	
74.00		386.28	0.31	0.04	0.01	12.09	
76.00		382.47	0.33	0.04	0.01	11.30	
78.00		378.66	0.34	0.03	0.01	10.39	
80.00		374.84	0.36	0.03	0.01	9.35	
81.00	Top - Section 4	185.99	0.37	0.03	0.01	4.38	

Seismic Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Elev	Section	Topog	F1	F2	F3	F4
82.00		154.41	0.38	0.02	0.01	3.41
84.00		306.44	0.40	0.02	0.01	5.76
85.00	Bot - Section 6	152.03	0.41	0.02	0.01	2.59
86.00		304.57	0.42	0.01	0.01	4.62
88.00		604.38	0.44	0.01	0.01	6.74
90.00		598.02	0.46	0.00	0.01	4.10
91.00	Top - Section 5	296.63	0.47	0.00	0.01	1.37
92.00		148.58	0.48	-0.01	0.01	0.34
93.83	RT1	269.84	0.50	-0.01	0.01	-0.53
94.00		24.93	0.50	-0.02	0.01	-0.06
96.00		291.59	0.52	-0.02	0.01	-2.07
98.00		288.41	0.54	-0.03	0.01	-3.39
100.00		285.23	0.56	-0.04	0.01	-4.64
102.00		282.06	0.59	-0.05	0.01	-5.79
104.00		278.88	0.61	-0.06	0.02	-6.82
106.00		483.88	0.63	-0.07	0.02	-13.54
108.00		478.16	0.66	-0.07	0.02	-14.85
110.00		472.44	0.68	-0.08	0.03	-15.88
111.17	RB2	273.72	0.70	-0.09	0.03	-9.55
112.00		192.99	0.71	-0.09	0.03	-6.88
114.00		461.00	0.73	-0.10	0.04	-17.14
115.00	Top - Section 6	130.30	0.75	-0.10	0.04	-4.92
116.00		103.77	0.76	-0.10	0.04	-3.96
118.00		205.64	0.79	-0.11	0.05	-7.94
120.00		203.10	0.81	-0.11	0.06	-7.83
122.00		200.55	0.84	-0.12	0.07	-7.61
123.83	RT2	181.28	0.87	-0.12	0.07	-6.69
124.00		16.73	0.87	-0.12	0.08	-0.62
126.00		195.47	0.90	-0.12	0.09	-6.88
128.00		192.93	0.92	-0.12	0.10	-6.37
130.00	Bot - Section 8	190.38	0.95	-0.12	0.11	-5.79
132.00		378.38	0.98	-0.11	0.12	-10.32
134.00		373.30	1.01	-0.11	0.14	-8.84
135.00	Top - Section 7	184.74	1.03	-0.10	0.15	-4.01
136.00		92.41	1.04	-0.10	0.15	-1.81
138.00		182.92	1.07	-0.08	0.17	-2.75
140.00		180.37	1.11	-0.07	0.19	-1.80
142.00		177.83	1.14	-0.05	0.21	-0.79
143.00	Appurtenance(s)	2977.2	1.15	-0.03	0.22	-4.44
144.00		87.33	1.17	-0.02	0.23	0.14
146.00		172.75	1.20	0.01	0.26	1.39
148.00		170.20	1.24	0.04	0.28	2.56
150.00	Appurtenance(s)	1667.6	1.27	0.08	0.31	37.54
152.00		165.12	1.30	0.13	0.34	5.03
153.00	Appurtenance(s)	2174.7	1.32	0.15	0.36	75.29
154.00		80.97	1.34	0.18	0.37	3.15
156.00		160.03	1.37	0.24	0.40	7.66
158.00		157.49	1.41	0.30	0.44	9.02
160.00		154.95	1.44	0.37	0.48	10.41
162.00		152.40	1.48	0.46	0.52	11.84
163.00	Appurtenance(s)	1787.0	1.50	0.50	0.54	148.45
164.00		74.61	1.52	0.55	0.56	6.61
166.00		147.32	1.56	0.65	0.61	14.74
168.00		144.78	1.59	0.76	0.66	16.23
170.00		142.23	1.63	0.88	0.71	17.72
172.00		139.69	1.67	1.01	0.77	19.22
173.00	Appurtenance(s)	2468.2	1.69	1.08	0.80	356.27

Seismic Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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174.00		68.26	1.71	1.16	0.83	10.32
176.00		134.61	1.75	1.31	0.89	22.25
178.00		132.06	1.79	1.49	0.96	23.76
180.00	Top - Section 8	129.52	1.83	1.67	1.03	25.27
181.00	Appurtenance(s)	1571.2	1.85	1.77	1.06	318.87
182.00		71.25	1.87	1.87	1.10	15.03
183.00		71.25	1.89	1.98	1.14	15.60
Totals:		44,592.3				1,612.1
						Total Wind: 37,649.6

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

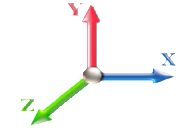
Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.2D + 1.0E						Iterations 26
Gust Response Factor	1.10			Sds	0.17	Ss 0.16
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1	0.09	S1 0.06
Wind Load Factor	0.00	Structure Frequency	0.29	SA	0.03	Seismic Importance Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-61.01	-1.81	0.00	-241.33	0.00	241.33	5190.16	2595.08	13702.9	6861.66	0.00	0.00	0.00	0.047
2.00	-60.28	-1.80	0.00	-237.72	0.00	237.72	5174.50	2587.25	13560.7	6790.43	0.00	0.00	0.00	0.047
4.00	-59.55	-1.80	0.00	-234.11	0.00	234.11	5158.51	2579.25	13418.2	6719.08	0.00	-0.01	0.00	0.046
6.00	-58.83	-1.80	0.00	-230.51	0.00	230.51	5142.18	2571.09	13275.4	6647.61	0.01	-0.01	0.00	0.046
8.00	-58.11	-1.79	0.00	-226.92	0.00	226.92	5125.52	2562.76	13132.5	6576.03	0.01	-0.01	0.00	0.046
10.00	-57.40	-1.78	0.00	-223.34	0.00	223.34	5108.53	2554.27	12989.4	6504.36	0.02	-0.02	0.00	0.046
12.00	-56.69	-1.77	0.00	-219.78	0.00	219.78	5091.21	2545.61	12846.0	6432.60	0.03	-0.02	0.00	0.045
14.00	-55.99	-1.76	0.00	-216.25	0.00	216.25	5073.56	2536.78	12702.6	6360.75	0.04	-0.02	0.00	0.045
16.00	-55.29	-1.75	0.00	-212.73	0.00	212.73	5055.57	2527.79	12559.0	6288.85	0.05	-0.03	0.00	0.045
18.00	-54.59	-1.74	0.00	-209.23	0.00	209.23	5037.25	2518.63	12415.3	6216.88	0.06	-0.03	0.00	0.044
20.00	-53.90	-1.72	0.00	-205.76	0.00	205.76	5018.60	2509.30	12271.4	6144.86	0.07	-0.04	0.00	0.044
22.00	-53.22	-1.71	0.00	-202.31	0.00	202.31	4999.62	2499.81	12127.5	6072.81	0.09	-0.04	0.00	0.044
24.00	-52.53	-1.70	0.00	-198.89	0.00	198.89	4980.31	2490.15	11983.6	6000.72	0.11	-0.04	0.00	0.044
26.00	-51.86	-1.69	0.00	-195.49	0.00	195.49	4960.66	2480.33	11839.6	5928.62	0.13	-0.05	0.00	0.043
28.00	-51.19	-1.68	0.00	-192.11	0.00	192.11	4940.68	2470.34	11695.6	5856.50	0.15	-0.05	0.00	0.043
30.00	-50.52	-1.66	0.00	-188.76	0.00	188.76	4920.37	2460.19	11551.6	5784.39	0.17	-0.05	0.00	0.043
32.00	-49.86	-1.65	0.00	-185.44	0.00	185.44	4899.73	2449.87	11407.6	5712.28	0.19	-0.06	0.00	0.043
34.00	-49.20	-1.64	0.00	-182.13	0.00	182.13	4878.76	2439.38	11263.6	5640.19	0.22	-0.06	0.00	0.042
36.00	-48.54	-1.63	0.00	-178.86	0.00	178.86	4857.45	2428.72	11119.7	5568.14	0.24	-0.07	0.00	0.042
38.00	-47.90	-1.61	0.00	-175.61	0.00	175.61	4835.81	2417.91	10975.9	5496.12	0.27	-0.07	0.00	0.042
40.00	-47.25	-1.60	0.00	-172.39	0.00	172.39	4813.84	2406.92	10832.2	5424.15	0.30	-0.07	0.00	0.042
41.00	-46.93	-1.59	0.00	-170.79	0.00	170.79	4802.73	2401.36	10760.3	5388.18	0.32	-0.08	0.00	0.041
42.00	-46.34	-1.58	0.00	-169.19	0.00	169.19	4791.54	2395.77	10688.5	5352.24	0.33	-0.08	0.00	0.041
44.00	-45.18	-1.55	0.00	-166.04	0.00	166.04	4768.90	2384.45	10545.1	5280.39	0.37	-0.08	0.00	0.041
46.00	-44.02	-1.52	0.00	-162.94	0.00	162.94	4745.94	2372.97	10401.7	5208.63	0.40	-0.09	0.00	0.041
48.00	-42.87	-1.49	0.00	-159.90	0.00	159.90	4759.60	2379.80	10486.7	5251.18	0.44	-0.09	0.00	0.039
50.00	-42.24	-1.48	0.00	-156.92	0.00	156.92	4736.50	2368.25	10343.5	5179.45	0.48	-0.09	0.00	0.039
51.00	-41.93	-1.47	0.00	-155.44	0.00	155.44	4724.82	2362.41	10271.9	5143.62	0.50	-0.10	0.00	0.039
51.00	-41.93	-1.47	0.00	-155.44	0.00	155.44	4064.30	2032.15	8835.99	4424.56	0.50	-0.10	0.00	0.045
52.00	-41.61	-1.46	0.00	-153.97	0.00	153.97	4053.20	2026.60	8772.35	4392.70	0.52	-0.10	0.00	0.045
54.00	-40.99	-1.45	0.00	-151.04	0.00	151.04	4030.83	2015.41	8645.34	4329.09	0.56	-0.10	0.00	0.045
56.00	-40.38	-1.44	0.00	-148.14	0.00	148.14	4008.20	2004.10	8518.66	4265.66	0.60	-0.11	0.00	0.045
58.00	-39.77	-1.42	0.00	-145.27	0.00	145.27	3985.33	1992.66	8392.33	4202.40	0.65	-0.11	0.00	0.045
60.00	-39.16	-1.41	0.00	-142.42	0.00	142.42	3962.20	1981.10	8266.38	4139.33	0.69	-0.11	0.00	0.044
62.00	-38.56	-1.40	0.00	-139.60	0.00	139.60	3938.82	1969.41	8140.81	4076.46	0.74	-0.12	0.00	0.044
64.00	-37.96	-1.38	0.00	-136.81	0.00	136.81	3915.19	1957.60	8015.64	4013.78	0.79	-0.12	0.00	0.044
66.00	-37.37	-1.37	0.00	-134.04	0.00	134.04	3891.31	1945.66	7890.88	3951.30	0.84	-0.13	0.00	0.044
66.17	-37.32	-1.37	0.00	-133.81	0.00	133.81	3889.27	1944.64	7880.29	3946.00	0.85	-0.13	0.00	0.032
68.00	-36.78	-1.36	0.00	-131.30	0.00	131.30	3867.19	1933.59	7766.55	3889.05	0.90	-0.13	0.00	0.032
70.00	-36.20	-1.34	0.00	-128.58	0.00	128.58	3842.81	1921.40	7642.66	3827.01	0.95	-0.13	0.00	0.032
71.00	-35.91	-1.34	0.00	-127.24	0.00	127.24	3830.52	1915.26	7580.89	3796.08	0.98	-0.13	0.00	0.031
71.00	-35.91	-1.34	0.00	-127.24	0.00	127.24	3467.89	1733.95	6863.13	3436.66	0.98	-0.13	0.00	0.035
72.00	-35.62	-1.33	0.00	-125.90	0.00	125.90	3456.29	1728.14	6806.46	3408.29	1.01	-0.14	0.00	0.035
74.00	-35.05	-1.32	0.00	-123.24	0.00	123.24	3432.92	1716.46	6693.50	3351.73	1.06	-0.14	0.00	0.034
76.00	-34.48	-1.31	0.00	-120.59	0.00	120.59	3409.33	1704.67	6581.05	3295.42	1.12	-0.14	0.00	0.034
78.00	-33.92	-1.30	0.00	-117.97	0.00	117.97	3385.54	1692.77	6469.11	3239.36	1.18	-0.14	0.00	0.034
80.00	-33.35	-1.29	0.00	-115.37	0.00	115.37	3361.54	1680.77	6357.71	3183.58	1.24	-0.15	0.00	0.033

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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81.00	-33.08	-1.29	0.00	-114.08	0.00	114.08	3349.46	1674.73	6302.21	3155.79	1.28	-0.15	0.033
81.00	-33.08	-1.29	0.00	-114.08	0.00	114.08	2964.88	1482.44	5593.85	2801.08	1.28	-0.15	0.031
82.00	-32.84	-1.28	0.00	-112.79	0.00	112.79	2956.03	1478.01	5548.33	2778.29	1.31	-0.15	0.035
84.00	-32.36	-1.28	0.00	-110.22	0.00	110.22	2938.12	1469.06	5457.44	2732.78	1.37	-0.15	0.035
85.00	-32.12	-1.28	0.00	-108.95	0.00	108.95	2929.07	1464.54	5412.08	2710.06	1.40	-0.16	0.035
86.00	-31.70	-1.27	0.00	-107.67	0.00	107.67	2919.96	1459.98	5366.77	2687.37	1.44	-0.16	0.034
88.00	-30.86	-1.27	0.00	-105.12	0.00	105.12	2901.53	1450.76	5276.32	2642.08	1.50	-0.16	0.034
90.00	-30.04	-1.26	0.00	-102.59	0.00	102.59	2882.84	1441.42	5186.12	2596.92	1.57	-0.17	0.033
91.00	-29.62	-1.26	0.00	-101.33	0.00	101.33	2898.35	1449.17	5260.87	2634.34	1.61	-0.17	0.034
92.00	-29.39	-1.26	0.00	-100.07	0.00	100.07	2889.01	1444.51	5215.76	2611.76	1.64	-0.17	0.033
93.83	-28.97	-1.26	0.00	-97.77	0.00	97.77	2871.76	1435.88	5133.38	2570.50	1.71	-0.17	0.032
93.83	-28.97	-1.26	0.00	-97.77	0.00	97.77	2871.76	1435.88	5133.38	2570.50	1.71	-0.17	0.032
94.00	-28.93	-1.26	0.00	-97.56	0.00	97.56	2870.15	1435.07	5125.73	2566.68	1.71	-0.17	0.048
96.00	-28.47	-1.26	0.00	-95.04	0.00	95.04	2851.02	1425.51	5035.98	2521.73	1.79	-0.18	0.048
98.00	-28.01	-1.26	0.00	-92.51	0.00	92.51	2831.62	1415.81	4946.52	2476.93	1.86	-0.18	0.047
100.00	-27.56	-1.26	0.00	-89.99	0.00	89.99	2811.97	1405.98	4857.35	2432.29	1.94	-0.19	0.047
102.00	-27.11	-1.26	0.00	-87.46	0.00	87.46	2792.05	1396.03	4768.51	2387.80	2.02	-0.19	0.046
104.00	-26.66	-1.27	0.00	-84.93	0.00	84.93	2771.87	1385.94	4680.00	2343.48	2.10	-0.20	0.046
106.00	-26.22	-1.27	0.00	-82.40	0.00	82.40	2751.43	1375.71	4591.84	2299.33	2.19	-0.21	0.045
108.00	-25.78	-1.27	0.00	-79.86	0.00	79.86	2730.72	1365.36	4504.04	2255.37	2.28	-0.21	0.045
110.00	-25.35	-1.27	0.00	-77.33	0.00	77.33	2709.75	1354.88	4416.62	2211.59	2.37	-0.22	0.044
111.17	-25.10	-1.27	0.00	-75.85	0.00	75.85	2697.36	1348.68	4365.66	2186.08	2.42	-0.22	0.035
112.00	-24.92	-1.27	0.00	-74.79	0.00	74.79	2688.52	1344.26	4329.60	2168.02	2.46	-0.22	0.035
114.00	-24.49	-1.27	0.00	-72.25	0.00	72.25	2667.03	1333.51	4242.98	2124.64	2.55	-0.23	0.034
115.00	-24.28	-1.27	0.00	-70.99	0.00	70.99	2656.18	1328.09	4199.83	2103.04	2.60	-0.23	0.033
115.00	-24.28	-1.27	0.00	-70.99	0.00	70.99	1951.15	975.57	3095.05	1549.82	2.60	-0.23	0.037
116.00	-24.10	-1.27	0.00	-69.72	0.00	69.72	1944.57	972.29	3065.67	1535.11	2.65	-0.23	0.043
118.00	-23.75	-1.27	0.00	-67.18	0.00	67.18	1931.24	965.62	3006.98	1505.73	2.74	-0.24	0.042
120.00	-23.39	-1.27	0.00	-64.64	0.00	64.64	1917.63	958.82	2948.42	1476.40	2.84	-0.24	0.041
122.00	-23.04	-1.27	0.00	-62.09	0.00	62.09	1903.77	951.88	2889.98	1447.14	2.94	-0.25	0.040
123.83	-22.72	-1.27	0.00	-59.77	0.00	59.77	1890.85	945.43	2836.64	1420.43	3.04	-0.25	0.039
123.83	-22.72	-1.27	0.00	-59.77	0.00	59.77	1890.85	945.43	2836.64	1420.43	3.04	-0.25	0.039
124.00	-22.69	-1.27	0.00	-59.55	0.00	59.55	1889.64	944.82	2831.69	1417.95	3.05	-0.25	0.054
126.00	-22.35	-1.27	0.00	-57.01	0.00	57.01	1875.25	937.63	2773.56	1388.84	3.15	-0.26	0.053
128.00	-22.01	-1.27	0.00	-54.46	0.00	54.46	1860.60	930.30	2715.62	1359.83	3.26	-0.26	0.052
130.00	-21.67	-1.28	0.00	-51.91	0.00	51.91	1845.69	922.84	2657.86	1330.91	3.38	-0.27	0.051
132.00	-21.10	-1.28	0.00	-49.36	0.00	49.36	1830.51	915.25	2600.31	1302.09	3.49	-0.28	0.049
134.00	-20.54	-1.27	0.00	-46.81	0.00	46.81	1815.07	907.53	2542.99	1273.39	3.61	-0.28	0.048
135.00	-20.27	-1.27	0.00	-45.53	0.00	45.53	1823.79	911.89	2575.21	1289.52	3.67	-0.29	0.046
136.00	-20.10	-1.28	0.00	-44.26	0.00	44.26	1816.04	908.02	2546.57	1275.18	3.73	-0.29	0.046
138.00	-19.77	-1.28	0.00	-41.71	0.00	41.71	1800.35	900.18	2489.47	1246.58	3.85	-0.30	0.044
140.00	-19.44	-1.28	0.00	-39.15	0.00	39.15	1784.41	892.20	2432.62	1218.12	3.98	-0.30	0.043
142.00	-19.12	-1.28	0.00	-36.60	0.00	36.60	1768.19	884.10	2376.04	1189.79	4.10	-0.31	0.042
143.00	-15.49	-1.26	0.00	-35.33	0.00	35.33	1759.99	879.99	2347.86	1175.68	4.17	-0.31	0.039
144.00	-15.35	-1.26	0.00	-34.07	0.00	34.07	1751.72	875.86	2319.75	1161.60	4.24	-0.31	0.038
146.00	-15.06	-1.26	0.00	-31.55	0.00	31.55	1734.98	867.49	2263.76	1133.56	4.37	-0.32	0.037
148.00	-14.78	-1.25	0.00	-29.04	0.00	29.04	1717.98	858.99	2208.08	1105.68	4.50	-0.33	0.035
150.00	-12.70	-1.21	0.00	-26.53	0.00	26.53	1700.72	850.36	2152.74	1077.97	4.64	-0.33	0.032
152.00	-12.42	-1.20	0.00	-24.12	0.00	24.12	1683.20	841.60	2097.74	1050.43	4.78	-0.34	0.030
153.00	-9.78	-1.11	0.00	-22.92	0.00	22.92	1674.33	837.17	2070.37	1036.72	4.85	-0.34	0.028
154.00	-9.66	-1.11	0.00	-21.82	0.00	21.82	1665.41	832.70	2043.10	1023.07	4.92	-0.34	0.027
156.00	-9.42	-1.10	0.00	-19.60	0.00	19.60	1647.36	823.68	1988.83	995.90	5.07	-0.34	0.025
158.00	-9.18	-1.09	0.00	-17.41	0.00	17.41	1629.04	814.52	1934.96	968.92	5.21	-0.35	0.024
160.00	-8.95	-1.08	0.00	-15.23	0.00	15.23	1610.47	805.23	1881.50	942.15	5.36	-0.35	0.022
162.00	-8.72	-1.06	0.00	-13.08	0.00	13.08	1591.63	795.82	1828.46	915.59	5.51	-0.36	0.020
163.00	-6.56	-0.90	0.00	-12.02	0.00	12.02	1582.11	791.06	1802.10	902.39	5.58	-0.36	0.017
164.00	-6.45	-0.89	0.00	-11.12	0.00	11.12	1572.53	786.27	1775.86	889.25	5.66	-0.36	0.017

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 70
	Struct Class: II	



166.00	-6.23	-0.88	0.00	-9.33	0.00	9.33	1553.17	776.58	1723.71	863.13	5.81	-0.36	0.015
168.00	-6.02	-0.86	0.00	-7.57	0.00	7.57	1533.54	766.77	1672.03	837.26	5.96	-0.36	0.013
170.00	-5.81	-0.84	0.00	-5.84	0.00	5.84	1513.65	756.83	1620.83	811.62	6.11	-0.37	0.011
172.00	-5.61	-0.82	0.00	-4.16	0.00	4.16	1493.50	746.75	1570.13	786.23	6.27	-0.37	0.009
173.00	-2.63	-0.45	0.00	-3.34	0.00	3.34	1483.33	741.66	1544.98	773.64	6.34	-0.37	0.006
174.00	-2.54	-0.44	0.00	-2.89	0.00	2.89	1473.09	736.54	1519.95	761.10	6.42	-0.37	0.006
176.00	-2.38	-0.41	0.00	-2.01	0.00	2.01	1452.41	726.20	1470.30	736.24	6.57	-0.37	0.004
178.00	-2.22	-0.39	0.00	-1.19	0.00	1.19	1427.85	713.93	1417.60	709.85	6.73	-0.37	0.003
180.00	-2.06	-0.36	0.00	-0.41	0.00	0.41	1400.09	700.05	1362.74	682.38	6.88	-0.37	0.002
180.00	-2.06	-0.36	0.00	-0.41	0.00	0.41	678.42	339.21	662.23	396.30	6.88	-0.37	0.004
181.00	-0.17	-0.03	0.00	-0.05	0.00	0.05	678.42	339.21	662.23	396.30	6.96	-0.37	0.000
182.00	-0.09	-0.02	0.00	-0.02	0.00	0.02	678.42	339.21	662.23	396.30	7.04	-0.37	0.000
183.00	0.00	-0.02	0.00	0.00	0.00	0.00	678.42	339.21	662.23	396.30	7.12	-0.37	0.000

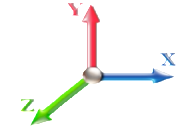
Seismic Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E					Iterations 26
Gust Response Factor	1.10			Sds 0.17	Ss 0.16
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1 0.09	S1 0.06
Wind Load Factor	0.00	Structure Frequency	0.29	SA 0.03	Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
2.00		517.51	0.00	0.01	0.01	4.26	
4.00		513.69	0.00	0.02	0.01	7.21	
6.00		509.88	0.00	0.03	0.02	9.35	
8.00		506.07	0.00	0.04	0.02	10.93	
10.00		502.25	0.01	0.05	0.03	12.12	
12.00		498.44	0.01	0.05	0.03	13.02	
14.00		494.62	0.01	0.06	0.03	13.69	
16.00		490.81	0.01	0.06	0.04	14.18	
18.00		487.00	0.02	0.06	0.04	14.55	
20.00		483.18	0.02	0.07	0.04	14.81	
22.00		479.37	0.03	0.07	0.04	14.99	
24.00		475.56	0.03	0.07	0.04	15.12	
26.00		471.74	0.04	0.07	0.04	15.19	
28.00		467.93	0.04	0.07	0.04	15.24	
30.00		464.11	0.05	0.07	0.04	15.26	
32.00		460.30	0.06	0.07	0.04	15.27	
34.00		456.49	0.07	0.07	0.04	15.27	
36.00		452.67	0.07	0.07	0.04	15.27	
38.00		448.86	0.08	0.07	0.04	15.26	
40.00		445.05	0.09	0.07	0.04	15.25	
41.00	Bot - Section 2	221.09	0.09	0.07	0.04	7.60	
42.00		443.32	0.10	0.07	0.04	15.31	
44.00		880.91	0.11	0.07	0.04	30.66	
46.00		873.28	0.12	0.07	0.03	30.64	
48.00	Top - Section 1	865.66	0.13	0.07	0.03	30.60	
50.00		432.05	0.14	0.07	0.03	15.38	
51.00	Top - Section 2	214.60	0.15	0.07	0.03	7.67	
52.00		213.64	0.15	0.07	0.03	7.66	
54.00		424.43	0.16	0.07	0.03	15.29	
56.00		420.61	0.18	0.07	0.03	15.21	
58.00		416.80	0.19	0.06	0.02	15.10	
60.00		412.98	0.20	0.06	0.02	14.95	
62.00		409.17	0.22	0.06	0.02	14.76	
64.00		405.36	0.23	0.06	0.02	14.51	
66.00		401.54	0.25	0.06	0.02	14.19	
66.17	RB1	33.96	0.25	0.06	0.02	1.20	
68.00		363.77	0.26	0.05	0.02	12.63	
70.00		393.92	0.28	0.05	0.01	13.33	
71.00	Top - Section 3	195.53	0.28	0.05	0.01	6.51	
72.00		194.57	0.29	0.05	0.01	6.36	
74.00		386.28	0.31	0.04	0.01	12.09	
76.00		382.47	0.33	0.04	0.01	11.30	
78.00		378.66	0.34	0.03	0.01	10.39	
80.00		374.84	0.36	0.03	0.01	9.35	
81.00	Top - Section 4	185.99	0.37	0.03	0.01	4.38	

Seismic Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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82.00		154.41	0.38	0.02	0.01	3.41
84.00		306.44	0.40	0.02	0.01	5.76
85.00	Bot - Section 6	152.03	0.41	0.02	0.01	2.59
86.00		304.57	0.42	0.01	0.01	4.62
88.00		604.38	0.44	0.01	0.01	6.74
90.00		598.02	0.46	0.00	0.01	4.10
91.00	Top - Section 5	296.63	0.47	0.00	0.01	1.37
92.00		148.58	0.48	-0.01	0.01	0.34
93.83	RT1	269.84	0.50	-0.01	0.01	-0.53
94.00		24.93	0.50	-0.02	0.01	-0.06
96.00		291.59	0.52	-0.02	0.01	-2.07
98.00		288.41	0.54	-0.03	0.01	-3.39
100.00		285.23	0.56	-0.04	0.01	-4.64
102.00		282.06	0.59	-0.05	0.01	-5.79
104.00		278.88	0.61	-0.06	0.02	-6.82
106.00		483.88	0.63	-0.07	0.02	-13.54
108.00		478.16	0.66	-0.07	0.02	-14.85
110.00		472.44	0.68	-0.08	0.03	-15.88
111.17	RB2	273.72	0.70	-0.09	0.03	-9.55
112.00		192.99	0.71	-0.09	0.03	-6.88
114.00		461.00	0.73	-0.10	0.04	-17.14
115.00	Top - Section 6	130.30	0.75	-0.10	0.04	-4.92
116.00		103.77	0.76	-0.10	0.04	-3.96
118.00		205.64	0.79	-0.11	0.05	-7.94
120.00		203.10	0.81	-0.11	0.06	-7.83
122.00		200.55	0.84	-0.12	0.07	-7.61
123.83	RT2	181.28	0.87	-0.12	0.07	-6.69
124.00		16.73	0.87	-0.12	0.08	-0.62
126.00		195.47	0.90	-0.12	0.09	-6.88
128.00		192.93	0.92	-0.12	0.10	-6.37
130.00	Bot - Section 8	190.38	0.95	-0.12	0.11	-5.79
132.00		378.38	0.98	-0.11	0.12	-10.32
134.00		373.30	1.01	-0.11	0.14	-8.84
135.00	Top - Section 7	184.74	1.03	-0.10	0.15	-4.01
136.00		92.41	1.04	-0.10	0.15	-1.81
138.00		182.92	1.07	-0.08	0.17	-2.75
140.00		180.37	1.11	-0.07	0.19	-1.80
142.00		177.83	1.14	-0.05	0.21	-0.79
143.00	Appurtenance(s)	2977.2	1.15	-0.03	0.22	-4.44
144.00		87.33	1.17	-0.02	0.23	0.14
146.00		172.75	1.20	0.01	0.26	1.39
148.00		170.20	1.24	0.04	0.28	2.56
150.00	Appurtenance(s)	1667.6	1.27	0.08	0.31	37.54
152.00		165.12	1.30	0.13	0.34	5.03
153.00	Appurtenance(s)	2174.7	1.32	0.15	0.36	75.29
154.00		80.97	1.34	0.18	0.37	3.15
156.00		160.03	1.37	0.24	0.40	7.66
158.00		157.49	1.41	0.30	0.44	9.02
160.00		154.95	1.44	0.37	0.48	10.41
162.00		152.40	1.48	0.46	0.52	11.84
163.00	Appurtenance(s)	1787.0	1.50	0.50	0.54	148.45
164.00		74.61	1.52	0.55	0.56	6.61
166.00		147.32	1.56	0.65	0.61	14.74
168.00		144.78	1.59	0.76	0.66	16.23
170.00		142.23	1.63	0.88	0.71	17.72
172.00		139.69	1.67	1.01	0.77	19.22
173.00	Appurtenance(s)	2468.2	1.69	1.08	0.80	356.27

Seismic Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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174.00		68.26	1.71	1.16	0.83	10.32
176.00		134.61	1.75	1.31	0.89	22.25
178.00		132.06	1.79	1.49	0.96	23.76
180.00	Top - Section 8	129.52	1.83	1.67	1.03	25.27
181.00	Appurtenance(s)	1571.2	1.85	1.77	1.06	318.87
182.00		71.25	1.87	1.87	1.10	15.03
183.00		71.25	1.89	1.98	1.14	15.60
Totals:		44,592.3				1,612.1
						Total Wind: 37,649.6

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

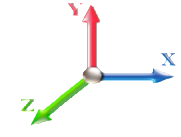
Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E										Iterations 26
Gust Response Factor 1.10					Sds 0.17					Ss 0.16
Dead Load Factor 0.90			Seismic Load Factor 1.00			Sd1 0.09			S1 0.06	
Wind Load Factor 0.00			Structure Frequency 0.29			SA 0.03			Seismic Importance Factor 1.00	



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-45.76	-1.81	0.00	-238.14	0.00	238.14	5190.16	2595.08	13702.9	6861.66	0.00	0.00	0.00	0.044
2.00	-45.21	-1.80	0.00	-234.53	0.00	234.53	5174.50	2587.25	13560.7	6790.43	0.00	0.00	0.00	0.043
4.00	-44.66	-1.80	0.00	-230.93	0.00	230.93	5158.51	2579.25	13418.2	6719.08	0.00	-0.01	0.00	0.043
6.00	-44.12	-1.79	0.00	-227.33	0.00	227.33	5142.18	2571.09	13275.4	6647.61	0.01	-0.01	0.00	0.043
8.00	-43.58	-1.78	0.00	-223.74	0.00	223.74	5125.52	2562.76	13132.5	6576.03	0.01	-0.01	0.00	0.043
10.00	-43.05	-1.77	0.00	-220.18	0.00	220.18	5108.53	2554.27	12989.4	6504.36	0.02	-0.02	0.00	0.042
12.00	-42.52	-1.76	0.00	-216.63	0.00	216.63	5091.21	2545.61	12846.0	6432.60	0.03	-0.02	0.00	0.042
14.00	-41.99	-1.75	0.00	-213.10	0.00	213.10	5073.56	2536.78	12702.6	6360.75	0.04	-0.02	0.00	0.042
16.00	-41.46	-1.74	0.00	-209.60	0.00	209.60	5055.57	2527.79	12559.0	6288.85	0.05	-0.03	0.00	0.042
18.00	-40.94	-1.73	0.00	-206.12	0.00	206.12	5037.25	2518.63	12415.3	6216.88	0.06	-0.03	0.00	0.041
20.00	-40.43	-1.72	0.00	-202.66	0.00	202.66	5018.60	2509.30	12271.4	6144.86	0.07	-0.03	0.00	0.041
22.00	-39.91	-1.70	0.00	-199.23	0.00	199.23	4999.62	2499.81	12127.5	6072.81	0.09	-0.04	0.00	0.041
24.00	-39.40	-1.69	0.00	-195.82	0.00	195.82	4980.31	2490.15	11983.6	6000.72	0.11	-0.04	0.00	0.041
26.00	-38.89	-1.68	0.00	-192.44	0.00	192.44	4960.66	2480.33	11839.6	5928.62	0.12	-0.05	0.00	0.040
28.00	-38.39	-1.66	0.00	-189.09	0.00	189.09	4940.68	2470.34	11695.6	5856.50	0.14	-0.05	0.00	0.040
30.00	-37.89	-1.65	0.00	-185.76	0.00	185.76	4920.37	2460.19	11551.6	5784.39	0.17	-0.05	0.00	0.040
32.00	-37.39	-1.64	0.00	-182.46	0.00	182.46	4899.73	2449.87	11407.6	5712.28	0.19	-0.06	0.00	0.040
34.00	-36.90	-1.62	0.00	-179.19	0.00	179.19	4878.76	2439.38	11263.6	5640.19	0.21	-0.06	0.00	0.039
36.00	-36.41	-1.61	0.00	-175.94	0.00	175.94	4857.45	2428.72	11119.7	5568.14	0.24	-0.06	0.00	0.039
38.00	-35.92	-1.60	0.00	-172.72	0.00	172.72	4835.81	2417.91	10975.9	5496.12	0.27	-0.07	0.00	0.039
40.00	-35.44	-1.58	0.00	-169.53	0.00	169.53	4813.84	2406.92	10832.2	5424.15	0.30	-0.07	0.00	0.039
41.00	-35.20	-1.58	0.00	-167.95	0.00	167.95	4802.73	2401.36	10760.3	5388.18	0.31	-0.07	0.00	0.038
42.00	-34.76	-1.56	0.00	-166.37	0.00	166.37	4791.54	2395.77	10688.5	5352.24	0.33	-0.08	0.00	0.038
44.00	-33.88	-1.53	0.00	-163.25	0.00	163.25	4768.90	2384.45	10545.1	5280.39	0.36	-0.08	0.00	0.038
46.00	-33.01	-1.50	0.00	-160.18	0.00	160.18	4745.94	2372.97	10401.7	5208.63	0.40	-0.08	0.00	0.038
48.00	-32.15	-1.47	0.00	-157.18	0.00	157.18	4759.60	2379.80	10486.7	5251.18	0.43	-0.09	0.00	0.037
50.00	-31.68	-1.46	0.00	-154.23	0.00	154.23	4736.50	2368.25	10343.5	5179.45	0.47	-0.09	0.00	0.036
51.00	-31.44	-1.45	0.00	-152.77	0.00	152.77	4724.82	2362.41	10271.9	5143.62	0.49	-0.09	0.00	0.036
51.00	-31.44	-1.45	0.00	-152.77	0.00	152.77	4064.30	2032.15	8835.99	4424.56	0.49	-0.09	0.00	0.042
52.00	-31.21	-1.45	0.00	-151.32	0.00	151.32	4053.20	2026.60	8772.35	4392.70	0.51	-0.10	0.00	0.042
54.00	-30.75	-1.43	0.00	-148.43	0.00	148.43	4030.83	2015.41	8645.34	4329.09	0.55	-0.10	0.00	0.042
56.00	-30.28	-1.42	0.00	-145.57	0.00	145.57	4008.20	2004.10	8518.66	4265.66	0.59	-0.10	0.00	0.042
58.00	-29.83	-1.40	0.00	-142.73	0.00	142.73	3985.33	1992.66	8392.33	4202.40	0.64	-0.11	0.00	0.041
60.00	-29.37	-1.39	0.00	-139.92	0.00	139.92	3962.20	1981.10	8266.38	4139.33	0.68	-0.11	0.00	0.041
62.00	-28.92	-1.38	0.00	-137.15	0.00	137.15	3938.82	1969.41	8140.81	4076.46	0.73	-0.12	0.00	0.041
64.00	-28.47	-1.36	0.00	-134.39	0.00	134.39	3915.19	1957.60	8015.64	4013.78	0.78	-0.12	0.00	0.041
66.00	-28.03	-1.35	0.00	-131.67	0.00	131.67	3891.31	1945.66	7890.88	3951.30	0.83	-0.12	0.00	0.041
66.17	-27.99	-1.35	0.00	-131.44	0.00	131.44	3889.27	1944.64	7880.29	3946.00	0.84	-0.12	0.00	0.030
68.00	-27.59	-1.34	0.00	-128.97	0.00	128.97	3867.19	1933.59	7766.55	3889.05	0.88	-0.13	0.00	0.030
70.00	-27.15	-1.32	0.00	-126.30	0.00	126.30	3842.81	1921.40	7642.66	3827.01	0.94	-0.13	0.00	0.029
71.00	-26.93	-1.32	0.00	-124.98	0.00	124.98	3830.52	1915.26	7580.89	3796.08	0.96	-0.13	0.00	0.029
71.00	-26.93	-1.32	0.00	-124.98	0.00	124.98	3467.89	1733.95	6863.13	3436.66	0.96	-0.13	0.00	0.032
72.00	-26.72	-1.31	0.00	-123.66	0.00	123.66	3456.29	1728.14	6806.46	3408.29	0.99	-0.13	0.00	0.032
74.00	-26.29	-1.30	0.00	-121.04	0.00	121.04	3432.92	1716.46	6693.50	3351.73	1.05	-0.14	0.00	0.032
76.00	-25.86	-1.29	0.00	-118.44	0.00	118.44	3409.33	1704.67	6581.05	3295.42	1.11	-0.14	0.00	0.032
78.00	-25.44	-1.28	0.00	-115.86	0.00	115.86	3385.54	1692.77	6469.11	3239.36	1.17	-0.14	0.00	0.031
80.00	-25.02	-1.27	0.00	-113.31	0.00	113.31	3361.54	1680.77	6357.71	3183.58	1.23	-0.15	0.00	0.031

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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81.00	-24.81	-1.26	0.00	-112.04	0.00	112.04	3349.46	1674.73	6302.21	3155.79	1.26	-0.15	0.031
81.00	-24.81	-1.26	0.00	-112.04	0.00	112.04	2964.88	1482.44	5593.85	2801.08	1.26	-0.15	0.029
82.00	-24.63	-1.26	0.00	-110.78	0.00	110.78	2956.03	1478.01	5548.33	2778.29	1.29	-0.15	0.033
84.00	-24.27	-1.26	0.00	-108.25	0.00	108.25	2938.12	1469.06	5457.44	2732.78	1.35	-0.15	0.033
85.00	-24.09	-1.25	0.00	-107.00	0.00	107.00	2929.07	1464.54	5412.08	2710.06	1.38	-0.15	0.032
86.00	-23.77	-1.25	0.00	-105.74	0.00	105.74	2919.96	1459.98	5366.77	2687.37	1.41	-0.16	0.032
88.00	-23.15	-1.24	0.00	-103.24	0.00	103.24	2901.53	1450.76	5276.32	2642.08	1.48	-0.16	0.032
90.00	-22.53	-1.24	0.00	-100.76	0.00	100.76	2882.84	1441.42	5186.12	2596.92	1.55	-0.16	0.031
91.00	-22.22	-1.24	0.00	-99.52	0.00	99.52	2898.35	1449.17	5260.87	2634.34	1.58	-0.16	0.031
92.00	-22.04	-1.24	0.00	-98.28	0.00	98.28	2889.01	1444.51	5215.76	2611.76	1.62	-0.17	0.030
93.83	-21.72	-1.24	0.00	-96.02	0.00	96.02	2871.76	1435.88	5133.38	2570.50	1.68	-0.17	0.030
93.83	-21.72	-1.24	0.00	-96.02	0.00	96.02	2871.76	1435.88	5133.38	2570.50	1.68	-0.17	0.030
94.00	-21.69	-1.24	0.00	-95.81	0.00	95.81	2870.15	1435.07	5125.73	2566.68	1.69	-0.17	0.045
96.00	-21.35	-1.24	0.00	-93.34	0.00	93.34	2851.02	1425.51	5035.98	2521.73	1.76	-0.17	0.045
98.00	-21.01	-1.24	0.00	-90.86	0.00	90.86	2831.62	1415.81	4946.52	2476.93	1.83	-0.18	0.044
100.00	-20.67	-1.24	0.00	-88.38	0.00	88.38	2811.97	1405.98	4857.35	2432.29	1.91	-0.19	0.044
102.00	-20.33	-1.24	0.00	-85.90	0.00	85.90	2792.05	1396.03	4768.51	2387.80	1.99	-0.19	0.043
104.00	-20.00	-1.24	0.00	-83.42	0.00	83.42	2771.87	1385.94	4680.00	2343.48	2.07	-0.20	0.043
106.00	-19.67	-1.24	0.00	-80.94	0.00	80.94	2751.43	1375.71	4591.84	2299.33	2.15	-0.20	0.042
108.00	-19.34	-1.24	0.00	-78.46	0.00	78.46	2730.72	1365.36	4504.04	2255.37	2.24	-0.21	0.042
110.00	-19.01	-1.24	0.00	-75.97	0.00	75.97	2709.75	1354.88	4416.62	2211.59	2.33	-0.21	0.041
111.17	-18.82	-1.24	0.00	-74.52	0.00	74.52	2697.36	1348.68	4365.66	2186.08	2.38	-0.22	0.033
112.00	-18.69	-1.24	0.00	-73.48	0.00	73.48	2688.52	1344.26	4329.60	2168.02	2.42	-0.22	0.033
114.00	-18.37	-1.24	0.00	-71.00	0.00	71.00	2667.03	1333.51	4242.98	2124.64	2.51	-0.22	0.032
115.00	-18.21	-1.24	0.00	-69.75	0.00	69.75	2656.18	1328.09	4199.83	2103.04	2.56	-0.22	0.031
115.00	-18.21	-1.24	0.00	-69.75	0.00	69.75	1951.15	975.57	3095.05	1549.82	2.56	-0.22	0.034
116.00	-18.08	-1.24	0.00	-68.51	0.00	68.51	1944.57	972.29	3065.67	1535.11	2.60	-0.23	0.040
118.00	-17.81	-1.24	0.00	-66.02	0.00	66.02	1931.24	965.62	3006.98	1505.73	2.70	-0.23	0.039
120.00	-17.54	-1.25	0.00	-63.53	0.00	63.53	1917.63	958.82	2948.42	1476.40	2.80	-0.24	0.038
122.00	-17.28	-1.25	0.00	-61.04	0.00	61.04	1903.77	951.88	2889.98	1447.14	2.90	-0.24	0.037
123.83	-17.04	-1.25	0.00	-58.76	0.00	58.76	1890.85	945.43	2836.64	1420.43	2.99	-0.25	0.037
123.83	-17.04	-1.25	0.00	-58.76	0.00	58.76	1890.85	945.43	2836.64	1420.43	2.99	-0.25	0.037
124.00	-17.02	-1.25	0.00	-58.55	0.00	58.55	1889.64	944.82	2831.69	1417.95	3.00	-0.25	0.050
126.00	-16.76	-1.25	0.00	-56.06	0.00	56.06	1875.25	937.63	2773.56	1388.84	3.10	-0.25	0.049
128.00	-16.50	-1.25	0.00	-53.56	0.00	53.56	1860.60	930.30	2715.62	1359.83	3.21	-0.26	0.048
130.00	-16.25	-1.25	0.00	-51.07	0.00	51.07	1845.69	922.84	2657.86	1330.91	3.32	-0.27	0.047
132.00	-15.83	-1.25	0.00	-48.57	0.00	48.57	1830.51	915.25	2600.31	1302.09	3.43	-0.27	0.046
134.00	-15.41	-1.25	0.00	-46.07	0.00	46.07	1815.07	907.53	2542.99	1273.39	3.55	-0.28	0.045
135.00	-15.20	-1.25	0.00	-44.82	0.00	44.82	1823.79	911.89	2575.21	1289.52	3.61	-0.28	0.043
136.00	-15.07	-1.25	0.00	-43.57	0.00	43.57	1816.04	908.02	2546.57	1275.18	3.67	-0.29	0.042
138.00	-14.83	-1.25	0.00	-41.08	0.00	41.08	1800.35	900.18	2489.47	1246.58	3.79	-0.29	0.041
140.00	-14.58	-1.25	0.00	-38.58	0.00	38.58	1784.41	892.20	2432.62	1218.12	3.91	-0.30	0.040
142.00	-14.34	-1.25	0.00	-36.08	0.00	36.08	1768.19	884.10	2376.04	1189.79	4.04	-0.30	0.038
143.00	-11.62	-1.24	0.00	-34.83	0.00	34.83	1759.99	879.99	2347.86	1175.68	4.10	-0.31	0.036
144.00	-11.51	-1.24	0.00	-33.60	0.00	33.60	1751.72	875.86	2319.75	1161.60	4.17	-0.31	0.035
146.00	-11.30	-1.23	0.00	-31.13	0.00	31.13	1734.98	867.49	2263.76	1133.56	4.30	-0.31	0.034
148.00	-11.08	-1.23	0.00	-28.66	0.00	28.66	1717.98	858.99	2208.08	1105.68	4.43	-0.32	0.032
150.00	-9.52	-1.19	0.00	-26.20	0.00	26.20	1700.72	850.36	2152.74	1077.97	4.56	-0.32	0.030
152.00	-9.32	-1.18	0.00	-23.82	0.00	23.82	1683.20	841.60	2097.74	1050.43	4.70	-0.33	0.028
153.00	-7.33	-1.09	0.00	-22.64	0.00	22.64	1674.33	837.17	2070.37	1036.72	4.77	-0.33	0.026
154.00	-7.24	-1.09	0.00	-21.55	0.00	21.55	1665.41	832.70	2043.10	1023.07	4.84	-0.33	0.025
156.00	-7.06	-1.08	0.00	-19.37	0.00	19.37	1647.36	823.68	1988.83	995.90	4.98	-0.34	0.024
158.00	-6.89	-1.07	0.00	-17.20	0.00	17.20	1629.04	814.52	1934.96	968.92	5.13	-0.34	0.022
160.00	-6.71	-1.06	0.00	-15.06	0.00	15.06	1610.47	805.23	1881.50	942.15	5.27	-0.35	0.020
162.00	-6.54	-1.05	0.00	-12.93	0.00	12.93	1591.63	795.82	1828.46	915.59	5.42	-0.35	0.018
163.00	-4.92	-0.89	0.00	-11.89	0.00	11.89	1582.11	791.06	1802.10	902.39	5.49	-0.35	0.016
164.00	-4.83	-0.88	0.00	-10.99	0.00	10.99	1572.53	786.27	1775.86	889.25	5.56	-0.35	0.015

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 76



166.00	-4.67	-0.87	0.00	-9.23	0.00	9.23	1553.17	776.58	1723.71	863.13	5.71	-0.36	0.014
168.00	-4.51	-0.85	0.00	-7.49	0.00	7.49	1533.54	766.77	1672.03	837.26	5.86	-0.36	0.012
170.00	-4.36	-0.83	0.00	-5.78	0.00	5.78	1513.65	756.83	1620.83	811.62	6.01	-0.36	0.010
172.00	-4.20	-0.81	0.00	-4.12	0.00	4.12	1493.50	746.75	1570.13	786.23	6.16	-0.36	0.008
173.00	-1.97	-0.44	0.00	-3.30	0.00	3.30	1483.33	741.66	1544.98	773.64	6.24	-0.36	0.006
174.00	-1.91	-0.43	0.00	-2.86	0.00	2.86	1473.09	736.54	1519.95	761.10	6.32	-0.36	0.005
176.00	-1.78	-0.41	0.00	-2.00	0.00	2.00	1452.41	726.20	1470.30	736.24	6.47	-0.36	0.004
178.00	-1.66	-0.39	0.00	-1.18	0.00	1.18	1427.85	713.93	1417.60	709.85	6.62	-0.36	0.003
180.00	-1.54	-0.36	0.00	-0.41	0.00	0.41	1400.09	700.05	1362.74	682.38	6.77	-0.36	0.002
180.00	-1.54	-0.36	0.00	-0.41	0.00	0.41	678.42	339.21	662.23	396.30	6.77	-0.36	0.003
181.00	-0.13	-0.03	0.00	-0.05	0.00	0.05	678.42	339.21	662.23	396.30	6.85	-0.36	0.000
182.00	-0.07	-0.02	0.00	-0.02	0.00	0.02	678.42	339.21	662.23	396.30	6.93	-0.36	0.000
183.00	0.00	-0.02	0.00	0.00	0.00	0.00	678.42	339.21	662.23	396.30	7.00	-0.36	0.000

Wind Loading - Shaft

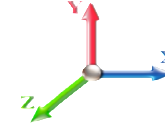
Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

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		1.00	0.70	6.129	6.74	273.99	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.70	6.129	6.74	271.99	0.650	0.000	2.00	10.876	7.07	47.7	0.0	517.5
4.00		1.00	0.70	6.129	6.74	269.99	0.650	0.000	2.00	10.796	7.02	47.3	0.0	513.7
6.00		1.00	0.70	6.129	6.74	267.99	0.650	0.000	2.00	10.717	6.97	47.0	0.0	509.9
8.00		1.00	0.70	6.129	6.74	265.99	0.650	0.000	2.00	10.637	6.91	46.6	0.0	506.1
10.00		1.00	0.70	6.129	6.74	263.99	0.650	0.000	2.00	10.557	6.86	46.3	0.0	502.3
12.00		1.00	0.70	6.129	6.74	261.99	0.650	0.000	2.00	10.478	6.81	45.9	0.0	498.4
14.00		1.00	0.70	6.129	6.74	259.99	0.650	0.000	2.00	10.398	6.76	45.6	0.0	494.6
16.00		1.00	0.70	6.129	6.74	257.99	0.650	0.000	2.00	10.318	6.71	45.2	0.0	490.8
18.00		1.00	0.70	6.129	6.74	255.99	0.650	0.000	2.00	10.239	6.66	44.9	0.0	487.0
20.00		1.00	0.70	6.129	6.74	253.99	0.650	0.000	2.00	10.159	6.60	44.5	0.0	483.2
22.00		1.00	0.70	6.129	6.74	251.99	0.650	0.000	2.00	10.079	6.55	44.2	0.0	479.4
24.00		1.00	0.70	6.129	6.74	249.99	0.650	0.000	2.00	9.999	6.50	43.8	0.0	475.6
26.00		1.00	0.70	6.129	6.74	247.98	0.650	0.000	2.00	9.920	6.45	43.5	0.0	471.7
28.00		1.00	0.70	6.129	6.74	245.98	0.650	0.000	2.00	9.840	6.40	43.1	0.0	467.9
30.00		1.00	0.70	6.134	6.75	244.09	0.650	0.000	2.00	9.760	6.34	42.8	0.0	464.1
32.00		1.00	0.71	6.248	6.87	244.33	0.650	0.000	2.00	9.681	6.29	43.2	0.0	460.3
34.00		1.00	0.73	6.357	6.99	244.42	0.650	0.000	2.00	9.601	6.24	43.6	0.0	456.5
36.00		1.00	0.74	6.462	7.11	244.37	0.650	0.000	2.00	9.521	6.19	44.0	0.0	452.7
38.00		1.00	0.75	6.562	7.22	244.19	0.650	0.000	2.00	9.442	6.14	44.3	0.0	448.9
40.00		1.00	0.76	6.659	7.33	243.90	0.650	0.000	2.00	9.362	6.09	44.6	0.0	445.0
41.00	Bot - Section 2	1.00	0.77	6.706	7.38	243.72	0.650	0.000	1.00	4.651	3.02	22.3	0.0	221.1
42.00		1.00	0.77	6.753	7.43	243.51	0.650	0.000	1.00	4.695	3.05	22.7	0.0	443.3
44.00		1.00	0.78	6.843	7.53	243.02	0.650	0.000	2.00	9.330	6.06	45.6	0.0	880.9
46.00		1.00	0.79	6.931	7.62	242.44	0.650	0.000	2.00	9.250	6.01	45.8	0.0	873.3
48.00	Top - Section 1	1.00	0.80	7.015	7.72	241.78	0.650	0.000	2.00	9.170	5.96	46.0	0.0	865.7
50.00		1.00	0.81	7.098	7.81	244.47	0.650	0.000	2.00	9.091	5.91	46.1	0.0	432.1
51.00	Top - Section 2	1.00	0.82	7.138	7.85	244.09	0.650	0.000	1.00	4.515	2.94	23.0	0.0	214.6
52.00		1.00	0.82	7.178	7.90	243.68	0.650	0.000	1.00	4.495	2.92	23.1	0.0	213.6
54.00		1.00	0.83	7.255	7.98	242.82	0.650	0.000	2.00	8.931	5.81	46.3	0.0	424.4
56.00		1.00	0.84	7.331	8.06	241.90	0.650	0.000	2.00	8.852	5.75	46.4	0.0	420.6
58.00		1.00	0.85	7.405	8.15	240.92	0.650	0.000	2.00	8.772	5.70	46.4	0.0	416.8
60.00		1.00	0.85	7.477	8.22	239.88	0.650	0.000	2.00	8.692	5.65	46.5	0.0	413.0
62.00		1.00	0.86	7.548	8.30	238.78	0.650	0.000	2.00	8.612	5.60	46.5	0.0	409.2
64.00		1.00	0.87	7.616	8.38	237.64	0.650	0.000	2.00	8.533	5.55	46.5	0.0	405.4
66.00		1.00	0.88	7.684	8.45	236.45	0.650	0.000	2.00	8.453	5.49	46.4	0.0	401.5
66.17	RB1	1.00	0.88	7.689	8.46	236.34	0.650	0.000	0.17	0.715	0.46	3.9	0.0	34.0
68.00		1.00	0.89	7.749	8.52	235.21	0.650	0.000	1.83	7.659	4.98	42.4	0.0	363.8
70.00		1.00	0.89	7.814	8.60	233.93	0.650	0.000	2.00	8.294	5.39	46.3	0.0	393.9
71.00	Top - Section 3	1.00	0.90	7.846	8.63	233.27	0.650	0.000	1.00	4.117	2.68	23.1	0.0	195.5
72.00		1.00	0.90	7.877	8.66	232.60	0.650	0.000	1.00	4.097	2.66	23.1	0.0	194.6
74.00		1.00	0.91	7.939	8.73	231.24	0.650	0.000	2.00	8.134	5.29	46.2	0.0	386.3
76.00		1.00	0.91	8.000	8.80	229.83	0.650	0.000	2.00	8.055	5.24	46.1	0.0	382.5
78.00		1.00	0.92	8.059	8.87	228.39	0.650	0.000	2.00	7.975	5.18	46.0	0.0	378.7
80.00		1.00	0.93	8.118	8.93	226.92	0.650	0.000	2.00	7.895	5.13	45.8	0.0	374.8
81.00	Top - Section 4	1.00	0.93	8.147	8.96	226.17	0.650	0.000	1.00	3.918	2.55	22.8	0.0	186.0
82.00		1.00	0.93	8.175	8.99	225.41	0.650	0.000	1.00	3.898	2.53	22.8	0.0	154.4

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00	1.00	0.94	8.232	9.05	223.87	0.650	0.000	2.00	7.736	5.03	45.5	0.0	306.4
85.00 Bot - Section 6	1.00	0.94	8.260	9.09	223.09	0.650	0.000	1.00	3.838	2.49	22.7	0.0	152.0
86.00	1.00	0.95	8.287	9.12	222.30	0.650	0.000	1.00	3.871	2.52	22.9	0.0	304.6
88.00	1.00	0.95	8.342	9.18	220.70	0.650	0.000	2.00	7.682	4.99	45.8	0.0	604.4
90.00	1.00	0.96	8.396	9.24	219.07	0.650	0.000	2.00	7.603	4.94	45.6	0.0	598.0
91.00 Top - Section 5	1.00	0.96	8.422	9.26	218.24	0.650	0.000	1.00	3.771	2.45	22.7	0.0	296.6
92.00	1.00	0.96	8.448	9.29	220.53	0.650	0.000	1.00	3.752	2.44	22.7	0.0	148.6
93.83 RT1	1.00	0.97	8.496	9.35	219.00	0.650	0.000	1.83	6.814	4.43	41.4	0.0	269.8
94.00	1.00	0.97	8.501	9.35	218.85	0.650	0.000	0.17	0.630	0.41	3.8	0.0	24.9
96.00	1.00	0.98	8.552	9.41	217.15	0.650	0.000	2.00	7.364	4.79	45.0	0.0	291.6
98.00	1.00	0.98	8.602	9.46	215.42	0.650	0.000	2.00	7.284	4.73	44.8	0.0	288.4
100.00	1.00	0.99	8.652	9.52	213.67	0.650	0.000	2.00	7.204	4.68	44.6	0.0	285.2
102.00	1.00	0.99	8.701	9.57	211.89	0.650	0.000	2.00	7.125	4.63	44.3	0.0	282.1
104.00	1.00	1.00	8.750	9.62	210.09	0.650	0.000	2.00	7.045	4.58	44.1	0.0	278.9
106.00	1.00	1.00	8.797	9.68	208.26	0.650	0.000	2.00	6.967	4.53	43.8	0.0	275.7
108.00	1.00	1.01	8.845	9.73	206.42	0.650	0.000	2.00	6.887	4.48	43.5	0.0	272.5
110.00	1.00	1.02	8.891	9.78	204.55	0.650	0.000	2.00	6.807	4.43	43.2	0.0	269.3
111.17 RB2	1.00	1.02	8.918	9.81	203.45	0.650	0.000	1.17	3.711	2.41	23.7	0.0	156.1
112.00	1.00	1.02	8.937	9.83	202.66	0.650	0.000	0.83	2.616	1.70	16.7	0.0	110.1
114.00	1.00	1.03	8.982	9.88	200.75	0.650	0.000	2.00	6.248	4.06	40.1	0.0	263.0
115.00 Top - Section 6	1.00	1.03	9.005	9.91	199.79	0.650	0.000	1.00	3.293	2.14	21.2	0.0	130.3
116.00	1.00	1.03	9.027	9.93	198.82	0.650	0.000	1.00	3.273	2.13	21.1	0.0	103.8
118.00	1.00	1.04	9.071	9.98	196.88	0.650	0.000	2.00	6.487	4.22	42.1	0.0	205.6
120.00	1.00	1.04	9.115	10.03	194.91	0.650	0.000	2.00	6.407	4.16	41.8	0.0	203.1
122.00	1.00	1.05	9.158	10.07	192.93	0.650	0.000	2.00	6.328	4.11	41.4	0.0	200.6
123.83 RT2	1.00	1.05	9.197	10.12	191.10	0.650	0.000	1.83	5.720	3.72	37.6	0.0	181.3
124.00	1.00	1.05	9.201	10.12	190.92	0.650	0.000	0.17	0.528	0.34	3.5	0.0	16.7
126.00	1.00	1.06	9.243	10.17	188.91	0.650	0.000	2.00	6.168	4.01	40.8	0.0	195.5
128.00	1.00	1.06	9.284	10.21	186.87	0.650	0.000	2.00	6.089	3.96	40.4	0.0	192.9
130.00 Bot - Section 8	1.00	1.07	9.326	10.26	184.82	0.650	0.000	2.00	6.009	3.91	40.1	0.0	190.4
132.00	1.00	1.07	9.366	10.30	182.75	0.650	0.000	2.00	6.014	3.91	40.3	0.0	378.4
134.00	1.00	1.07	9.407	10.35	180.66	0.650	0.000	2.00	5.934	3.86	39.9	0.0	373.3
135.00 Top - Section 7	1.00	1.08	9.427	10.37	179.61	0.650	0.000	1.00	2.937	1.91	19.8	0.0	184.7
136.00	1.00	1.08	9.447	10.39	181.20	0.650	0.000	1.00	2.917	1.90	19.7	0.0	92.4
138.00	1.00	1.08	9.486	10.43	179.09	0.650	0.000	2.00	5.775	3.75	39.2	0.0	182.9
140.00	1.00	1.09	9.525	10.48	176.97	0.650	0.000	2.00	5.695	3.70	38.8	0.0	180.4
142.00	1.00	1.09	9.564	10.52	174.83	0.650	0.000	2.00	5.616	3.65	38.4	0.0	177.8
143.00 Appurtenance(s)	1.00	1.09	9.583	10.54	173.75	0.650	0.000	1.00	2.778	1.81	19.0	0.0	88.0
144.00	1.00	1.10	9.602	10.56	172.67	0.650	0.000	1.00	2.758	1.79	18.9	0.0	87.3
146.00	1.00	1.10	9.640	10.60	170.50	0.650	0.000	2.00	5.456	3.55	37.6	0.0	172.7
148.00	1.00	1.11	9.678	10.65	168.32	0.650	0.000	2.00	5.376	3.49	37.2	0.0	170.2
150.00 Appurtenance(s)	1.00	1.11	9.715	10.69	166.13	0.650	0.000	2.00	5.297	3.44	36.8	0.0	167.7
152.00	1.00	1.11	9.752	10.73	163.92	0.650	0.000	2.00	5.217	3.39	36.4	0.0	165.1
153.00 Appurtenance(s)	1.00	1.12	9.770	10.75	162.81	0.650	0.000	1.00	2.579	1.68	18.0	0.0	81.6
154.00	1.00	1.12	9.788	10.77	161.70	0.650	0.000	1.00	2.559	1.66	17.9	0.0	81.0
156.00	1.00	1.12	9.824	10.81	159.46	0.650	0.000	2.00	5.058	3.29	35.5	0.0	160.0
158.00	1.00	1.13	9.860	10.85	157.22	0.650	0.000	2.00	4.978	3.24	35.1	0.0	157.5
160.00	1.00	1.13	9.896	10.89	154.96	0.650	0.000	2.00	4.898	3.18	34.7	0.0	154.9
162.00	1.00	1.13	9.931	10.92	152.69	0.650	0.000	2.00	4.819	3.13	34.2	0.0	152.4
163.00 Appurtenance(s)	1.00	1.14	9.948	10.94	151.55	0.650	0.000	1.00	2.379	1.55	16.9	0.0	75.2
164.00	1.00	1.14	9.966	10.96	150.41	0.650	0.000	1.00	2.360	1.53	16.8	0.0	74.6
166.00	1.00	1.14	10.000	11.00	148.11	0.650	0.000	2.00	4.659	3.03	33.3	0.0	147.3
168.00	1.00	1.15	10.035	11.04	145.81	0.650	0.000	2.00	4.580	2.98	32.9	0.0	144.8
170.00	1.00	1.15	10.069	11.08	143.49	0.650	0.000	2.00	4.500	2.92	32.4	0.0	142.2
172.00	1.00	1.15	10.102	11.11	141.16	0.650	0.000	2.00	4.420	2.87	31.9	0.0	139.7
173.00 Appurtenance(s)	1.00	1.16	10.119	11.13	139.99	0.650	0.000	1.00	2.180	1.42	15.8	0.0	68.9
174.00	1.00	1.16	10.136	11.15	138.82	0.650	0.000	1.00	2.160	1.40	15.7	0.0	68.3

Wind Loading - Shaft

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 79
	Struct Class: II	



176.00	1.00	1.16	10.169	11.19	136.47	0.650	0.000	2.00	4.261	2.77	31.0	0.0	134.6
178.00	1.00	1.17	10.202	11.22	134.11	0.650	0.000	2.00	4.181	2.72	30.5	0.0	132.1
180.00 Top - Section 8	1.00	1.17	10.234	11.26	131.74	0.650	0.000	2.00	4.102	2.67	30.0	0.0	129.5
181.00 Appurtenance(s)	1.00	1.17	10.251	11.28	129.84	0.600	0.000	1.00	2.000	1.20	13.5	0.0	71.3
182.00	1.00	1.17	10.267	11.29	129.95	0.600	0.000	1.00	2.000	1.20	13.6	0.0	71.3
183.00	1.00	1.17	10.283	11.31	130.05	0.600	0.000	1.00	2.000	1.20	13.6	0.0	71.3
Totals:								183.00			3,820.9		31,483.2

Discrete Appurtenance Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	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	1	10.251	11.276	1.00	1.00	22.00	1500.00	0.000	0.000	248.06	0.00	0.00
2	173.00	LNx-6514DS-VTM	3	10.119	11.131	0.64	0.80	15.53	99.30	0.000	0.000	172.89	0.00	0.00
3	173.00	Low Profile	1	10.119	11.131	1.00	1.00	22.00	1500.00	0.000	0.000	244.88	0.00	0.00
4	173.00	APL866513-42T0	2	10.119	11.131	0.74	0.80	6.03	31.40	0.000	0.000	67.08	0.00	0.00
5	173.00	HBXX-6517DS-VTM	6	10.119	11.131	0.62	0.80	31.60	244.20	0.000	0.000	351.75	0.00	0.00
6	173.00	LPA-80080-4CF-EDIN-0	4	10.119	11.131	0.80	0.80	8.35	48.00	0.000	0.000	92.97	0.00	0.00
7	173.00	RRH2X60-AWS	3	10.119	11.131	0.61	0.80	6.38	180.00	0.000	0.000	71.06	0.00	0.00
8	173.00	RRH2x60-700U	3	10.119	11.131	0.74	0.80	5.54	150.00	0.000	0.000	61.61	0.00	0.00
9	173.00	RRH2x60-1900	3	10.119	11.131	0.72	0.80	3.26	58.50	0.000	0.000	36.30	0.00	0.00
10	173.00	DB-T1-6Z-8AB-OZ	2	10.119	11.131	0.80	0.80	7.68	88.00	0.000	0.000	85.49	0.00	0.00
11	163.00	LLPX310R	3	9.948	10.943	0.55	0.80	7.12	85.80	0.000	0.000	77.92	0.00	0.00
12	163.00	Low Profile	1	9.948	10.943	1.00	1.00	22.00	1500.00	0.000	0.000	240.75	0.00	0.00
13	163.00	DAP Head	3	9.948	10.943	0.80	0.80	4.51	126.00	0.000	0.000	49.38	0.00	0.00
14	153.00	S11B12	3	9.770	10.747	0.57	0.80	5.01	165.00	0.000	0.000	53.84	0.00	0.00
15	153.00	KRY 112 144/1	3	9.770	10.747	0.56	0.80	0.69	33.00	0.000	0.000	7.40	0.00	0.00
16	153.00	LNx-6515DS	3	9.770	10.747	0.64	0.80	22.02	149.40	0.000	0.000	236.67	0.00	0.00
17	153.00	AIR 21, 1.3M, B4A B2P	3	9.770	10.747	0.69	0.80	12.57	271.20	0.000	0.000	135.09	0.00	0.00
18	153.00	AIR 21, 1.3M, B2A B4P	3	9.770	10.747	0.69	0.80	12.57	274.50	0.000	0.000	135.09	0.00	0.00
19	153.00	Low Profile Platform-flat	1	9.770	10.747	1.00	1.00	25.00	1200.00	0.000	0.000	268.67	0.00	0.00
20	150.00	Low Profile	1	9.715	10.686	1.00	1.00	22.00	1500.00	0.000	0.000	235.10	0.00	0.00
21	143.00	DC6-48-60-18-8F	1	9.583	10.541	0.75	0.75	1.10	31.80	0.000	0.000	11.62	0.00	0.00
22	143.00	HRK14	1	9.583	10.541	1.00	1.00	10.13	352.36	0.000	0.000	106.78	0.00	0.00
23	143.00	Powerwave 7770.00	3	9.583	10.541	0.55	0.75	9.03	105.00	0.000	0.000	95.23	0.00	0.00
24	143.00	Low Profile	1	9.583	10.541	1.00	1.00	22.00	1500.00	0.000	0.000	231.91	0.00	0.00
25	143.00	850-1900 Dual Band	3	9.583	10.541	0.49	0.75	0.77	16.50	0.000	0.000	8.14	0.00	0.00
26	143.00	RRUS 11	3	9.583	10.541	0.50	0.75	3.80	152.10	0.000	0.000	40.05	0.00	0.00
27	143.00	DBC-750	3	9.583	10.541	0.75	0.75	1.15	14.40	0.000	0.000	12.10	0.00	0.00
28	143.00	OPA-65R-LCUU-H4	1	9.583	10.541	0.59	0.75	3.52	57.00	0.000	0.000	37.10	0.00	0.00
29	143.00	QS46512-2	1	9.583	10.541	0.72	0.75	3.99	27.30	0.000	0.000	42.04	0.00	0.00
30	143.00	TPA-65R-LCUUUU-H8	2	9.583	10.541	0.62	0.75	16.56	150.00	0.000	0.000	174.55	0.00	0.00
31	143.00	OPA-65R-LCUU-H8	2	9.583	10.541	0.59	0.75	15.11	190.00	0.000	0.000	159.27	0.00	0.00
32	143.00	DTMABP7819VG12A	3	9.583	10.541	0.50	0.75	1.72	57.60	0.000	0.000	18.12	0.00	0.00
33	143.00	DBC0061F1V51-2	3	9.583	10.541	0.75	0.75	0.97	76.20	0.000	0.000	10.20	0.00	0.00
34	143.00	RRUS 32 B2	3	9.583	10.541	0.50	0.75	4.13	159.00	0.000	0.000	43.54	0.00	0.00
Totals:								12,093.56				3,862.64		

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

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		47.66	609.47	0.00	0.00
4.00		47.31	605.66	0.00	0.00
6.00		46.96	601.85	0.00	0.00
8.00		46.61	598.03	0.00	0.00
10.00		46.26	594.22	0.00	0.00
12.00		45.91	590.40	0.00	0.00
14.00		45.56	586.59	0.00	0.00
16.00		45.21	582.78	0.00	0.00
18.00		44.87	578.96	0.00	0.00
20.00		44.52	575.15	0.00	0.00
22.00		44.17	571.34	0.00	0.00
24.00		43.82	567.52	0.00	0.00
26.00		43.47	563.71	0.00	0.00
28.00		43.12	559.89	0.00	0.00
30.00		42.81	556.08	0.00	0.00
32.00		43.25	552.27	0.00	0.00
34.00		43.64	548.45	0.00	0.00
36.00		43.99	544.64	0.00	0.00
38.00		44.30	540.83	0.00	0.00
40.00		44.58	537.01	0.00	0.00
41.00		22.30	267.08	0.00	0.00
42.00		22.67	489.30	0.00	0.00
44.00		45.65	972.88	0.00	0.00
46.00		45.84	965.25	0.00	0.00
48.00		46.00	957.62	0.00	0.00
50.00		46.13	524.02	0.00	0.00
51.00		23.04	260.58	0.00	0.00
52.00		23.07	259.63	0.00	0.00
54.00		46.33	516.39	0.00	0.00
56.00		46.40	512.58	0.00	0.00
58.00		46.44	508.76	0.00	0.00
60.00		46.47	504.95	0.00	0.00
62.00		46.48	501.14	0.00	0.00
64.00		46.47	497.32	0.00	0.00
66.00		46.44	493.51	0.00	0.00
66.17		3.93	41.77	0.00	0.00
68.00		42.44	447.92	0.00	0.00
70.00		46.34	485.88	0.00	0.00
71.00		23.09	241.51	0.00	0.00
72.00		23.07	240.55	0.00	0.00
74.00		46.17	478.25	0.00	0.00
76.00		46.07	474.44	0.00	0.00
78.00		45.95	470.62	0.00	0.00
80.00		45.83	466.81	0.00	0.00
81.00		22.82	231.97	0.00	0.00
82.00		22.78	200.39	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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84.00		45.53	398.40	0.00	0.00
85.00		22.67	198.01	0.00	0.00
86.00		22.94	350.56	0.00	0.00
88.00		45.82	696.35	0.00	0.00
90.00		45.64	689.99	0.00	0.00
91.00		22.71	342.61	0.00	0.00
92.00		22.66	194.56	0.00	0.00
93.83		41.39	353.98	0.00	0.00
94.00		3.83	32.75	0.00	0.00
96.00		45.03	383.56	0.00	0.00
98.00		44.80	380.38	0.00	0.00
100.00		44.57	377.20	0.00	0.00
102.00		44.33	374.02	0.00	0.00
104.00		44.07	370.84	0.00	0.00
106.00		41.31	367.66	0.00	0.00
108.00		41.02	364.49	0.00	0.00
110.00		40.73	361.31	0.00	0.00
111.17		23.66	209.89	0.00	0.00
112.00		16.72	148.24	0.00	0.00
114.00		40.13	354.95	0.00	0.00
115.00		21.20	176.28	0.00	0.00
116.00		21.13	149.76	0.00	0.00
118.00		42.07	297.60	0.00	0.00
120.00		41.76	295.06	0.00	0.00
122.00		41.43	292.52	0.00	0.00
123.83		37.61	265.43	0.00	0.00
124.00		3.47	24.55	0.00	0.00
126.00		40.76	287.43	0.00	0.00
128.00		40.42	284.89	0.00	0.00
130.00		40.07	282.35	0.00	0.00
132.00		40.28	470.35	0.00	0.00
134.00		39.91	465.26	0.00	0.00
135.00		19.80	230.73	0.00	0.00
136.00		19.70	138.39	0.00	0.00
138.00		39.17	274.88	0.00	0.00
140.00		38.79	272.34	0.00	0.00
142.00		38.40	269.80	0.00	0.00
143.00	(30) attachments	1009.67	3023.20	0.00	0.00
144.00		18.94	119.95	0.00	0.00
146.00		37.61	237.99	0.00	0.00
148.00		37.20	235.45	0.00	0.00
150.00	(1) attachments	271.89	1732.91	0.00	0.00
152.00		36.38	230.36	0.00	0.00
153.00	(16) attachments	854.78	2207.33	0.00	0.00
154.00		17.91	100.01	0.00	0.00
156.00		35.53	198.12	0.00	0.00
158.00		35.10	195.58	0.00	0.00
160.00		34.66	193.03	0.00	0.00
162.00		34.22	190.49	0.00	0.00
163.00	(7) attachments	384.97	1806.09	0.00	0.00
164.00		16.81	90.61	0.00	0.00
166.00		33.32	179.31	0.00	0.00
168.00		32.86	176.76	0.00	0.00
170.00		32.40	174.22	0.00	0.00
172.00		31.93	171.68	0.00	0.00
173.00	(27) attachments	1199.80	2484.29	0.00	0.00
174.00		15.66	69.57	0.00	0.00

Total Applied Force Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
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176.00	30.98	137.23	0.00	0.00
178.00	30.50	134.69	0.00	0.00
180.00	30.01	132.15	0.00	0.00
181.00 (1) attachments	261.59	1572.56	0.00	0.00
182.00	13.55	72.56	0.00	0.00
183.00	13.57	72.56	0.00	0.00
Totals:	7,683.59	50,842.06	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
2.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
2.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
4.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
4.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
4.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
6.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
6.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
6.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
8.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
8.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
8.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
10.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
10.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
10.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
12.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
12.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
12.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
14.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
14.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
14.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
16.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
16.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
16.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
18.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
18.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
18.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
20.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
20.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
20.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
22.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
22.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
22.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
24.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
24.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
24.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
26.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
26.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
26.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
28.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	0.55
28.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	2.08
28.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.129	0.00	6.24
30.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.134	0.00	0.55
30.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.134	0.00	2.08
30.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.134	0.00	6.24
32.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.248	0.00	0.55
32.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.248	0.00	2.08

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
32.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.248	0.00	6.24
34.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.357	0.00	0.55
34.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.357	0.00	2.08
34.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.357	0.00	6.24
36.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.462	0.00	0.55
36.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.462	0.00	2.08
36.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.462	0.00	6.24
38.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.562	0.00	0.55
38.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.562	0.00	2.08
38.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.562	0.00	6.24
40.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.659	0.00	0.55
40.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.659	0.00	2.08
40.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.659	0.00	6.24
41.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.706	0.00	0.27
41.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.706	0.00	1.04
41.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.706	0.00	3.12
42.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.753	0.00	0.27
42.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.753	0.00	1.04
42.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	6.753	0.00	3.12
44.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.843	0.00	0.55
44.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.843	0.00	2.08
44.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.843	0.00	6.24
46.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.931	0.00	0.55
46.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.931	0.00	2.08
46.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.931	0.00	6.24
48.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.015	0.00	0.55
48.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.015	0.00	2.08
48.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.015	0.00	6.24
50.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.098	0.00	0.55
50.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.098	0.00	2.08
50.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.098	0.00	6.24
51.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	0.27
51.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	1.04
51.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	3.12
52.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.178	0.00	0.27
52.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.178	0.00	1.04
52.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.178	0.00	3.12
54.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.255	0.00	0.55
54.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.255	0.00	2.08
54.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.255	0.00	6.24
56.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.331	0.00	0.55
56.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.331	0.00	2.08
56.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.331	0.00	6.24
58.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.405	0.00	0.55
58.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.405	0.00	2.08
58.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.405	0.00	6.24
60.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.477	0.00	0.55

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
60.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.477	0.00	2.08
60.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.477	0.00	6.24
62.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.548	0.00	0.55
62.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.548	0.00	2.08
62.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.548	0.00	6.24
64.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.616	0.00	0.55
64.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.616	0.00	2.08
64.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.616	0.00	6.24
66.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.684	0.00	0.55
66.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.684	0.00	2.08
66.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.684	0.00	6.24
66.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.684	0.00	0.00
66.17	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	7.689	0.00	0.05
66.17	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	7.689	0.00	0.18
66.17	1 5/8" Coax	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	7.689	0.00	0.53
66.17	C6X10.5 Reinforcing	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	7.689	0.00	0.00
68.00	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	7.749	0.00	0.50
68.00	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	7.749	0.00	1.90
68.00	1 5/8" Coax	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	7.749	0.00	5.71
68.00	C6X10.5 Reinforcing	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	7.749	0.00	0.00
70.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.814	0.00	0.55
70.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.814	0.00	2.08
70.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.814	0.00	6.24
70.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.814	0.00	0.00
71.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.846	0.00	0.27
71.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.846	0.00	1.04
71.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.846	0.00	3.12
71.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.846	0.00	0.00
72.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.877	0.00	0.27
72.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.877	0.00	1.04
72.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.877	0.00	3.12
72.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	7.877	0.00	0.00
74.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.939	0.00	0.55
74.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.939	0.00	2.08
74.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.939	0.00	6.24
74.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.939	0.00	0.00
76.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.000	0.00	0.55
76.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.000	0.00	2.08
76.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.000	0.00	6.24
76.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.000	0.00	0.00
78.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.059	0.00	0.55
78.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.059	0.00	2.08
78.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.059	0.00	6.24
78.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.059	0.00	0.00
80.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.118	0.00	0.55
80.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.118	0.00	2.08
80.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.118	0.00	6.24

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
80.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.118	0.00	0.00
81.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.147	0.00	0.27
81.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.147	0.00	1.04
81.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.147	0.00	3.12
81.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.147	0.00	0.00
82.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.175	0.00	0.27
82.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.175	0.00	1.04
82.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.175	0.00	3.12
82.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.175	0.00	0.00
84.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.232	0.00	0.55
84.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.232	0.00	2.08
84.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.232	0.00	6.24
84.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.232	0.00	0.00
85.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.260	0.00	0.27
85.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.260	0.00	1.04
85.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.260	0.00	3.12
85.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.260	0.00	0.00
86.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.287	0.00	0.27
86.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.287	0.00	1.04
86.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.287	0.00	3.12
86.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.287	0.00	0.00
88.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.342	0.00	0.55
88.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.342	0.00	2.08
88.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.342	0.00	6.24
88.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.342	0.00	0.00
90.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.396	0.00	0.55
90.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.396	0.00	2.08
90.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.396	0.00	6.24
90.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.396	0.00	0.00
91.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.422	0.00	0.27
91.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.422	0.00	1.04
91.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.422	0.00	3.12
91.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.422	0.00	0.00
92.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.448	0.00	0.27
92.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.448	0.00	1.04
92.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.448	0.00	3.12
92.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.448	0.00	0.00
93.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	8.496	0.00	0.50
93.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	8.496	0.00	1.90
93.83	1 5/8" Coax	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	8.496	0.00	5.71
93.83	C6X10.5 Reinforcing	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	8.496	0.00	0.00
94.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	8.501	0.00	0.05
94.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	8.501	0.00	0.18
94.00	1 5/8" Coax	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	8.501	0.00	0.53
94.00	C6X10.5 Reinforcing	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	8.501	0.00	0.00
96.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.552	0.00	0.55
96.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.552	0.00	2.08

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
96.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.552	0.00	6.24
96.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	8.552	0.00	0.00
98.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.602	0.00	0.55
98.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.602	0.00	2.08
98.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.602	0.00	6.24
100.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.652	0.00	0.55
100.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.652	0.00	2.08
100.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.652	0.00	6.24
102.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.701	0.00	0.55
102.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.701	0.00	2.08
102.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.701	0.00	6.24
104.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.750	0.00	0.55
104.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.750	0.00	2.08
104.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.750	0.00	6.24
106.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.797	0.00	0.55
106.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.797	0.00	2.08
106.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.797	0.00	6.24
108.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.845	0.00	0.55
108.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.845	0.00	2.08
108.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.845	0.00	6.24
110.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.891	0.00	0.55
110.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.891	0.00	2.08
110.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.891	0.00	6.24
111.17	Safety Cable	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	8.918	0.00	0.32
111.17	Step bolts (ladder)	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	8.918	0.00	1.22
111.17	1 5/8" Coax	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	8.918	0.00	3.65
111.17	C6X10.5 Reinforcing	Yes	1.17	0.000	0.00	0.00	0.00	0.000	0.000	8.918	0.00	0.00
112.00	Safety Cable	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	8.937	0.00	0.23
112.00	Step bolts (ladder)	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	8.937	0.00	0.86
112.00	1 5/8" Coax	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	8.937	0.00	2.59
112.00	C6X10.5 Reinforcing	Yes	0.83	0.000	0.00	0.00	0.00	0.000	0.000	8.937	0.00	0.00
114.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.982	0.00	0.55
114.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.982	0.00	2.08
114.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.982	0.00	6.24
114.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	8.982	0.00	0.00
115.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.005	0.00	0.27
115.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.005	0.00	1.04
115.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.005	0.00	3.12
115.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.005	0.00	0.00
116.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.027	0.00	0.27
116.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.027	0.00	1.04
116.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.027	0.00	3.12
116.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.027	0.00	0.00
118.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.071	0.00	0.55
118.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.071	0.00	2.08
118.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.071	0.00	6.24
118.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.071	0.00	0.00

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
120.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.115	0.00	0.55
120.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.115	0.00	2.08
120.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.115	0.00	6.24
120.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.115	0.00	0.00
122.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.158	0.00	0.55
122.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.158	0.00	2.08
122.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.158	0.00	6.24
122.00	C6X10.5 Reinforcing	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.158	0.00	0.00
123.83	Safety Cable	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	9.197	0.00	0.50
123.83	Step bolts (ladder)	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	9.197	0.00	1.90
123.83	1 5/8" Coax	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	9.197	0.00	5.71
123.83	C6X10.5 Reinforcing	Yes	1.83	0.000	0.00	0.00	0.00	0.000	0.000	9.197	0.00	0.00
124.00	Safety Cable	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	9.201	0.00	0.05
124.00	Step bolts (ladder)	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	9.201	0.00	0.18
124.00	1 5/8" Coax	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	9.201	0.00	0.53
124.00	C6X10.5 Reinforcing	Yes	0.17	0.000	0.00	0.00	0.00	0.000	0.000	9.201	0.00	0.00
126.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.243	0.00	0.55
126.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.243	0.00	2.08
126.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.243	0.00	6.24
126.00	C6X10.5 Reinforcing	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.243	0.00	0.00
128.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.284	0.00	0.55
128.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.284	0.00	2.08
128.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.284	0.00	6.24
130.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.326	0.00	0.55
130.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.326	0.00	2.08
130.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.326	0.00	6.24
132.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.366	0.00	0.55
132.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.366	0.00	2.08
132.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.366	0.00	6.24
134.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.407	0.00	0.55
134.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.407	0.00	2.08
134.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.407	0.00	6.24
135.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.427	0.00	0.27
135.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.427	0.00	1.04
135.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.427	0.00	3.12
136.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.447	0.00	0.27
136.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.447	0.00	1.04
136.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.447	0.00	3.12
138.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.486	0.00	0.55
138.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.486	0.00	2.08
138.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.486	0.00	6.24
140.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.525	0.00	0.55
140.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.525	0.00	2.08
140.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.525	0.00	6.24
142.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.564	0.00	0.55
142.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.564	0.00	2.08
142.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.564	0.00	6.24

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
143.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.583	0.00	0.27
143.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.583	0.00	1.04
143.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.583	0.00	3.12
144.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.602	0.00	0.27
144.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.602	0.00	1.04
144.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.602	0.00	3.12
146.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.640	0.00	0.55
146.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.640	0.00	2.08
146.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.640	0.00	6.24
148.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.678	0.00	0.55
148.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.678	0.00	2.08
148.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.678	0.00	6.24
150.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.715	0.00	0.55
150.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.715	0.00	2.08
150.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.715	0.00	6.24
152.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.752	0.00	0.55
152.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.752	0.00	2.08
152.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.752	0.00	6.24
153.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.770	0.00	0.27
153.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.770	0.00	1.04
153.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.770	0.00	3.12
154.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.788	0.00	0.27
154.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.788	0.00	1.04
154.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.788	0.00	3.12
156.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.824	0.00	0.55
156.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.824	0.00	2.08
156.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.824	0.00	6.24
158.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.860	0.00	0.55
158.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.860	0.00	2.08
158.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.860	0.00	6.24
160.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.896	0.00	0.55
160.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.896	0.00	2.08
160.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.896	0.00	6.24
162.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.931	0.00	0.55
162.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.931	0.00	2.08
162.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.931	0.00	6.24
163.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.948	0.00	0.27
163.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.948	0.00	1.04
163.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.948	0.00	3.12
164.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.966	0.00	0.27
164.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.966	0.00	1.04
164.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	9.966	0.00	3.12
166.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.000	0.00	0.55
166.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.000	0.00	2.08
166.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.000	0.00	6.24
168.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.035	0.00	0.55
168.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.035	0.00	2.08

Linear Appurtenance Segment Forces (Factored)

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 28

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
168.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.035	0.00	6.24
170.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.069	0.00	0.55
170.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.069	0.00	2.08
170.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.069	0.00	6.24
172.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.102	0.00	0.55
172.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.102	0.00	2.08
172.00	1 5/8" Coax	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.102	0.00	6.24
173.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.119	0.00	0.27
173.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.119	0.00	1.04
173.00	1 5/8" Coax	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.119	0.00	3.12
174.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.136	0.00	0.27
174.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.136	0.00	1.04
176.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.169	0.00	0.55
176.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.169	0.00	2.08
178.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.202	0.00	0.55
178.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.202	0.00	2.08
180.00	Safety Cable	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.234	0.00	0.55
180.00	Step bolts (ladder)	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	10.234	0.00	2.08
181.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.251	0.00	0.27
181.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.251	0.00	1.04
182.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.267	0.00	0.27
182.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.267	0.00	1.04
183.00	Safety Cable	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.283	0.00	0.27
183.00	Step bolts (ladder)	Yes	1.00	0.000	0.00	0.00	0.00	0.000	0.000	10.283	0.00	1.04
Totals:											0.0	780.0

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

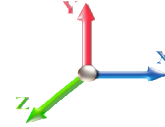


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Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 28

Dead Load Factor 1.00
Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-50.84	-7.69	0.00	-985.50	0.00	985.50	5190.16	2595.08	13702.9	6861.66	0.00	0.000	0.000	0.153
2.00	-50.23	-7.65	0.00	-970.13	0.00	970.13	5174.50	2587.25	13560.7	6790.43	0.00	-0.014	0.000	0.153
4.00	-49.62	-7.62	0.00	-954.82	0.00	954.82	5158.51	2579.25	13418.2	6719.08	0.01	-0.028	0.000	0.152
6.00	-49.02	-7.58	0.00	-939.59	0.00	939.59	5142.18	2571.09	13275.4	6647.61	0.03	-0.042	0.000	0.151
8.00	-48.42	-7.55	0.00	-924.42	0.00	924.42	5125.52	2562.76	13132.5	6576.03	0.05	-0.057	0.000	0.150
10.00	-47.82	-7.51	0.00	-909.33	0.00	909.33	5108.53	2554.27	12989.4	6504.36	0.07	-0.071	0.000	0.149
12.00	-47.23	-7.48	0.00	-894.30	0.00	894.30	5091.21	2545.61	12846.0	6432.60	0.11	-0.086	0.000	0.148
14.00	-46.64	-7.44	0.00	-879.35	0.00	879.35	5073.56	2536.78	12702.6	6360.75	0.15	-0.100	0.000	0.147
16.00	-46.06	-7.41	0.00	-864.46	0.00	864.46	5055.57	2527.79	12559.0	6288.85	0.19	-0.115	0.000	0.147
18.00	-45.48	-7.37	0.00	-849.65	0.00	849.65	5037.25	2518.63	12415.3	6216.88	0.24	-0.130	0.000	0.146
20.00	-44.90	-7.34	0.00	-834.90	0.00	834.90	5018.60	2509.30	12271.4	6144.86	0.30	-0.144	0.000	0.145
22.00	-44.33	-7.31	0.00	-820.22	0.00	820.22	4999.62	2499.81	12127.5	6072.81	0.36	-0.159	0.000	0.144
24.00	-43.76	-7.27	0.00	-805.61	0.00	805.61	4980.31	2490.15	11983.6	6000.72	0.43	-0.174	0.000	0.143
26.00	-43.19	-7.24	0.00	-791.06	0.00	791.06	4960.66	2480.33	11839.6	5928.62	0.51	-0.189	0.000	0.142
28.00	-42.63	-7.20	0.00	-776.59	0.00	776.59	4940.68	2470.34	11695.6	5856.50	0.59	-0.205	0.000	0.141
30.00	-42.07	-7.17	0.00	-762.18	0.00	762.18	4920.37	2460.19	11551.6	5784.39	0.68	-0.220	0.000	0.140
32.00	-41.52	-7.14	0.00	-747.84	0.00	747.84	4899.73	2449.87	11407.6	5712.28	0.78	-0.235	0.000	0.139
34.00	-40.97	-7.10	0.00	-733.56	0.00	733.56	4878.76	2439.38	11263.6	5640.19	0.88	-0.251	0.000	0.138
36.00	-40.42	-7.07	0.00	-719.36	0.00	719.36	4857.45	2428.72	11119.7	5568.14	0.99	-0.266	0.000	0.138
38.00	-39.88	-7.03	0.00	-705.23	0.00	705.23	4835.81	2417.91	10975.9	5496.12	1.10	-0.282	0.000	0.137
40.00	-39.34	-6.99	0.00	-691.17	0.00	691.17	4813.84	2406.92	10832.2	5424.15	1.23	-0.298	0.000	0.136
41.00	-39.07	-6.97	0.00	-684.18	0.00	684.18	4802.73	2401.36	10760.3	5388.18	1.29	-0.306	0.000	0.135
42.00	-38.58	-6.96	0.00	-677.20	0.00	677.20	4791.54	2395.77	10688.5	5352.24	1.35	-0.314	0.000	0.135
44.00	-37.61	-6.91	0.00	-663.29	0.00	663.29	4768.90	2384.45	10545.1	5280.39	1.49	-0.329	0.000	0.134
46.00	-36.64	-6.87	0.00	-649.46	0.00	649.46	4745.94	2372.97	10401.7	5208.63	1.63	-0.345	0.000	0.132
48.00	-35.68	-6.83	0.00	-635.72	0.00	635.72	4759.60	2379.80	10486.7	5251.18	1.78	-0.361	0.000	0.129
50.00	-35.16	-6.79	0.00	-622.05	0.00	622.05	4736.50	2368.25	10343.5	5179.45	1.93	-0.378	0.000	0.128
51.00	-34.90	-6.77	0.00	-615.26	0.00	615.26	4724.82	2362.41	10271.9	5143.62	2.01	-0.385	0.000	0.127
51.00	-34.90	-6.77	0.00	-615.26	0.00	615.26	4064.30	2032.15	8835.99	4424.56	2.01	-0.385	0.000	0.148
52.00	-34.63	-6.75	0.00	-608.49	0.00	608.49	4053.20	2026.60	8772.35	4392.70	2.09	-0.393	0.000	0.147
54.00	-34.12	-6.71	0.00	-594.99	0.00	594.99	4030.83	2015.41	8645.34	4329.09	2.26	-0.409	0.000	0.146
56.00	-33.60	-6.67	0.00	-581.57	0.00	581.57	4008.20	2004.10	8518.66	4265.66	2.44	-0.425	0.000	0.145
58.00	-33.09	-6.63	0.00	-568.23	0.00	568.23	3985.33	1992.66	8392.33	4202.40	2.62	-0.440	0.000	0.144
60.00	-32.59	-6.59	0.00	-554.97	0.00	554.97	3962.20	1981.10	8266.38	4139.33	2.81	-0.456	0.000	0.142
62.00	-32.08	-6.55	0.00	-541.79	0.00	541.79	3938.82	1969.41	8140.81	4076.46	3.00	-0.472	0.000	0.141
64.00	-31.58	-6.50	0.00	-528.70	0.00	528.70	3915.19	1957.60	8015.64	4013.78	3.20	-0.488	0.000	0.140
66.00	-31.09	-6.46	0.00	-515.69	0.00	515.69	3891.31	1945.66	7890.88	3951.30	3.41	-0.504	0.000	0.139
66.17	-31.05	-6.46	0.00	-514.60	0.00	514.60	3889.27	1944.64	7880.29	3946.00	3.43	-0.505	0.000	0.102
68.00	-30.60	-6.42	0.00	-502.78	0.00	502.78	3867.19	1933.59	7766.55	3889.05	3.62	-0.516	0.000	0.100
70.00	-30.11	-6.37	0.00	-489.95	0.00	489.95	3842.81	1921.40	7642.66	3827.01	3.84	-0.528	0.000	0.099
71.00	-29.87	-6.35	0.00	-483.57	0.00	483.57	3830.52	1915.26	7580.89	3796.08	3.95	-0.534	0.000	0.099
71.00	-29.87	-6.35	0.00	-483.57	0.00	483.57	3467.89	1733.95	6863.13	3436.66	3.95	-0.534	0.000	0.109
72.00	-29.63	-6.33	0.00	-477.23	0.00	477.23	3456.29	1728.14	6806.46	3408.29	4.07	-0.540	0.000	0.108
74.00	-29.15	-6.28	0.00	-464.57	0.00	464.57	3432.92	1716.46	6693.50	3351.73	4.30	-0.551	0.000	0.107
76.00	-28.68	-6.24	0.00	-452.00	0.00	452.00	3409.33	1704.67	6581.05	3295.42	4.53	-0.563	0.000	0.105
78.00	-28.20	-6.19	0.00	-439.53	0.00	439.53	3385.54	1692.77	6469.11	3239.36	4.77	-0.575	0.000	0.104
80.00	-27.74	-6.15	0.00	-427.14	0.00	427.14	3361.54	1680.77	6357.71	3183.58	5.01	-0.587	0.000	0.102
81.00	-27.50	-6.12	0.00	-421.00	0.00	421.00	3349.46	1674.73	6302.21	3155.79	5.13	-0.593	0.000	0.102

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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81.00	-27.50	-6.12	0.00	-421.00	0.00	421.00	2964.88	1482.44	5593.85	2801.08	5.13	-0.593	0.000	0.096
82.00	-27.30	-6.10	0.00	-414.87	0.00	414.87	2956.03	1478.01	5548.33	2778.29	5.26	-0.598	0.000	0.108
84.00	-26.90	-6.06	0.00	-402.66	0.00	402.66	2938.12	1469.06	5457.44	2732.78	5.51	-0.612	0.000	0.106
85.00	-26.71	-6.04	0.00	-396.60	0.00	396.60	2929.07	1464.54	5412.08	2710.06	5.64	-0.618	0.000	0.105
86.00	-26.35	-6.02	0.00	-390.56	0.00	390.56	2919.96	1459.98	5366.77	2687.37	5.77	-0.625	0.000	0.103
88.00	-25.66	-5.97	0.00	-378.53	0.00	378.53	2901.53	1450.76	5276.32	2642.08	6.04	-0.638	0.000	0.101
90.00	-24.97	-5.92	0.00	-366.60	0.00	366.60	2882.84	1441.42	5186.12	2596.92	6.31	-0.651	0.000	0.099
91.00	-24.62	-5.89	0.00	-360.68	0.00	360.68	2898.35	1449.17	5260.87	2634.34	6.44	-0.657	0.000	0.100
92.00	-24.43	-5.87	0.00	-354.79	0.00	354.79	2889.01	1444.51	5215.76	2611.76	6.58	-0.664	0.000	0.097
93.83	-24.07	-5.83	0.00	-344.04	0.00	344.04	2871.76	1435.88	5133.38	2570.50	6.84	-0.675	0.000	0.095
93.83	-24.07	-5.83	0.00	-344.04	0.00	344.04	2871.76	1435.88	5133.38	2570.50	6.84	-0.675	0.000	0.095
94.00	-24.04	-5.83	0.00	-343.05	0.00	343.05	2870.15	1435.07	5125.73	2566.68	6.86	-0.676	0.000	0.142
96.00	-23.66	-5.79	0.00	-331.38	0.00	331.38	2851.02	1425.51	5035.98	2521.73	7.15	-0.695	0.000	0.140
98.00	-23.27	-5.75	0.00	-319.81	0.00	319.81	2831.62	1415.81	4946.52	2476.93	7.45	-0.714	0.000	0.137
100.00	-22.90	-5.71	0.00	-308.31	0.00	308.31	2811.97	1405.98	4857.35	2432.29	7.75	-0.732	0.000	0.135
102.00	-22.52	-5.66	0.00	-296.90	0.00	296.90	2792.05	1396.03	4768.51	2387.80	8.06	-0.751	0.000	0.132
104.00	-22.15	-5.62	0.00	-285.58	0.00	285.58	2771.87	1385.94	4680.00	2343.48	8.38	-0.769	0.000	0.130
106.00	-21.78	-5.58	0.00	-274.33	0.00	274.33	2751.43	1375.71	4591.84	2299.33	8.71	-0.788	0.000	0.127
108.00	-21.41	-5.54	0.00	-263.17	0.00	263.17	2730.72	1365.36	4504.04	2255.37	9.04	-0.806	0.000	0.125
110.00	-21.05	-5.50	0.00	-252.08	0.00	252.08	2709.75	1354.88	4416.62	2211.59	9.38	-0.824	0.000	0.122
111.17	-20.84	-5.48	0.00	-245.65	0.00	245.65	2697.36	1348.68	4365.66	2186.08	9.58	-0.835	0.000	0.096
112.00	-20.69	-5.46	0.00	-241.10	0.00	241.10	2688.52	1344.26	4329.60	2168.02	9.73	-0.841	0.000	0.095
114.00	-20.34	-5.42	0.00	-230.17	0.00	230.17	2667.03	1333.51	4242.98	2124.64	10.09	-0.855	0.000	0.092
115.00	-20.16	-5.40	0.00	-224.75	0.00	224.75	2656.18	1328.09	4199.83	2103.04	10.26	-0.862	0.000	0.089
115.00	-20.16	-5.40	0.00	-224.75	0.00	224.75	1951.15	975.57	3095.05	1549.82	10.26	-0.862	0.000	0.097
116.00	-20.01	-5.38	0.00	-219.35	0.00	219.35	1944.57	972.29	3065.67	1535.11	10.45	-0.869	0.000	0.113
118.00	-19.71	-5.34	0.00	-208.59	0.00	208.59	1931.24	965.62	3006.98	1505.73	10.81	-0.884	0.000	0.109
120.00	-19.42	-5.30	0.00	-197.91	0.00	197.91	1917.63	958.82	2948.42	1476.40	11.19	-0.900	0.000	0.105
122.00	-19.12	-5.26	0.00	-187.31	0.00	187.31	1903.77	951.88	2889.98	1447.14	11.57	-0.915	0.000	0.101
123.83	-18.86	-5.22	0.00	-177.69	0.00	177.69	1890.85	945.43	2836.64	1420.43	11.92	-0.929	0.000	0.098
123.83	-18.86	-5.22	0.00	-177.69	0.00	177.69	1890.85	945.43	2836.64	1420.43	11.92	-0.929	0.000	0.098
124.00	-18.83	-5.22	0.00	-176.80	0.00	176.80	1889.64	944.82	2831.69	1417.95	11.95	-0.930	0.000	0.135
126.00	-18.54	-5.18	0.00	-166.37	0.00	166.37	1875.25	937.63	2773.56	1388.84	12.35	-0.950	0.000	0.130
128.00	-18.26	-5.14	0.00	-156.01	0.00	156.01	1860.60	930.30	2715.62	1359.83	12.75	-0.970	0.000	0.125
130.00	-17.97	-5.10	0.00	-145.73	0.00	145.73	1845.69	922.84	2657.86	1330.91	13.16	-0.989	0.000	0.119
132.00	-17.50	-5.06	0.00	-135.53	0.00	135.53	1830.51	915.25	2600.31	1302.09	13.58	-1.008	0.000	0.114
134.00	-17.04	-5.01	0.00	-125.41	0.00	125.41	1815.07	907.53	2542.99	1273.39	14.01	-1.026	0.000	0.108
135.00	-16.81	-4.99	0.00	-120.40	0.00	120.40	1823.79	911.89	2575.21	1289.52	14.22	-1.034	0.000	0.103
136.00	-16.67	-4.97	0.00	-115.41	0.00	115.41	1816.04	908.02	2546.57	1275.18	14.44	-1.043	0.000	0.100
138.00	-16.39	-4.93	0.00	-105.46	0.00	105.46	1800.35	900.18	2489.47	1246.58	14.88	-1.059	0.000	0.094
140.00	-16.12	-4.89	0.00	-95.59	0.00	95.59	1784.41	892.20	2432.62	1218.12	15.33	-1.074	0.000	0.088
142.00	-15.85	-4.85	0.00	-85.81	0.00	85.81	1768.19	884.10	2376.04	1189.79	15.78	-1.088	0.000	0.081
143.00	-12.85	-3.79	0.00	-80.95	0.00	80.95	1759.99	879.99	2347.86	1175.68	16.01	-1.095	0.000	0.076
144.00	-12.73	-3.77	0.00	-77.16	0.00	77.16	1751.72	875.86	2319.75	1161.60	16.24	-1.101	0.000	0.074
146.00	-12.49	-3.73	0.00	-69.63	0.00	69.63	1734.98	867.49	2263.76	1133.56	16.70	-1.114	0.000	0.069
148.00	-12.25	-3.69	0.00	-62.17	0.00	62.17	1717.98	858.99	2208.08	1105.68	17.17	-1.125	0.000	0.063
150.00	-10.52	-3.39	0.00	-54.79	0.00	54.79	1700.72	850.36	2152.74	1077.97	17.65	-1.136	0.000	0.057
152.00	-10.29	-3.35	0.00	-48.01	0.00	48.01	1683.20	841.60	2097.74	1050.43	18.12	-1.146	0.000	0.052
153.00	-8.10	-2.45	0.00	-44.67	0.00	44.67	1674.33	837.17	2070.37	1036.72	18.37	-1.151	0.000	0.048
154.00	-8.00	-2.43	0.00	-42.22	0.00	42.22	1665.41	832.70	2043.10	1023.07	18.61	-1.155	0.000	0.046
156.00	-7.81	-2.39	0.00	-37.36	0.00	37.36	1647.36	823.68	1988.83	995.90	19.09	-1.164	0.000	0.042
158.00	-7.61	-2.35	0.00	-32.58	0.00	32.58	1629.04	814.52	1934.96	968.92	19.58	-1.172	0.000	0.038
160.00	-7.42	-2.32	0.00	-27.87	0.00	27.87	1610.47	805.23	1881.50	942.15	20.07	-1.179	0.000	0.034
162.00	-7.23	-2.28	0.00	-23.24	0.00	23.24	1591.63	795.82	1828.46	915.59	20.57	-1.185	0.000	0.030
163.00	-5.43	-1.86	0.00	-20.97	0.00	20.97	1582.11	791.06	1802.10	902.39	20.82	-1.188	0.000	0.027
164.00	-5.34	-1.84	0.00	-19.11	0.00	19.11	1572.53	786.27	1775.86	889.25	21.07	-1.191	0.000	0.025
166.00	-5.16	-1.80	0.00	-15.44	0.00	15.44	1553.17	776.58	1723.71	863.13	21.57	-1.195	0.000	0.021

Calculated Forces

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 94
	Struct Class: II	



168.00	-4.99	-1.76	0.00	-11.84	0.00	11.84	1533.54	766.77	1672.03	837.26	22.07	-1.199	0.000	0.017
170.00	-4.81	-1.73	0.00	-8.31	0.00	8.31	1513.65	756.83	1620.83	811.62	22.57	-1.202	0.000	0.013
172.00	-4.64	-1.69	0.00	-4.85	0.00	4.85	1493.50	746.75	1570.13	786.23	23.08	-1.204	0.000	0.009
173.00	-2.18	-0.44	0.00	-3.16	0.00	3.16	1483.33	741.66	1544.98	773.64	23.33	-1.205	0.000	0.006
174.00	-2.11	-0.42	0.00	-2.71	0.00	2.71	1473.09	736.54	1519.95	761.10	23.58	-1.206	0.000	0.005
176.00	-1.98	-0.39	0.00	-1.87	0.00	1.87	1452.41	726.20	1470.30	736.24	24.09	-1.206	0.000	0.004
178.00	-1.84	-0.36	0.00	-1.08	0.00	1.08	1427.85	713.93	1417.60	709.85	24.59	-1.207	0.000	0.003
180.00	-1.71	-0.32	0.00	-0.37	0.00	0.37	1400.09	700.05	1362.74	682.38	25.10	-1.207	0.000	0.002
180.00	-1.71	-0.32	0.00	-0.37	0.00	0.37	678.42	339.21	662.23	396.30	25.10	-1.207	0.000	0.003
181.00	-0.14	-0.03	0.00	-0.05	0.00	0.05	678.42	339.21	662.23	396.30	25.35	-1.207	0.000	0.000
182.00	-0.07	-0.02	0.00	-0.02	0.00	0.02	678.42	339.21	662.23	396.30	25.60	-1.207	0.000	0.000
183.00	0.00	-0.01	0.00	0.00	0.00	0.00	678.42	339.21	662.23	396.30	25.86	-1.207	0.000	0.000

Final Analysis Summary

Structure: CT01002-S-SBA	Code: EIA/TIA-222-G	5/21/2018
Site Name: Waterford	Exposure: B	
Height: 183.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 105 mph Wind	37.7	0.00	60.99	0.00	0.00	4863.30
0.9D + 1.6W 105 mph Wind	37.7	0.00	45.73	0.00	0.00	4803.02
1.2D + 1.0Di + 1.0Wi 50 mph Wind	9.4	0.00	94.97	0.00	0.00	1219.42
1.2D + 1.0E	1.8	0.00	61.01	0.00	0.00	241.33
0.9D + 1.0E	1.8	0.00	45.76	0.00	0.00	238.14
1.0D + 1.0W 60 mph Wind	7.7	0.00	50.84	0.00	0.00	985.50

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 105 mph Wind	-60.99	-37.69	0.00	-4863.3	0.00	-4863.3	5190.16	2595.0	13702.9	6861.66	0.00	0.721
0.9D + 1.6W 105 mph Wind	-45.73	-37.68	0.00	-4803.0	0.00	-4803.0	5190.16	2595.0	13702.9	6861.66	0.00	0.709
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-94.97	-9.39	0.00	-1219.4	0.00	-1219.4	5190.16	2595.0	13702.9	6861.66	0.00	0.196
1.2D + 1.0E	-22.69	-1.27	0.00	-59.55	0.00	-59.55	1889.64	944.82	2831.69	1417.95	124.00	0.054
0.9D + 1.0E	-17.02	-1.25	0.00	-58.55	0.00	-58.55	1889.64	944.82	2831.69	1417.95	124.00	0.050
1.0D + 1.0W 60 mph Wind	-50.84	-7.69	0.00	-985.50	0.00	-985.50	5190.16	2595.0	13702.9	6861.66	0.00	0.153

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors			Lower Termination				Upper Termination				Max Member			
			VQ/I (lb/in)	Vu (kips)	phi Vn (kips)	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	MQ/I (kips)	phi Vn (kips)	Num Reqd	Num Actual	Pu (kips)	phi Pn (kips)	phi Tn (kips)	Ratio
66.2	93.8	(6) PLT-C6x10.5(1.5" Hole)	137.7	0.00	25.3	102.0	25.3	5	0	96.3	25.3	4	0	106.89	180.2	155.36	0.688
111.2	123.8	(3) PLT-C6x10.5(1.5" Hole)	237.8	0.00	25.3	95.9	25.3	4	0	97.2	25.3	4	0	109.94	180.2	155.36	0.708



Monopole Mat Foundation Design

Date

5/21/2018

Customer Name:	AT&T	EIA/TIA Standard:	EIA-222-G
Site Name:		Structure Height (Ft.):	183
Site Number:	CT01002-S-SBA	Engineer Name:	M. Franco
Engr. Number:	53401	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations

Structure Type:

Monopole

Analysis or Design?

Analysis

Base Reactions (Factored):

Axial Load (Kips):	60.9	Shear Force (Kips):	37.7
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4863.3

Allowable overstress %: 5.0%

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	8.0	Depth of Base BG (ft.):	8.0
Pier Height A. G. (ft.):	0.25	Thickness of Pad (ft):	4.00
Length of Pad (ft.):	32	Width of Pad (ft.):	32
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	

Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

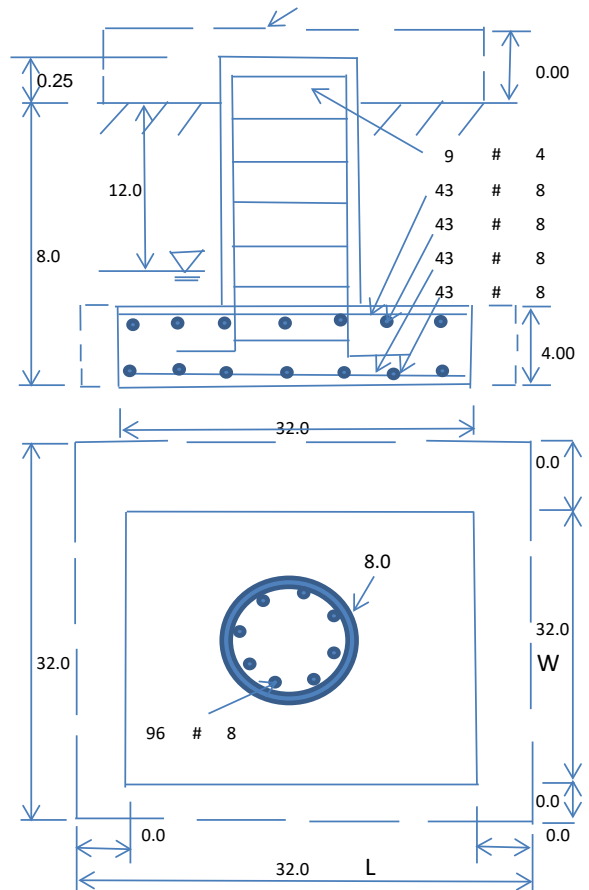
Soil Unit Weight (pcf):	100.0	Soil Buoyant Weight:	50.0	Pcf
Water Table B.G.S. (ft):	12.0	Unit Weight of Water:	62.4	pcf
Ultimate Bearing Pressure (psf):	10000	Ultimate Skin Friction:	0	Psf
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	
Consider soil hor. resist. for OTM.:	Yes	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:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
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):	1096.84

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	1861	<	Allowable Factored Soil Bearing (psf):	7500	0.25	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	15891.9	>	Design Factored Momont (kips-ft):	4804	0.30	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	3.31					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: 1.00

Load/
Capacity
Ratio

(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	0.79	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	14006.5	>	Design Factored Moment (Mu, Kips-Ft)	5023.5	0.36 OK!
Calculated Shear Capacity (Kips):	840.3	>	Design Factored Shear (Kips):	37.7	0.04 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):	60.9	0.00 OK!
Moment & Axial Strength Combination:	0.36	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):	315.7	0.19 OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1621.1	>	One-Way Factored Shear (W-D., Kips)	315.7	0.19 OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	1511.6	>	One-Way Factored Shear (C-C, Kips):	284.0	0.19 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-Dir. K-Ft):	2408.0	0.36 OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	6683.2	>	Moment at Bottom (W-Dir. K-Ft):	2408.0	0.36 OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	9415.2	>	Moment at Bottom (C-C Dir. K-Ft):	3405.4	0.36 OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0020	
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	6683.2	>	Moment at the top (L-Dir K-Ft):	835.8	0.13 OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	6683.2	>	Moment at the top (W-Dir K-Ft):	835.8	0.13 OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	9415.2	>	Moment at the top (C-C Dir. K-Ft):	781.5	0.08 OK!

(3).Check Punching Shear Capacity due to Moment in the Pier:

Moment transferred by punching shear:	1945.3	k-ft.	Max. factored shear stress $v_{u,CD}$:	3.0	Psi
Max. factored shear stress $v_{u,AB}$:	7.7	Psi	Factored shear Strength ϕv_n :	189.7	Psi
Max. factored shear stress v_u :	7.7	Psi	Check Usage of Punching Shear Capacity:	0.04	OK!

March 19, 2018



Centerline Communications
95 Ryan Drive
Raynham, MA 02767

RE: Site Number: CT2079 (LTE 2C/3C)
 FA Number: 10035398
 PACE Number: MRCTB023541
 PTN Number: 2051A0B8WW
 Site Name: WATERFORD FARGO
 Site Address: 45 Fargo Road
 Waterford, CT 06385

To Whom It May Concern:

Hudson Design Group LLC (HDG) has been authorized by Centerline Communications to perform a mount analysis on the existing AT&T antenna mount to determine their capability of supporting the following equipment loading:

- (3) 7770 Antennas (55.0"x11.0"x5.0" – Wt. = 35 lbs. /each)
- (3) RRUS-11 RRH's (19.7"x17.0"x7.2" – Wt. = 51 lbs. /each)
- (3) DTMABP7819VG12A TMA's (10.6"x11.0"x3.8" – Wt. = 20 lbs. /each)
- (1) Squid Surge Arrestor (24.0"x9.7"Ø – Wt. = 33 lbs.)
- **(1) QS46512-2 Antenna (52.0"x12.0"x10.8" – Wt. = 75 lbs.)**
- **(1) OPA-65R-BU4B Antenna (48.0"x11.7"x10.1" – Wt. = 43 lbs.)**
- **(2) OPA-65R-BU8B Antennas (95.9"x11.7"x8.4" – Wt. = 69 lbs. /each)**
- **(2) TPA-65R-LCUUUU-H8 Antennas (96.0"x14.4"x8.6" – Wt. = 75 lbs. /each)**
- **(3) RRUS-32 B2 RRH's (27.2"x12.1"x7" – Wt. = 60 lbs. /each)**
- **(3) DBC0061F151-2 Diplexers (8.0"x6.2"x6.5" – Wt. = 26 lbs. /each)**

**Proposed Loading Shown in Bold.*

No original structural design documents or fabrication drawings were available for the existing mounts. HDG's subconsultant, ProVertic LLC, conducted a survey climb and mapping of the existing AT&T antenna mounts on February 12, 2018.

Based on our analysis, we have determined that the existing antenna mount **IS NOT CAPABLE** of supporting the proposed installation. HDG recommends the following modifications:

- **Install new handrail kit, SitePro1 P/N HRK 14-U (or approved equal).**
- **Remove and replace existing pipe masts with new 2-1/2" std. (2.88" O.D.) steel pipe masts (typ. of 2 per sector, total of 6).**

	Member	Controlling Load Case	Stress Ratio	Pass/Fail
Existing 2C/3C Mount Rating	131	LC2	215%	FAIL
Proposed 2C/3C Mount Rating	187	LC4	97%	PASS

This analysis was conducted in accordance with EIA/TIA-222-G, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, International Building Code 2012, and 2005 Connecticut Supplement with 2016 amendments. (See the attached analysis).

Reference Documents:

- Mount Mapping Report prepared by ProVertic LLC dated March 14, 2018.

This determination was based on the following limitations and assumptions:

1. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
2. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
4. The existing mount has been adequately secured to the tower structure per the mount manufacturer's specifications.
5. All components pertaining to AT&T's mounts must be tightened and re-plumbed prior to the installation of new appurtenances.
6. HDG performed a localized analysis on the mount itself and not on the supporting tower structure.

Please feel free to contact our office should you have any questions.

Respectfully Submitted,
Hudson Design Group LLC

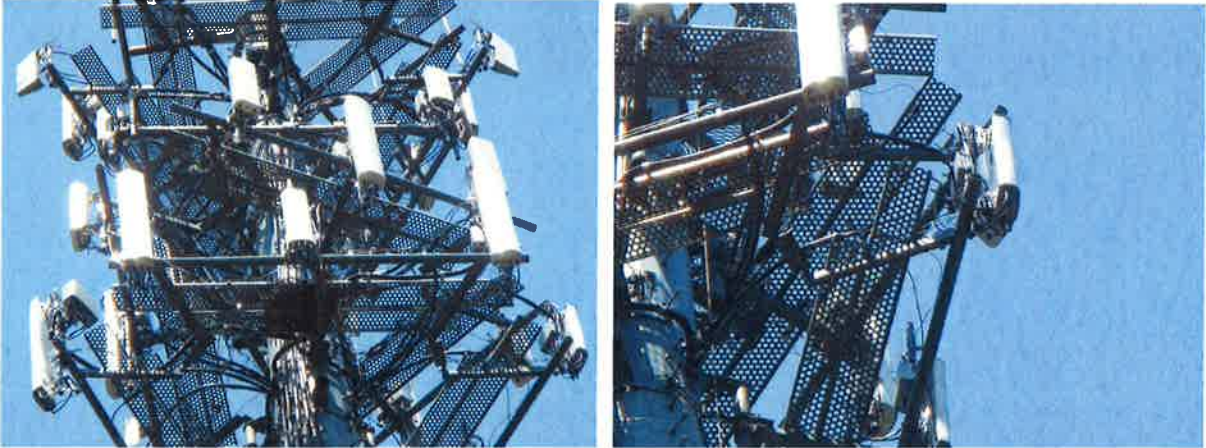
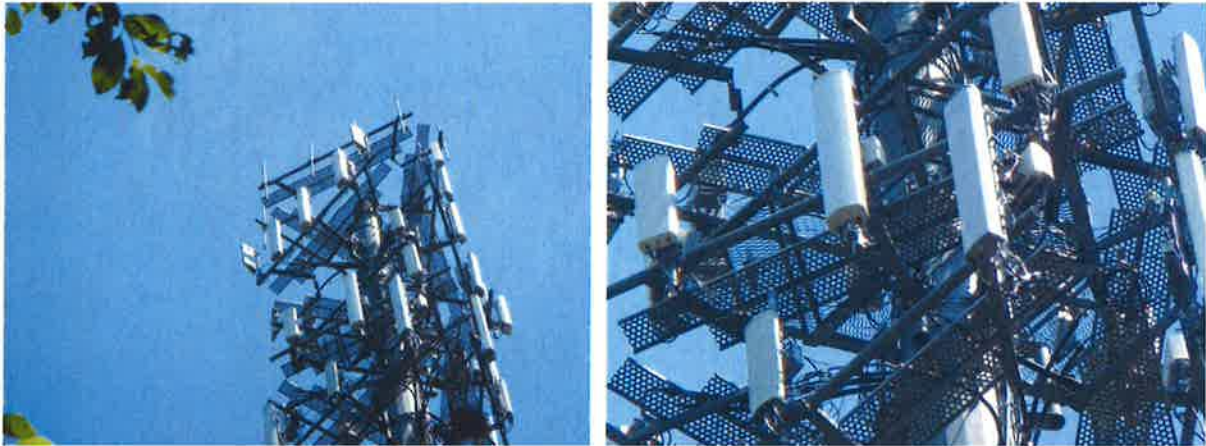


Michael Cabral
Structural Dept. Head



Daniel H. Hamm, PE
Principal

FIELD PHOTOS:







HUDSON
Design Group LLC

**Wind & Ice
Calculations**

Date: 3/19/2018
 Project Name: WATERFORD FARGO
 Project Number: CT2079
 Designed By: BD Checked By: MSC



HUDSON
 Design Group LLC

2.6.5.2 Velocity Pressure Coeff:

$$K_z = 2.01 (z/z_g)^{2/\alpha}$$

$z = 143$ (ft)
 $z_g = 1200$ (ft)
 $\alpha = 7.0$

$K_z = 1.095$

$K_{zmin} \leq K_z \leq 2.01$

Table 2-4

Exposure	Z _g	α	K _{zmin}	K _e
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.4 Topographic Factor:

Table 2-5

Topo. Category	K _t	f
2	0.43	1.25
3	0.53	2.0
4	0.72	1.5

$$K_{zt} = [1 + (K_e K_t / K_h)]^2$$

$$K_h = e^{(fz/H)}$$

$K_{zt} = \text{\#DIV/0!}$

$K_h = \text{\#DIV/0!}$

$K_e = 0$ (from Table 2-4)

$K_t = 0$ (from Table 2-5)

$f = 0$ (from Table 2-5)

$z = 143$

$H = 0$ (Ht. of the crest above surrounding terrain)

$K_{zt} = 1.00$

(If Category 1 then K_{zt}=1.0)

Category = 1

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 Designed By: BD Checked By: MSC



2.6.7 Gust Effect Factor

2.6.7.1 Self Supporting Lattice Structures

Gh = 1.0 Latticed Structures > 600 ft

Gh = 0.85 Latticed Structures 450 ft or less

Gh = 0.85 + 0.15 [h/150 - 3.0] h= ht. of structure

h= 183 Gh= 0.85

2.6.7.2 Guyed Masts Gh= 0.85

2.6.7.3 Pole Structures Gh= 1.1

2.6.9 Appurtenances Gh= 1.0

2.6.7.4 Structures Supported on Other Structures

(Cantilevered tubular or latticed spines, pole, structures on buildings (ht. : width ratio > 5)

Gh= 1.35 Gh= 1.10

2.6.9.2 Design Wind Force on Appurtenances

$F = q_z * Gh * (EPA)_A$

$q_z = 0.00256 * K_z * K_{zt} * K_d * V_{max}^2 * I$

q_z = 38.33

q_{z (Ice)} = 6.65

K_z = 1.095

K_{zt} = 1.0

K_d = 0.95

V_{max} = 120

V_{max (Ice)} = 50

I = 1.0

Table 2-2

Structure Type	Wind Direction Probability Factor, Kd
Latticed structures with triangular, square or rectangular cross sections	0.85
Tubular pole structures, latticed structures with other cross sections, appurtenances	0.95

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Determine Ca:

Table 2-8

Force Coefficients (Ca) for Appurtenances				
Member Type		Aspect Ratio ≤ 2.5	Aspect Ratio = 7	Aspect Ratio ≥ 25
		Ca	Ca	Ca
Flat		1.2	1.4	2.0
Round	C < 32 (Subcritical)	0.7	0.8	1.2
	32 ≤ C ≤ 64 (Transitional)	$3.76/(C^{0.485})$	$3.37/(C^{0.415})$	$38.4/(C^{1.0})$
	C > 64 (Supercritical)	0.5	0.6	0.6

Aspect Ratio is the overall length/width ratio in the plane normal to the wind direction.
 (Aspect ratio is independent of the spacing between support points of a linear appurtenance,
 Note: Linear interpolation may be used for aspect ratios other than those shown.

Ice Thickness = 0.75 in Angle = 0 (deg) Equivalent Angle = 180 (deg)

Appurtenances	Height	Width	Depth	Flat Area	Aspect Ratio	Ca	Force (lbs)	Force (lbs) w/ Ice
7770 Antenna	55.0	11.0	5.0	4.20	5.00	1.31	232	47
QS46512-2 Antenna	52.0	12.0	10.8	4.33	4.33	1.28	234	47
OPA-65R-BU4B Antenna	48.0	11.7	10.1	3.90	4.10	1.27	209	42
OPA-65R-BU8B Antenna	95.9	11.7	8.4	7.79	8.20	1.44	473	94
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	6.67	1.39	561	109
RRUS-11 RRH	19.7	17.0	7.2	2.33	1.16	1.20	118	24
RRUS-11 RRH (Shielded)	19.7	5.0	7.2	0.68	3.94	1.26	36	9
RRUS-11 RRH (Shielded)	19.7	2.6	7.2	0.36	7.58	1.42	21	6
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	2.25	1.20	116	24
RRUS-32 B2 RRH (Shielded)	27.2	0.1	7.0	0.02	272.00	10.23	8	3
DTMABP7819G12A TMA	10.6	11.0	3.8	0.81	0.96	1.20	41	9
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	1.29	1.20	17	4
Squid Surge Arrestor	24.0	9.7	9.7	1.62	2.47	0.70	48	10
2" Pipe	2.4	12.0		0.20	0.20	0.70	6	2
3-1/2" Pipe	4.0	12.0		0.33	0.33	0.70	10	3
4" Pipe	4.5	12.0		0.38	0.38	0.70	11	3
L 4x4x1/4 Angle	4.0	12.0		0.33	0.33	1.20	17	5
HSS 4x4	4.0	12.0		0.33	0.33	1.20	17	5
PL 6x1/2	6.0	12.0		0.50	0.50	1.20	25	6

Date: 3/19/2018
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WIND LOADS

Angle = 30 (deg)

Ice Thickness = 0.75 in.

Equivalent Angle = 210 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio	Aspect Ratio	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	232	123	205
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	234	214	229
OPA-65R-BU4B Antenna	48.0	11.7	10.1	3.90	3.37	4.10	4.75	1.27	1.30	209	185	203
OPA-65R-BU8B Antenna	95.9	11.7	8.4	7.79	5.59	8.20	11.42	1.44	1.55	473	365	446
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	561	372	514
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	118	50	101
RRUS-11 RRH (Shielded)	19.7	8.5	7.2	1.16	0.99	2.32	2.74	1.20	1.21	59	50	57
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	116	70	104
RRUS-32 B2 RRH (Shielded)	27.2	6.1	7.0	1.15	1.32	4.46	3.89	1.29	1.26	63	70	64
DTMABP7819G12A TMA	10.6	11.0	3.8	0.81	0.28	0.96	2.79	1.20	1.21	41	14	34
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	17	18	18
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	82	82	82

WIND LOADS WITH ICE:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	40	21	36
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	41	37	40
OPA-65R-BU4B Antenna	48.0	11.7	10.1	3.90	3.37	4.10	4.75	1.27	1.30	36	32	35
OPA-65R-BU8B Antenna	95.9	11.7	8.4	7.79	5.59	8.20	11.42	1.44	1.55	82	63	77
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	97	65	89
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	20	9	18
RRUS-11 RRH (Shielded)	19.7	8.5	7.2	1.16	0.99	2.32	2.74	1.20	1.21	10	9	10
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	20	12	18
RRUS-32 B2 RRH (Shielded)	27.2	6.1	7.0	1.15	1.32	4.46	3.89	1.29	1.26	11	12	11
DTMABP7819G12A TMA	10.6	11.0	3.8	0.81	0.28	0.96	2.79	1.20	1.21	7	2	6
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	3	3	3
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	14	14	14

Date: 3/19/2018
 Project Name: WATERFORD FARGO
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 Designed By: BD Checked By: MSC



WIND LOADS

Angle = 60 (deg)

Ice Thickness = 0.75 in.

Equivalent Angle = 240 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	232	123	151
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	234	214	219
OPA-65R-BU4B Antenna	48.0	11.7	10.1	3.90	3.37	4.10	4.75	1.27	1.30	209	185	191
OPA-65R-BU8B Antenna	95.9	11.7	8.4	7.79	5.59	8.20	11.42	1.44	1.55	473	365	392
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	561	372	419
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	118	50	67
RRUS-11 RRH (Shielded)	19.7	12.8	7.2	1.75	0.99	1.54	2.74	1.20	1.21	89	50	60
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	116	70	82
RRUS-32 B2 RRH (Shielded)	27.2	9.1	7.0	1.72	1.32	2.99	3.89	1.22	1.26	89	70	75
DTMABP7819G12A TMA	10.6	11.0	3.8	0.81	0.28	0.96	2.79	1.20	1.21	41	14	21
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	17	18	18
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	82	82	82

WIND LOADS WITH ICE:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	40	21	26
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	41	37	38
OPA-65R-BU4B Antenna	48.0	11.7	10.1	3.90	3.37	4.10	4.75	1.27	1.30	36	32	33
OPA-65R-BU8B Antenna	95.9	11.7	8.4	7.79	5.59	8.20	11.42	1.44	1.55	82	63	68
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	97	65	73
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	20	9	12
RRUS-11 RRH (Shielded)	19.7	12.8	7.2	1.75	0.99	1.54	2.74	1.20	1.21	15	9	10
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	20	12	14
RRUS-32 B2 RRH (Shielded)	27.2	9.1	7.0	1.72	1.32	2.99	3.89	1.22	1.26	15	12	13
DTMABP7819G12A TMA	10.6	11.0	3.8	0.81	0.28	0.96	2.79	1.20	1.21	7	2	4
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	3	3	3
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	14	14	14

Date: 3/19/2018
 Project Name: WATERFORD FARGO
 Project Number: CT2079
 Designed By: BD Checked By: MSC



WIND LOADS

Angle = 90 (deg) Ice Thickness = 0.75 in. Equivalent Angle = 270 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	232	123	123
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	234	214	214
OPA-65R-BU4B Antenna	48.0	11.7	10.1	3.90	3.37	4.10	4.75	1.27	1.30	209	185	185
OPA-65R-BU8B Antenna	95.9	11.7	8.4	7.79	5.59	8.20	11.42	1.44	1.55	473	365	365
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	561	372	372
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	118	50	50
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	116	70	70
DTMABP7819G12A TMA	10.6	11.0	3.8	0.81	0.28	0.96	2.79	1.20	1.21	41	14	14
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	17	18	18
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	82	82	82

WIND LOADS WITH ICE:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	40	21	21
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	41	37	37
OPA-65R-BU4B Antenna	48.0	11.7	10.1	3.90	3.37	4.10	4.75	1.27	1.30	36	32	32
OPA-65R-BU8B Antenna	95.9	11.7	8.4	7.79	5.59	8.20	11.42	1.44	1.55	82	63	63
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	97	65	65
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	20	9	9
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	20	12	12
DTMABP7819G12A TMA	10.6	11.0	3.8	0.81	0.28	0.96	2.79	1.20	1.21	7	2	2
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	3	3	3
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	14	14	14

Date: 3/19/2018
 Project Name: WATERFORD FARGO
 Project Number: CT2079
 Designed By: BD Checked By: MSC



WIND LOADS

Angle = 120 (deg) Ice Thickness = 0.75 in. Equivalent Angle = 300 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	232	123	151
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	234	214	219
OPA-65R-BU4B Antenna	48.0	11.7	10.1	3.90	3.37	4.10	4.75	1.27	1.30	209	185	191
OPA-65R-BU8B Antenna	95.9	11.7	8.4	7.79	5.59	8.20	11.42	1.44	1.55	473	365	392
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	561	372	419
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	118	50	67
RRUS-11 RRH (Shielded)	19.7	8.5	7.2	1.16	0.99	2.32	2.74	1.20	1.21	59	50	52
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	116	70	82
RRUS-32 B2 RRH (Shielded)	27.2	6.1	7.0	1.15	1.32	4.46	3.89	1.29	1.26	63	70	68
DTMABP7819G12A TMA	10.6	11.0	3.8	0.81	0.28	0.96	2.79	1.20	1.21	41	14	21
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	17	18	18
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	82	82	82

WIND LOADS WITH ICE:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	40	21	26
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	41	37	38
OPA-65R-BU4B Antenna	48.0	11.7	10.1	3.90	3.37	4.10	4.75	1.27	1.30	36	32	33
OPA-65R-BU8B Antenna	95.9	11.7	8.4	7.79	5.59	8.20	11.42	1.44	1.55	82	63	68
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	97	65	73
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	20	9	12
RRUS-11 RRH (Shielded)	19.7	8.5	7.2	1.16	0.99	2.32	2.74	1.20	1.21	10	9	9
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	20	12	14
RRUS-32 B2 RRH (Shielded)	27.2	6.1	7.0	1.15	1.32	4.46	3.89	1.29	1.26	11	12	12
DTMABP7819G12A TMA	10.6	11.0	3.8	0.81	0.28	0.96	2.79	1.20	1.21	7	2	4
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	3	3	3
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	14	14	14

Date: 3/19/2018
 Project Name: WATERFORD FARGO
 Project Number: CT2079
 Designed By: BD Checked By: MSC



WIND LOADS

Angle = 150 (deg) Ice Thickness = 0.75 in. Equivalent Angle = 330 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs) (normal)	Force (lbs) (side)	Force (lbs) (angle)
7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	232	123	205
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	234	214	229
OPA-65R-BU4B Antenna	48.0	11.7	10.1	3.90	3.37	4.10	4.75	1.27	1.30	209	185	203
OPA-65R-BU8B Antenna	95.9	11.7	8.4	7.79	5.59	8.20	11.42	1.44	1.55	473	365	446
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	561	372	514
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	118	50	101
RRUS-11 RRH (Shielded)	19.7	12.8	7.2	1.75	0.99	1.54	2.74	1.20	1.21	89	50	79
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	116	70	104
RRUS-32 B2 RRH (Shielded)	27.2	9.1	7.0	1.72	1.32	2.99	3.89	1.22	1.26	89	70	84
DTMABP7819G12A TMA	10.6	11.0	3.8	0.81	0.28	0.96	2.79	1.20	1.21	41	14	34
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	17	18	18
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	82	82	82

WIND LOADS WITH ICE:

7770 Antenna	55.0	11.0	5.0	4.20	1.91	5.00	11.00	1.31	1.53	40	21	36
QS46512-2 Antenna	52.0	12.0	10.8	4.33	3.90	4.33	4.81	1.28	1.30	41	37	40
OPA-65R-BU4B Antenna	48.0	11.7	10.1	3.90	3.37	4.10	4.75	1.27	1.30	36	32	35
OPA-65R-BU8B Antenna	95.9	11.7	8.4	7.79	5.59	8.20	11.42	1.44	1.55	82	63	77
TPA-65R-LCUUUU-H8 Antenna	96.0	14.4	8.6	9.60	5.73	6.67	11.16	1.39	1.54	97	65	89
RRUS-11 RRH	19.7	17.0	7.2	2.33	0.99	1.16	2.74	1.20	1.21	20	9	18
RRUS-11 RRH (Shielded)	19.7	12.8	7.2	1.75	0.99	1.54	2.74	1.20	1.21	15	9	14
RRUS-32 B2 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	20	12	18
RRUS-32 B2 RRH (Shielded)	27.2	9.1	7.0	1.72	1.32	2.99	3.89	1.22	1.26	15	12	15
DTMABP7819G12A TMA	10.6	11.0	3.8	0.81	0.28	0.96	2.79	1.20	1.21	7	2	6
DBC0061F151-2 Diplexer	8.0	6.2	6.5	0.34	0.36	1.29	1.23	1.20	1.20	3	3	3
Squid Surge Arrestor	24.0	9.7	9.7	1.62	1.62	2.47	2.47	1.20	1.20	14	14	14

Date: 3/19/2018
 Site Name: WATERFORD FARGO
 Site No.: CT2079
 Done by: BD Checked by: MSC



ICE WEIGHT CALCULATIONS

Thickness of ice: 0.75 in.
 Density of ice: 56 pcf

7770 Antenna

Weight of ice based on total radial SF area:
 Height (in): 55.0
 Width (in): 11.0
 Depth (in): 5.0
 Total weight of ice on object: 51 lbs
 Weight of object: 35 lbs

Combined weight of ice and object: 86 lbs

OPA-65R-BU4B Antenna

Weight of ice based on total radial SF area:
 Height (in): 48.0
 Width (in): 11.7
 Depth (in): 10.1
 Total weight of ice on object: 62 lbs
 Weight of object: 43 lbs

Combined weight of ice and object: 105 lbs

TPA-65R-LCUUUU-H8 Antenna

Weight of ice based on total radial SF area:
 Height (in): 96.0
 Width (in): 14.4
 Depth (in): 8.6
 Total weight of ice on object: 122 lbs
 Weight of object: 75 lbs

Combined weight of ice and object: 197 lbs

RRUS-32 B2 RRH

Weight of ice based on total radial SF area:
 Height (in): 27.2
 Width (in): 12.1
 Depth (in): 7.0
 Total weight of ice on object: 33 lbs
 Weight of object: 60 lbs

Combined weight of ice and object: 93 lbs

DBC0061F151-2 Diplexer

Weight of ice based on total radial SF area:
 Height (in): 8.0
 Width (in): 6.2
 Depth (in): 6.5
 Total weight of ice on object: 9 lbs
 Weight of object: 26 lbs

Combined weight of ice and object: 35 lbs

PL 6x1/2

Weight of ice based on total radial SF area:
 Height (in): 0.5
 Width (in): 6
 Per foot weight of ice on object: 5 plf

HSS 4x4

Weight of ice based on total radial SF area:
 Height (in): 4
 Width (in): 4
 Per foot weight of ice on object: 6 plf

4" pipe

Per foot weight of ice:
 diameter (in): 4.5
 Per foot weight of ice on object: 5 lbs/ft

QS46512-2 Antenna

Weight of ice based on total radial SF area:
 Height (in): 52.0
 Width (in): 12.0
 Depth (in): 10.8
 Total weight of ice on object: 69 lbs
 Weight of object: 75 lbs

Combined weight of ice and object: 144 lbs

OPA-65R-BU8B Antenna

Weight of ice based on total radial SF area:
 Height (in): 95.9
 Width (in): 11.7
 Depth (in): 8.4
 Total weight of ice on object: 107 lbs
 Weight of object: 69 lbs

Combined weight of ice and object: 176 lbs

RRUS-11 RRH

Weight of ice based on total radial SF area:
 Height (in): 19.7
 Width (in): 17.0
 Depth (in): 7.2
 Total weight of ice on object: 32 lbs
 Weight of object: 51 lbs

Combined weight of ice and object: 83 lbs

DTMABP7819VG12A TMA

Weight of ice based on total radial SF area:
 Height (in): 10.6
 Width (in): 11.0
 Depth (in): 3.8
 Total weight of ice on object: 12 lbs
 Weight of object: 20 lbs

Combined weight of ice and object: 32 lbs

Squid Surge Arrestor

Weight of ice based on total radial SF area:
 Height (in): 24.0
 Width (in): 9.7
 Depth (in): 9.7
 Total weight of ice on object: 30 lbs
 Weight of object: 33 lbs

Combined weight of ice and object: 63 lbs

L 4x4x1/4 Angles

Weight of ice based on total radial SF area:
 Thickness (in): 0.25
 Height (in): 4
 Width (in): 4
 Per foot weight of ice on object: 5 plf

2" pipe

Per foot weight of ice:
 diameter (in): 2.38
 Per foot weight of ice on object: 3 lbs/ft

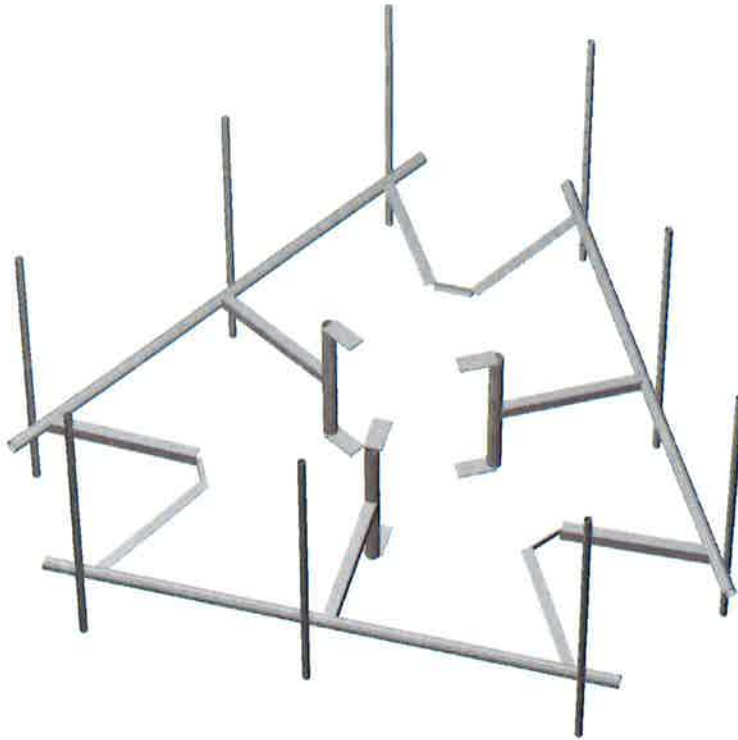
3-1/2" pipe

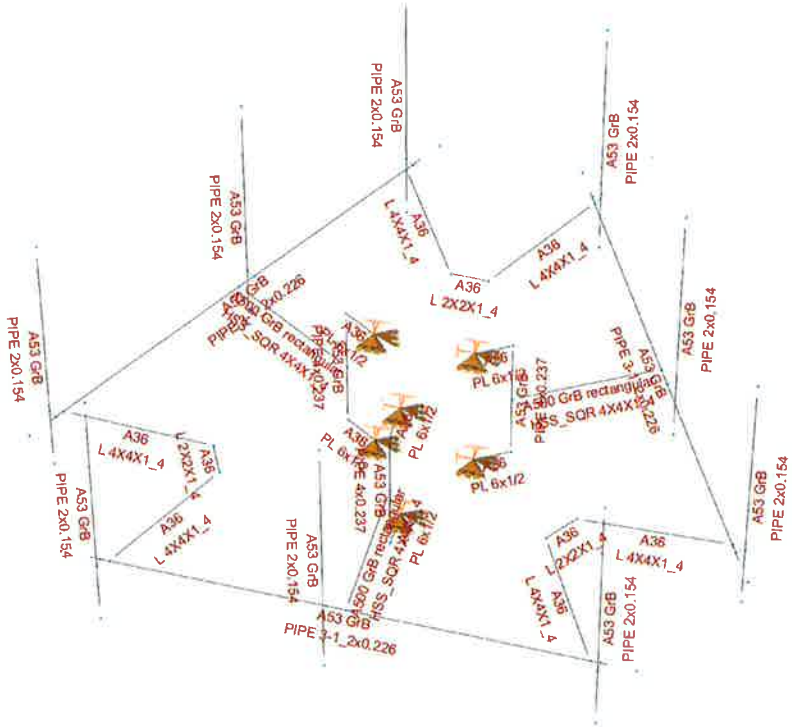
Per foot weight of ice:
 diameter (in): 4
 Per foot weight of ice on object: 4 lbs/ft

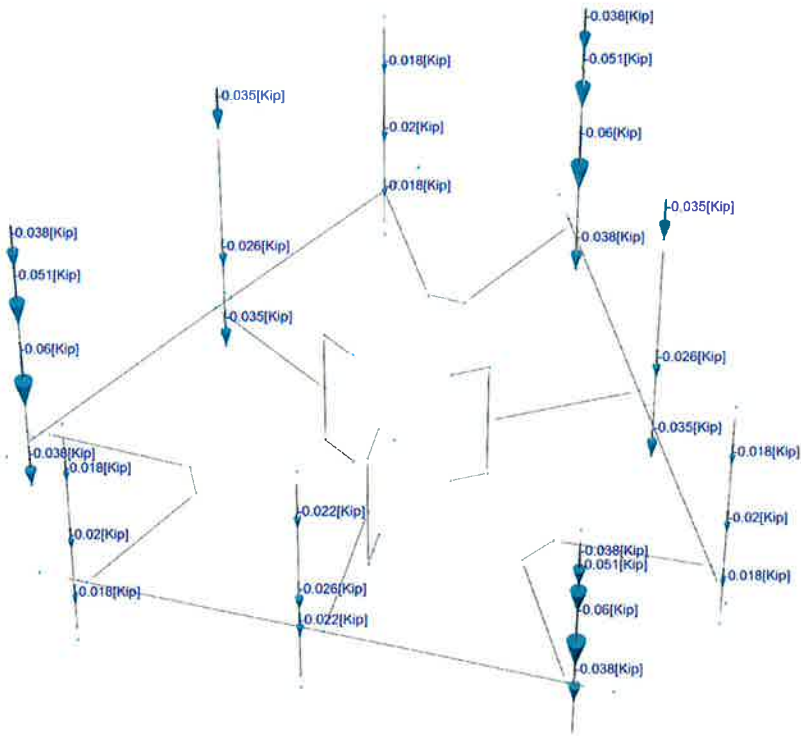


HUDSON
Design Group LLC

**Mount Calculations
(Existing Conditions)**

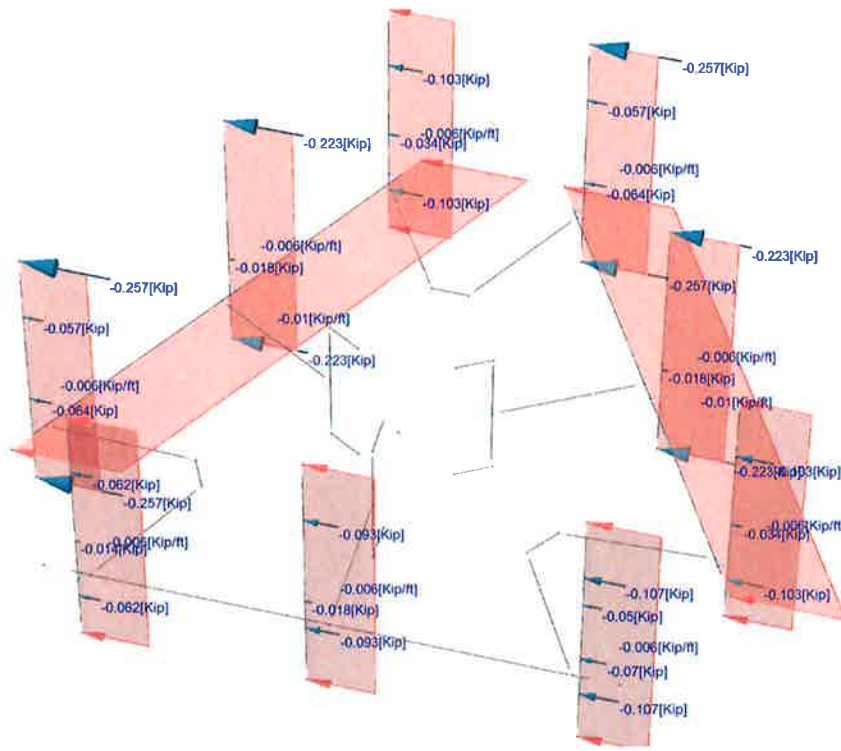








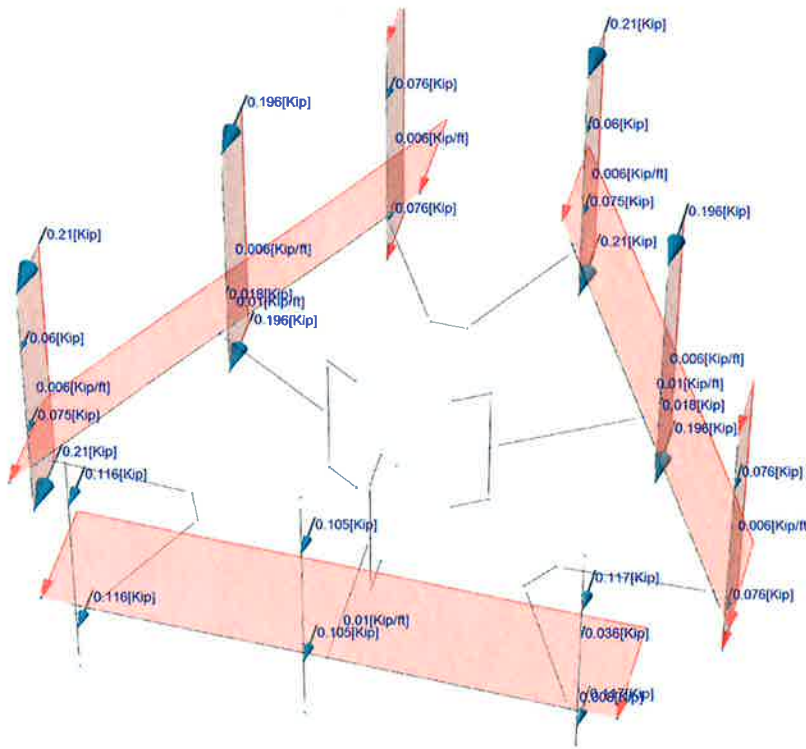
Loads

- Distributed user loads - Members
- Concentrated user loads - Members



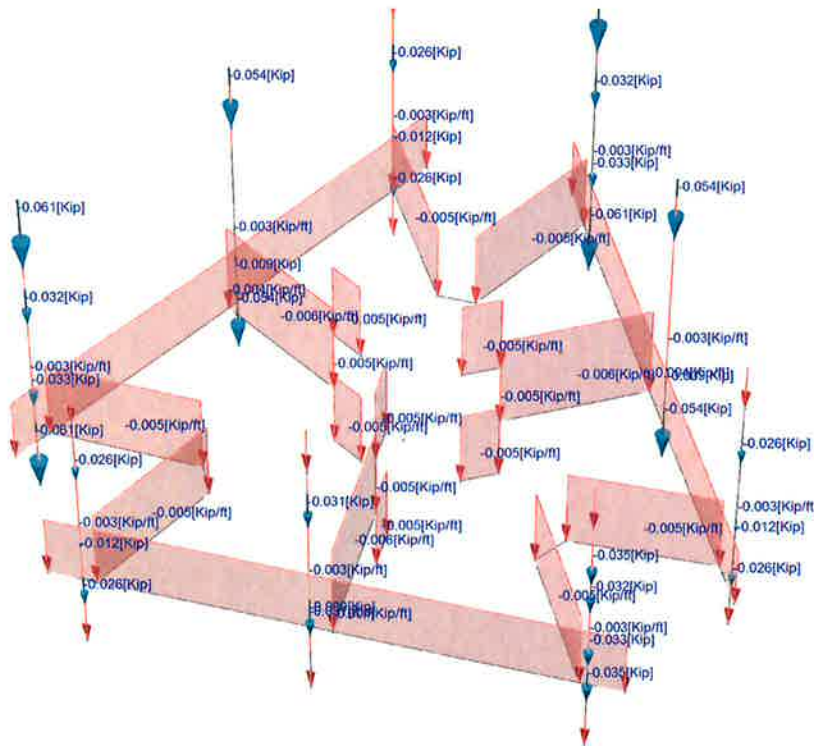
Loads

-  Distributed user loads - Members
-  Concentrated user loads - Members



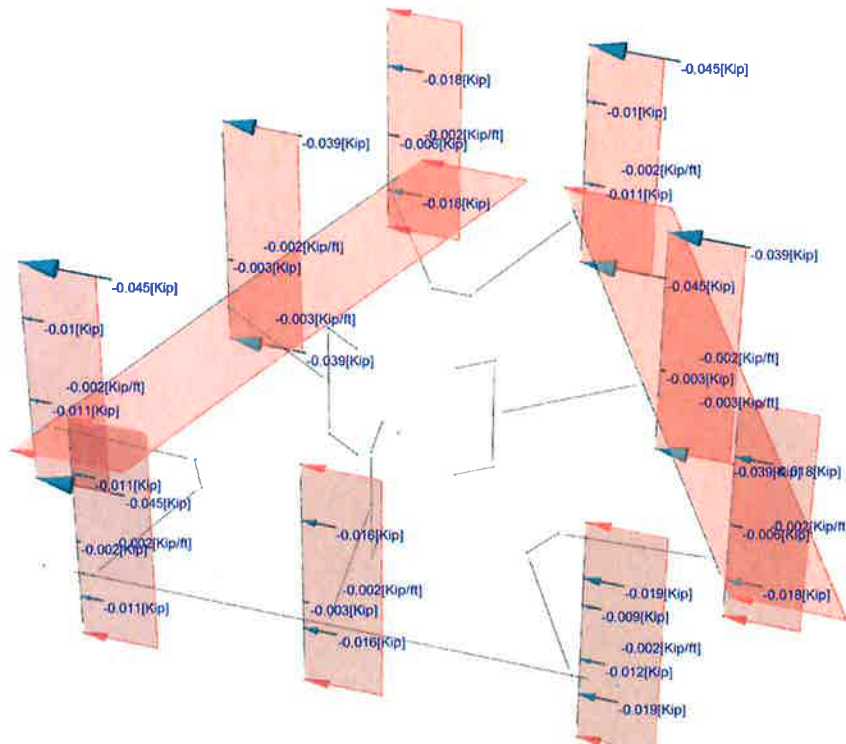
Loads

- Distributed user loads - Members
- Concentrated user loads - Members



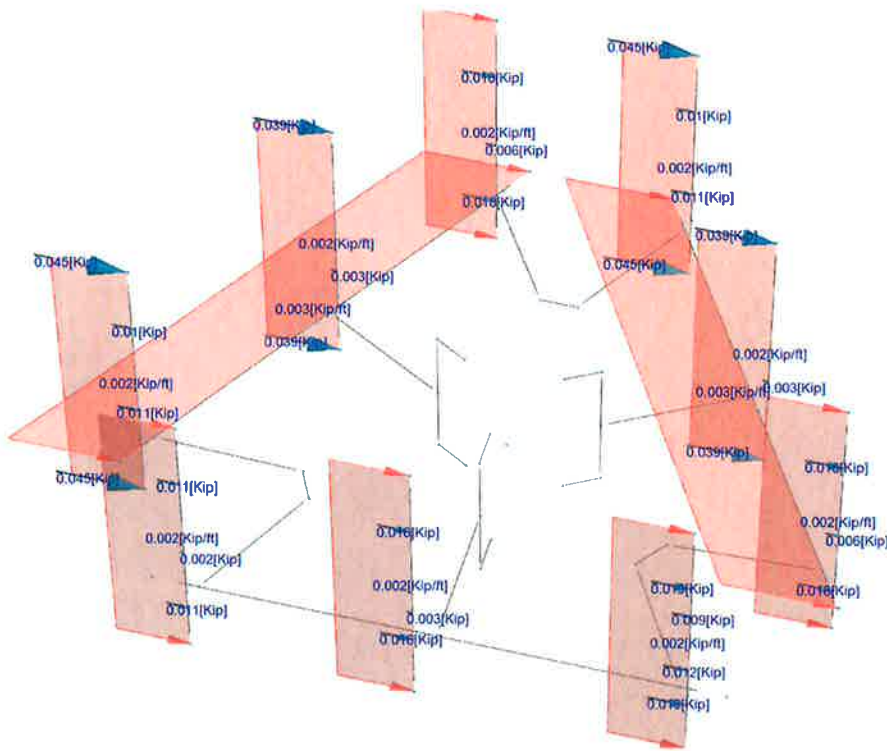
Loads

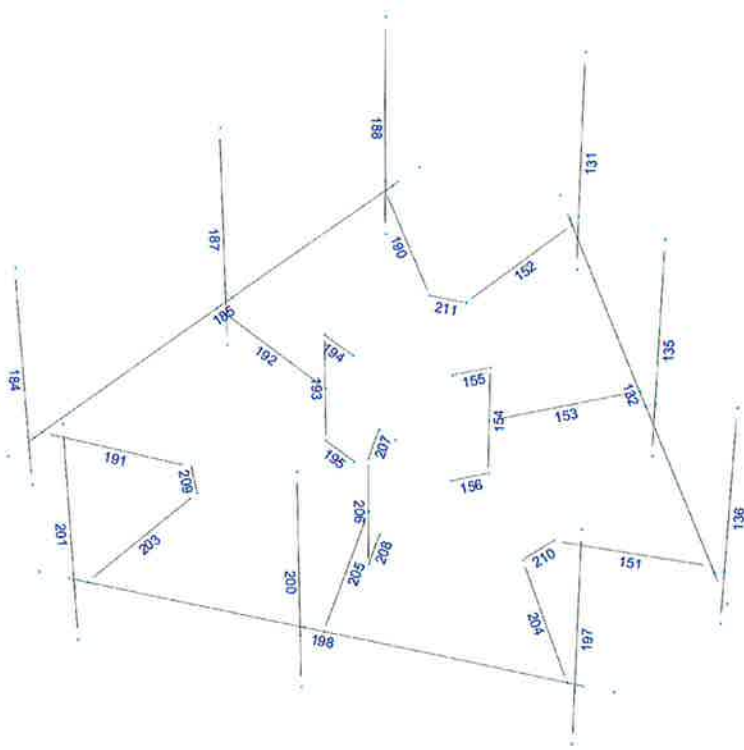
- Distributed user loads - Members
- Concentrated user loads - Members



Loads

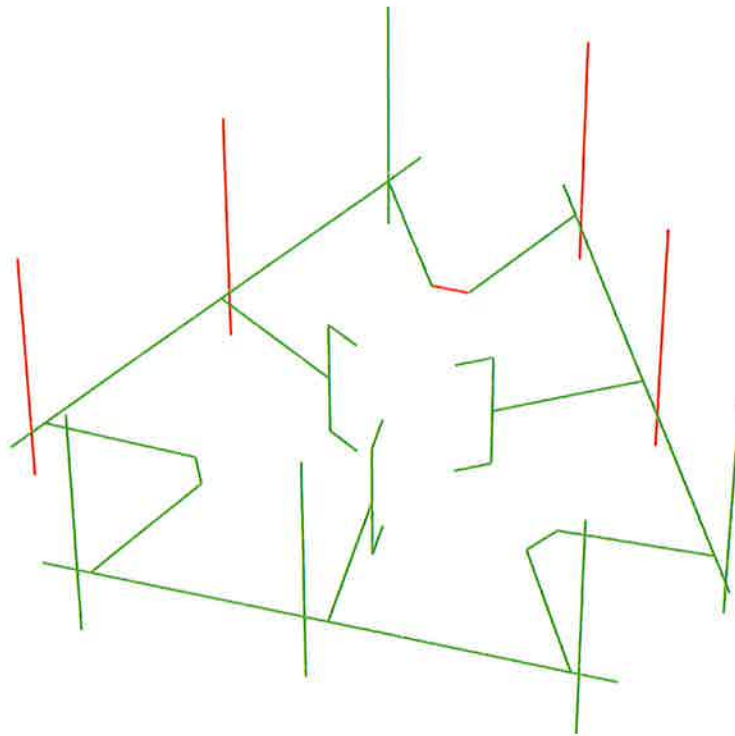
- Distributed user loads - Members
- Concentrated user loads - Members





Design status

-  Not designed
-  Error on design
-  Design O.K.
-  With warnings



Current Date: 3/19/2018 12:36 PM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT2079\CT2079.etz

Steel Code Check

Report: Summary - For all selected load conditions

Load conditions to be included in design :

- W180=-W0
- W210=-W30
- Wi180=-Wi0
- Wi210=-Wi30
- LC1=1.2DL+1.6W0
- LC2=1.2DL+1.6W30
- LC3=1.2DL-1.6W0
- LC4=1.2DL-1.6W30
- LC5=0.9DL+1.6W0
- LC6=0.9DL+1.6W30
- LC7=0.9DL-1.6W0
- LC8=0.9DL-1.6W30
- LC9=1.2DL+Di+Wi0
- LC10=1.2DL+Di+Wi30
- LC11=1.2DL+Di-Wi0
- LC12=1.2DL+Di-Wi30
- LC13=1.2DL
- LC14=0.9DL

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X1_4	153	LC1 at 0.00%	0.60	OK	Eq. H3-6
			LC10 at 0.00%	0.33	OK	
			LC11 at 0.00%	0.33	OK	
			LC12 at 0.00%	0.38	OK	
			LC13 at 0.00%	0.19	OK	
			LC14 at 0.00%	0.14	OK	
			LC2 at 0.00%	0.31	OK	
			LC3 at 100.00%	0.32	OK	Eq. H1-1b
			LC4 at 0.00%	0.68	OK	Eq. H1-1b
			LC5 at 0.00%	0.55	OK	
			LC6 at 0.00%	0.35	OK	
			LC7 at 100.00%	0.32	OK	
			LC8 at 0.00%	0.63	OK	
			LC9 at 0.00%	0.37	OK	
			W180 at 100.00%	0.20	OK	
			W210 at 0.00%	0.31	OK	
			Wi180 at 0.00%	0.04	OK	
			Wi210 at 0.00%	0.06	OK	
		192	LC1 at 0.00%	0.59	OK	
			LC10 at 0.00%	0.38	OK	
			LC11 at 0.00%	0.35	OK	
			LC12 at 0.00%	0.32	OK	
			LC13 at 0.00%	0.19	OK	
			LC14 at 0.00%	0.14	OK	
			LC2 at 0.00%	0.63	OK	Eq. H1-1b
			LC3 at 0.00%	0.45	OK	Eq. H3-6
			LC4 at 100.00%	0.37	OK	Eq. H1-1b
			LC5 at 0.00%	0.54	OK	
			LC6 at 0.00%	0.59	OK	
			LC7 at 0.00%	0.39	OK	

	LC8 at 100.00%	0.37	OK		
	LC9 at 0.00%	0.37	OK		
	W180 at 0.00%	0.25	OK		
	W210 at 0.00%	0.28	OK		
	Wi180 at 0.00%	0.05	OK		
	Wi210 at 0.00%	0.05	OK		
<hr/>					
205	LC1 at 100.00%	0.08	OK		
	LC10 at 0.00%	0.31	OK		
	LC11 at 0.00%	0.31	OK		
	LC12 at 0.00%	0.31	OK		
	LC13 at 0.00%	0.18	OK		
	LC14 at 0.00%	0.13	OK		
	LC2 at 0.00%	0.31	OK		
	LC3 at 0.00%	0.36	OK	Eq. H1-1b	
	LC4 at 0.00%	0.31	OK		
	LC5 at 100.00%	0.08	OK		
	LC6 at 0.00%	0.27	OK		
	LC7 at 0.00%	0.31	OK		
	LC8 at 0.00%	0.27	OK		
	LC9 at 0.00%	0.27	OK		
	W180 at 0.00%	0.11	OK		
	W210 at 100.00%	0.13	OK		
	Wi180 at 0.00%	0.02	OK		
	Wi210 at 100.00%	0.03	OK		
<hr/>					
L 2X2X1_4	209	LC1 at 0.00%	0.97	OK	Eq. H2-1
		LC10 at 100.00%	0.08	OK	
		LC11 at 100.00%	0.18	OK	
		LC12 at 100.00%	0.17	OK	
		LC13 at 100.00%	0.08	OK	
		LC14 at 100.00%	0.06	OK	
		LC2 at 0.00%	0.40	OK	
		LC3 at 0.00%	0.95	OK	
		LC4 at 100.00%	0.47	OK	
		LC5 at 0.00%	0.97	OK	
		LC6 at 0.00%	0.40	OK	
		LC7 at 0.00%	0.96	OK	
		LC8 at 100.00%	0.45	OK	
		LC9 at 0.00%	0.13	OK	
		W180 at 0.00%	0.60	OK	
		W210 at 0.00%	0.25	OK	
		Wi180 at 0.00%	0.11	OK	
		Wi210 at 0.00%	0.05	OK	
<hr/>					
	210	LC1 at 0.00%	0.49	OK	Eq. H3-8
		LC10 at 100.00%	0.09	OK	
		LC11 at 0.00%	0.06	OK	
		LC12 at 0.00%	0.13	OK	
		LC13 at 0.00%	0.06	OK	
		LC14 at 0.00%	0.05	OK	
		LC2 at 100.00%	0.64	OK	Eq. H2-1
		LC3 at 100.00%	0.38	OK	
		LC4 at 100.00%	0.62	OK	
		LC5 at 0.00%	0.48	OK	
		LC6 at 100.00%	0.64	OK	
		LC7 at 100.00%	0.40	OK	
		LC8 at 100.00%	0.62	OK	Eq. H2-1
		LC9 at 0.00%	0.16	OK	
		W180 at 0.00%	0.27	OK	
		W210 at 100.00%	0.40	OK	
		Wi180 at 0.00%	0.06	OK	
		Wi210 at 100.00%	0.07	OK	
<hr/>					

211	LC1 at 100.00%	0.62	OK	Eq. H2-1	
	LC10 at 100.00%	0.22	OK		
	LC11 at 100.00%	0.14	OK		
	LC12 at 0.00%	0.14	OK		
	LC13 at 100.00%	0.08	OK		
	LC14 at 100.00%	0.06	OK		
	LC2 at 0.00%	1.08	N.G.		
	LC3 at 100.00%	0.59	OK		
	LC4 at 0.00%	1.10	N.G.		Eq. H2-1
	LC5 at 100.00%	0.61	OK		
	LC6 at 0.00%	1.08	N.G.		
	LC7 at 100.00%	0.59	OK		
	LC8 at 0.00%	1.10	N.G.		
	LC9 at 100.00%	0.13	OK		
	W180 at 100.00%	0.37	OK		
	W210 at 0.00%	0.68	OK		
	Wi180 at 100.00%	0.07	OK		
	Wi210 at 0.00%	0.12	OK		
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151	LC1 at 100.00%	0.29	OK	Sec. F1	
	LC10 at 100.00%	0.11	OK		
	LC11 at 100.00%	0.10	OK		
	LC12 at 100.00%	0.15	OK		
	LC13 at 100.00%	0.08	OK		
	LC14 at 100.00%	0.06	OK		
	LC2 at 100.00%	0.45	OK		
	LC3 at 100.00%	0.14	OK		
	LC4 at 100.00%	0.49	OK		Eq. H2-1
	LC5 at 100.00%	0.28	OK		
	LC6 at 100.00%	0.45	OK		
	LC7 at 100.00%	0.16	OK		
	LC8 at 100.00%	0.49	OK		
	LC9 at 100.00%	0.15	OK		
	W180 at 100.00%	0.13	OK		
	W210 at 100.00%	0.30	OK		
	Wi180 at 100.00%	0.03	OK		
	Wi210 at 100.00%	0.06	OK		
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152	LC1 at 0.00%	0.54	OK	Eq. H2-1	
	LC10 at 0.00%	0.11	OK		
	LC11 at 0.00%	0.10	OK		
	LC12 at 100.00%	0.04	OK		
	LC13 at 100.00%	0.04	OK		
	LC14 at 100.00%	0.03	OK		
	LC2 at 0.00%	0.48	OK		
	LC3 at 0.00%	0.56	OK		
	LC4 at 0.00%	0.42	OK		
	LC5 at 0.00%	0.55	OK		
	LC6 at 0.00%	0.47	OK		
	LC7 at 0.00%	0.56	OK		
	LC8 at 0.00%	0.43	OK		
	LC9 at 0.00%	0.06	OK		
	W180 at 0.00%	0.34	OK		
	W210 at 0.00%	0.28	OK		
	Wi180 at 0.00%	0.07	OK		
	Wi210 at 0.00%	0.05	OK		
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190	LC1 at 100.00%	0.32	OK	Eq. H2-1	
	LC10 at 100.00%	0.19	OK		
	LC11 at 100.00%	0.13	OK		
	LC12 at 100.00%	0.09	OK		
	LC13 at 100.00%	0.08	OK		
	LC14 at 100.00%	0.06	OK		
	LC2 at 100.00%	0.74	OK		

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	LC3 at 100.00%	0.29	OK	
	LC4 at 100.00%	0.69	OK	
	LC5 at 100.00%	0.32	OK	
	LC6 at 100.00%	0.73	OK	
	LC7 at 100.00%	0.29	OK	
	LC8 at 100.00%	0.70	OK	
	LC9 at 100.00%	0.14	OK	
	W180 at 100.00%	0.19	OK	
	W210 at 100.00%	0.44	OK	
	Wi180 at 100.00%	0.04	OK	
	Wi210 at 100.00%	0.08	OK	
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191	LC1 at 100.00%	0.24	OK	
	LC10 at 0.00%	0.05	OK	
	LC11 at 0.00%	0.09	OK	
	LC12 at 0.00%	0.10	OK	
	LC13 at 100.00%	0.04	OK	
	LC14 at 100.00%	0.03	OK	
	LC2 at 0.00%	0.50	OK	
	LC3 at 0.00%	0.29	OK	
	LC4 at 0.00%	0.52	OK	Eq. H2-1
	LC5 at 100.00%	0.24	OK	Eq. H2-1
	LC6 at 0.00%	0.50	OK	
	LC7 at 0.00%	0.28	OK	
	LC8 at 0.00%	0.51	OK	
	LC9 at 100.00%	0.05	OK	
	W180 at 0.00%	0.16	OK	
	W210 at 0.00%	0.31	OK	
	Wi180 at 0.00%	0.03	OK	
	Wi210 at 0.00%	0.06	OK	
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203	LC1 at 100.00%	0.64	OK	
	LC10 at 100.00%	0.11	OK	
	LC11 at 100.00%	0.18	OK	
	LC12 at 100.00%	0.15	OK	
	LC13 at 100.00%	0.08	OK	
	LC14 at 100.00%	0.06	OK	
	LC2 at 100.00%	0.09	OK	
	LC3 at 100.00%	0.69	OK	Eq. H2-1
	LC4 at 100.00%	0.24	OK	
	LC5 at 100.00%	0.65	OK	
	LC6 at 100.00%	0.11	OK	
	LC7 at 100.00%	0.69	OK	
	LC8 at 100.00%	0.22	OK	
	LC9 at 100.00%	0.10	OK	
	W180 at 100.00%	0.42	OK	
	W210 at 100.00%	0.10	OK	
	Wi180 at 100.00%	0.08	OK	
	Wi210 at 100.00%	0.02	OK	
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204	LC1 at 0.00%	0.44	OK	Eq. H2-1
	LC10 at 100.00%	0.07	OK	
	LC11 at 0.00%	0.04	OK	
	LC12 at 0.00%	0.06	OK	
	LC13 at 100.00%	0.04	OK	
	LC14 at 100.00%	0.03	OK	
	LC2 at 0.00%	0.30	OK	
	LC3 at 0.00%	0.42	OK	
	LC4 at 0.00%	0.31	OK	
	LC5 at 0.00%	0.44	OK	
	LC6 at 0.00%	0.30	OK	
	LC7 at 0.00%	0.43	OK	
	LC8 at 0.00%	0.31	OK	
	LC9 at 100.00%	0.09	OK	

PIPE 2x0.154

	W180 at 0.00%	0.27	OK	
	W210 at 0.00%	0.20	OK	
	Wi180 at 0.00%	0.06	OK	
	Wi210 at 0.00%	0.04	OK	
131	LC1 at 71.88%	1.86	N.G.	
	LC10 at 71.88%	0.26	OK	
	LC11 at 71.88%	0.23	OK	
	LC12 at 71.88%	0.26	OK	
	LC13 at 71.88%	0.01	OK	
	LC14 at 71.88%	0.01	OK	
	LC2 at 71.88%	2.15	N.G.	Eq. H1-1b
	LC3 at 71.88%	1.86	N.G.	
	LC4 at 71.88%	2.15	N.G.	
	LC5 at 71.88%	1.86	N.G.	
	LC6 at 71.88%	2.15	N.G.	
	LC7 at 71.88%	1.86	N.G.	
	LC8 at 71.88%	2.15	N.G.	
	LC9 at 71.88%	0.23	OK	
	W180 at 71.88%	1.16	N.G.	
	W210 at 71.88%	1.34	N.G.	
	Wi180 at 71.88%	0.21	OK	
	Wi210 at 71.88%	0.25	OK	
135	LC1 at 71.88%	1.45	N.G.	
	LC10 at 71.88%	0.20	OK	
	LC11 at 71.88%	0.17	OK	
	LC12 at 71.88%	0.20	OK	
	LC13 at 71.88%	0.01	OK	
	LC14 at 71.88%	0.00	OK	
	LC2 at 71.88%	1.63	N.G.	Eq. H1-1b
	LC3 at 71.88%	1.45	N.G.	
	LC4 at 71.88%	1.63	N.G.	
	LC5 at 71.88%	1.45	N.G.	
	LC6 at 71.88%	1.63	N.G.	
	LC7 at 71.88%	1.45	N.G.	
	LC8 at 71.88%	1.63	N.G.	
	LC9 at 71.88%	0.17	OK	
	W180 at 71.88%	0.90	OK	
	W210 at 71.88%	1.02	N.G.	
	Wi180 at 71.88%	0.17	OK	
	Wi210 at 71.88%	0.19	OK	
136	LC1 at 71.88%	0.45	OK	
	LC10 at 71.88%	0.08	OK	
	LC11 at 71.88%	0.06	OK	
	LC12 at 71.88%	0.08	OK	
	LC13 at 71.88%	0.00	OK	
	LC14 at 71.88%	0.00	OK	
	LC2 at 71.88%	0.62	OK	Eq. H1-1b
	LC3 at 71.88%	0.45	OK	
	LC4 at 71.88%	0.62	OK	
	LC5 at 71.88%	0.45	OK	
	LC6 at 71.88%	0.62	OK	
	LC7 at 71.88%	0.45	OK	
	LC8 at 71.88%	0.62	OK	
	LC9 at 71.88%	0.06	OK	
	W180 at 71.88%	0.28	OK	
	W210 at 71.88%	0.39	OK	
	Wi180 at 71.88%	0.06	OK	
	Wi210 at 71.88%	0.08	OK	
184	LC1 at 71.88%	1.86	N.G.	
	LC10 at 71.88%	0.26	OK	

	LC11 at 71.88%	0.23	OK	
	LC12 at 71.88%	0.26	OK	
	LC13 at 71.88%	0.01	OK	
	LC14 at 71.88%	0.01	OK	
	LC2 at 71.88%	2.15	N.G.	
	LC3 at 71.88%	1.86	N.G.	
	LC4 at 71.88%	2.15	N.G.	Eq. H1-1b
	LC5 at 71.88%	1.86	N.G.	
	LC6 at 71.88%	2.15	N.G.	
	LC7 at 71.88%	1.86	N.G.	
	LC8 at 71.88%	2.15	N.G.	
	LC9 at 71.88%	0.23	OK	
	W180 at 71.88%	1.16	N.G.	
	W210 at 71.88%	1.34	N.G.	
	Wi180 at 71.88%	0.21	OK	
	Wi210 at 71.88%	0.25	OK	
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187	LC1 at 71.88%	1.45	N.G.	
	LC10 at 71.88%	0.20	OK	
	LC11 at 71.88%	0.17	OK	
	LC12 at 71.88%	0.20	OK	
	LC13 at 71.88%	0.01	OK	
	LC14 at 71.88%	0.00	OK	
	LC2 at 71.88%	1.63	N.G.	Eq. H1-1b
	LC3 at 71.88%	1.45	N.G.	
	LC4 at 71.88%	1.63	N.G.	
	LC5 at 71.88%	1.45	N.G.	
	LC6 at 71.88%	1.63	N.G.	
	LC7 at 71.88%	1.45	N.G.	
	LC8 at 71.88%	1.63	N.G.	
	LC9 at 71.88%	0.17	OK	
	W180 at 71.88%	0.90	OK	
	W210 at 71.88%	1.02	N.G.	
	Wi180 at 71.88%	0.17	OK	
	Wi210 at 71.88%	0.19	OK	
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188	LC1 at 71.88%	0.45	OK	
	LC10 at 71.88%	0.08	OK	
	LC11 at 71.88%	0.06	OK	
	LC12 at 71.88%	0.08	OK	
	LC13 at 71.88%	0.00	OK	
	LC14 at 71.88%	0.00	OK	
	LC2 at 71.88%	0.62	OK	Eq. H1-1b
	LC3 at 71.88%	0.45	OK	
	LC4 at 71.88%	0.62	OK	
	LC5 at 71.88%	0.45	OK	
	LC6 at 71.88%	0.62	OK	
	LC7 at 71.88%	0.45	OK	
	LC8 at 71.88%	0.62	OK	
	LC9 at 71.88%	0.06	OK	
	W180 at 71.88%	0.28	OK	
	W210 at 71.88%	0.39	OK	
	Wi180 at 71.88%	0.06	OK	
	Wi210 at 71.88%	0.08	OK	
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197	LC1 at 71.88%	0.47	OK	
	LC10 at 71.88%	0.08	OK	
	LC11 at 71.88%	0.07	OK	
	LC12 at 71.88%	0.08	OK	
	LC13 at 71.88%	0.01	OK	
	LC14 at 71.88%	0.01	OK	
	LC2 at 71.88%	0.60	OK	
	LC3 at 71.88%	0.47	OK	
	LC4 at 71.88%	0.60	OK	Eq. H1-1b

		LC5 at 71.88%	0.47	OK	
		LC6 at 71.88%	0.60	OK	
		LC7 at 71.88%	0.47	OK	
		LC8 at 71.88%	0.60	OK	
		LC9 at 71.88%	0.07	OK	
		W180 at 71.88%	0.29	OK	
		W210 at 71.88%	0.37	OK	
		Wi180 at 71.88%	0.06	OK	
		Wi210 at 71.88%	0.07	OK	
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	200	LC1 at 71.88%	0.34	OK	
		LC10 at 71.88%	0.06	OK	
		LC11 at 71.88%	0.05	OK	
		LC12 at 71.88%	0.06	OK	
		LC13 at 71.88%	0.01	OK	
		LC14 at 71.88%	0.00	OK	
		LC2 at 71.88%	0.40	OK	Eq. H1-1b
		LC3 at 71.88%	0.34	OK	
		LC4 at 71.88%	0.40	OK	
		LC5 at 71.88%	0.34	OK	
		LC6 at 71.88%	0.40	OK	
		LC7 at 71.88%	0.34	OK	
		LC8 at 71.88%	0.40	OK	
		LC9 at 71.88%	0.05	OK	
		W180 at 71.88%	0.21	OK	
		W210 at 71.88%	0.25	OK	
		Wi180 at 71.88%	0.04	OK	
		Wi210 at 71.88%	0.05	OK	
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	201	LC1 at 71.88%	0.37	OK	Eq. H1-1b
		LC10 at 71.88%	0.05	OK	
		LC11 at 71.88%	0.05	OK	
		LC12 at 71.88%	0.05	OK	
		LC13 at 71.88%	0.00	OK	
		LC14 at 71.88%	0.00	OK	
		LC2 at 71.88%	0.30	OK	
		LC3 at 71.88%	0.37	OK	
		LC4 at 71.88%	0.30	OK	
		LC5 at 71.88%	0.37	OK	
		LC6 at 71.88%	0.30	OK	
		LC7 at 71.88%	0.37	OK	
		LC8 at 71.88%	0.30	OK	
		LC9 at 71.88%	0.05	OK	
		W180 at 71.88%	0.23	OK	
		W210 at 71.88%	0.19	OK	
		Wi180 at 71.88%	0.05	OK	
		Wi210 at 71.88%	0.04	OK	
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PIPE 3-1_2x0.226	132	LC1 at 49.11%	0.89	OK	Eq. H1-1b
		LC10 at 49.11%	0.46	OK	
		LC11 at 49.11%	0.45	OK	
		LC12 at 49.11%	0.44	OK	
		LC13 at 49.11%	0.24	OK	
		LC14 at 49.11%	0.18	OK	
		LC2 at 50.00%	0.61	OK	
		LC3 at 49.11%	0.46	OK	
		LC4 at 50.00%	0.85	OK	Eq. H1-1b
		LC5 at 49.11%	0.83	OK	
		LC6 at 50.00%	0.61	OK	
		LC7 at 49.11%	0.49	OK	
		LC8 at 50.00%	0.81	OK	
		LC9 at 49.11%	0.49	OK	
		W180 at 49.11%	0.41	OK	
		W210 at 50.00%	0.42	OK	

	Wi180 at 49.11%	0.08	OK	
	Wi210 at 50.00%	0.09	OK	
185	LC1 at 50.00%	0.80	OK	Eq. H1-1b
	LC10 at 49.11%	0.50	OK	
	LC11 at 49.11%	0.44	OK	
	LC12 at 49.11%	0.47	OK	
	LC13 at 49.11%	0.24	OK	
	LC14 at 49.11%	0.18	OK	
	LC2 at 49.11%	1.00	OK	Eq. H1-1b
	LC3 at 50.00%	0.47	OK	
	LC4 at 49.11%	0.63	OK	
	LC5 at 50.00%	0.75	OK	
	LC6 at 49.11%	0.94	OK	
	LC7 at 50.00%	0.51	OK	
	LC8 at 49.11%	0.59	OK	
	LC9 at 49.11%	0.41	OK	
	W180 at 50.00%	0.40	OK	
	W210 at 49.11%	0.48	OK	
	Wi180 at 50.00%	0.08	OK	
	Wi210 at 49.11%	0.09	OK	
198	LC1 at 49.11%	0.49	OK	
	LC10 at 49.11%	0.39	OK	
	LC11 at 49.11%	0.42	OK	
	LC12 at 49.11%	0.41	OK	
	LC13 at 49.11%	0.24	OK	
	LC14 at 49.11%	0.18	OK	
	LC2 at 50.00%	0.50	OK	
	LC3 at 49.11%	0.64	OK	Eq. H1-1b
	LC4 at 49.11%	0.53	OK	
	LC5 at 49.11%	0.43	OK	
	LC6 at 50.00%	0.45	OK	
	LC7 at 49.11%	0.58	OK	
	LC8 at 49.11%	0.48	OK	
	LC9 at 49.11%	0.42	OK	
	W180 at 49.11%	0.25	OK	
	W210 at 50.00%	0.21	OK	
	Wi180 at 49.11%	0.05	OK	
	Wi210 at 50.00%	0.04	OK	
PIPE 4x0.237				
154	LC1 at 46.88%	0.62	OK	
	LC10 at 50.00%	0.30	OK	
	LC11 at 50.00%	0.31	OK	Eq. H1-1b
	LC12 at 50.00%	0.31	OK	
	LC13 at 50.00%	0.17	OK	
	LC14 at 50.00%	0.13	OK	
	LC2 at 46.88%	0.44	OK	
	LC3 at 46.88%	0.30	OK	
	LC4 at 46.88%	0.65	OK	Eq. H1-1b
	LC5 at 46.88%	0.58	OK	
	LC6 at 46.88%	0.46	OK	
	LC7 at 46.88%	0.34	OK	
	LC8 at 46.88%	0.62	OK	
	LC9 at 46.88%	0.34	OK	
	W180 at 46.88%	0.29	OK	
	W210 at 46.88%	0.34	OK	
	Wi180 at 46.88%	0.06	OK	
	Wi210 at 46.88%	0.07	OK	
193	LC1 at 46.88%	0.57	OK	
	LC10 at 46.88%	0.35	OK	
	LC11 at 50.00%	0.30	OK	
	LC12 at 50.00%	0.32	OK	Eq. H1-1b

		LC13 at 50.00%	0.17	OK	
		LC14 at 50.00%	0.13	OK	
		LC2 at 46.88%	0.74	OK	Eq. H1-1b
		LC3 at 46.88%	0.40	OK	
		LC4 at 46.88%	0.42	OK	
		LC5 at 46.88%	0.55	OK	
		LC6 at 46.88%	0.70	OK	
		LC7 at 46.88%	0.40	OK	
		LC8 at 46.88%	0.46	OK	
		LC9 at 50.00%	0.31	OK	
		W180 at 46.88%	0.29	OK	
		W210 at 46.88%	0.36	OK	
		Wi180 at 46.88%	0.06	OK	
		Wi210 at 46.88%	0.07	OK	
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	206	LC1 at 50.00%	0.24	OK	
		LC10 at 50.00%	0.27	OK	
		LC11 at 46.88%	0.28	OK	
		LC12 at 46.88%	0.27	OK	
		LC13 at 50.00%	0.17	OK	
		LC14 at 50.00%	0.13	OK	
		LC2 at 46.88%	0.28	OK	
		LC3 at 46.88%	0.41	OK	Eq. H1-1b
		LC4 at 46.88%	0.36	OK	
		LC5 at 50.00%	0.20	OK	
		LC6 at 46.88%	0.26	OK	
		LC7 at 46.88%	0.37	OK	
		LC8 at 46.88%	0.32	OK	
		LC9 at 50.00%	0.28	OK	Eq. H1-1b
		W180 at 46.88%	0.16	OK	
		W210 at 46.88%	0.13	OK	
		Wi180 at 46.88%	0.03	OK	
		Wi210 at 46.88%	0.03	OK	
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PL 6x1/2	155	LC1 at 100.00%	0.53	OK	
		LC10 at 100.00%	0.39	OK	
		LC11 at 0.00%	0.37	OK	
		LC12 at 0.00%	0.40	OK	
		LC13 at 100.00%	0.22	OK	
		LC14 at 100.00%	0.17	OK	
		LC2 at 100.00%	0.36	OK	
		LC3 at 100.00%	0.38	OK	
		LC4 at 100.00%	0.56	OK	Eq. H1-1b
		LC5 at 100.00%	0.47	OK	
		LC6 at 100.00%	0.31	OK	
		LC7 at 100.00%	0.34	OK	
		LC8 at 100.00%	0.51	OK	
		LC9 at 100.00%	0.42	OK	
		W180 at 100.00%	0.19	OK	
		W210 at 100.00%	0.22	OK	
		Wi180 at 100.00%	0.04	OK	
		Wi210 at 100.00%	0.04	OK	
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	156	LC1 at 100.00%	0.36	OK	
		LC10 at 0.00%	0.39	OK	Eq. H1-1b
		LC11 at 100.00%	0.40	OK	
		LC12 at 100.00%	0.41	OK	
		LC13 at 100.00%	0.22	OK	
		LC14 at 100.00%	0.17	OK	
		LC2 at 0.00%	0.38	OK	
		LC3 at 100.00%	0.35	OK	
		LC4 at 100.00%	0.44	OK	Eq. H1-1b
		LC5 at 100.00%	0.31	OK	
		LC6 at 0.00%	0.32	OK	

	LC7 at 100.00%	0.29	OK	
	LC8 at 100.00%	0.39	OK	
	LC9 at 0.00%	0.39	OK	
	W180 at 100.00%	0.10	OK	
	W210 at 100.00%	0.14	OK	
	Wi180 at 100.00%	0.02	OK	
	Wi210 at 100.00%	0.03	OK	
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194	LC1 at 100.00%	0.57	OK	Eq. H1-1b
	LC10 at 100.00%	0.42	OK	
	LC11 at 100.00%	0.41	OK	
	LC12 at 0.00%	0.36	OK	
	LC13 at 100.00%	0.22	OK	
	LC14 at 100.00%	0.17	OK	
	LC2 at 100.00%	0.57	OK	
	LC3 at 100.00%	0.48	OK	
	LC4 at 100.00%	0.31	OK	
	LC5 at 100.00%	0.52	OK	
	LC6 at 100.00%	0.52	OK	
	LC7 at 100.00%	0.42	OK	
	LC8 at 100.00%	0.26	OK	
	LC9 at 0.00%	0.40	OK	
	W180 at 100.00%	0.23	OK	
	W210 at 100.00%	0.22	OK	
	Wi180 at 100.00%	0.05	OK	
	Wi210 at 100.00%	0.04	OK	
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195	LC1 at 100.00%	0.46	OK	Eq. H1-1b
	LC10 at 0.00%	0.39	OK	
	LC11 at 0.00%	0.39	OK	
	LC12 at 100.00%	0.40	OK	
	LC13 at 100.00%	0.22	OK	
	LC14 at 100.00%	0.17	OK	
	LC2 at 100.00%	0.40	OK	
	LC3 at 0.00%	0.41	OK	
	LC4 at 100.00%	0.34	OK	
	LC5 at 100.00%	0.40	OK	
	LC6 at 100.00%	0.35	OK	
	LC7 at 0.00%	0.35	OK	
	LC8 at 100.00%	0.29	OK	
	LC9 at 100.00%	0.41	OK	
	W180 at 100.00%	0.15	OK	
	W210 at 100.00%	0.13	OK	
	Wi180 at 100.00%	0.03	OK	
	Wi210 at 100.00%	0.03	OK	
<hr/>				
207	LC1 at 100.00%	0.12	OK	
	LC10 at 0.00%	0.34	OK	
	LC11 at 100.00%	0.36	OK	
	LC12 at 100.00%	0.37	OK	
	LC13 at 100.00%	0.22	OK	
	LC14 at 100.00%	0.16	OK	
	LC2 at 100.00%	0.36	OK	
	LC3 at 0.00%	0.38	OK	Eq. H1-1b
	LC4 at 100.00%	0.40	OK	Eq. H1-1b
	LC5 at 100.00%	0.07	OK	
	LC6 at 100.00%	0.31	OK	
	LC7 at 0.00%	0.32	OK	
	LC8 at 100.00%	0.35	OK	
	LC9 at 100.00%	0.32	OK	
	W180 at 0.00%	0.11	OK	
	W210 at 100.00%	0.12	OK	
	Wi180 at 0.00%	0.02	OK	
	Wi210 at 100.00%	0.02	OK	

208

LC1 at 0.00%	0.21	OK	
LC10 at 100.00%	0.36	OK	Eq. H1-1b
LC11 at 100.00%	0.35	OK	
LC12 at 0.00%	0.35	OK	Eq. H1-1b
LC13 at 100.00%	0.22	OK	
LC14 at 100.00%	0.16	OK	
LC2 at 100.00%	0.32	OK	
LC3 at 100.00%	0.28	OK	
LC4 at 100.00%	0.32	OK	
LC5 at 0.00%	0.16	OK	
LC6 at 100.00%	0.27	OK	
LC7 at 100.00%	0.23	OK	
LC8 at 100.00%	0.27	OK	
LC9 at 100.00%	0.34	OK	
W180 at 100.00%	0.05	OK	
W210 at 100.00%	0.07	OK	
Wi180 at 100.00%	0.01	OK	
Wi210 at 100.00%	0.01	OK	

Current Date: 3/19/2018 12:36 PM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT2079\CT2079.etz\

Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
7	12.9442	0.00	-9.75	0
221	7.315	0.00	-6.50	0
313	9.7452	0.00	-15.2908	0
314	9.9617	0.00	-15.4158	0
315	9.9617	-2.00	-15.4158	0
316	9.9617	6.00	-15.4158	0
322	13.2037	0.00	-9.3005	0
323	13.4202	0.00	-9.4255	0
324	13.4202	6.00	-9.4255	0
325	16.3182	6.00	-4.406	0
326	16.1017	0.00	-4.281	0
327	16.3182	0.00	-4.406	0
328	16.3182	-2.00	-4.406	0
329	13.4202	-2.00	-9.4255	0
331	16.6017	0.00	-3.415	0
332	9.2867	0.00	-16.085	0
344	12.0573	0.00	-4.3003	0
345	15.9767	0.00	-4.4976	0
346	9.8702	0.00	-15.0743	0
347	7.8461	0.00	-11.5942	0
348	9.4801	0.00	-7.75	0
349	9.4801	2.00	-7.75	0

350	9.4801	-2.00	-7.75	0
351	8.614	2.00	-7.25	0
352	8.614	-2.00	-7.25	0
401	1.6858	0.00	-9.75	0
402	-1.5132	0.00	-4.2092	0
403	-1.7297	0.00	-4.3342	0
404	-1.7297	-2.00	-4.3342	0
405	-1.7297	6.00	-4.3342	0
406	1.9453	0.00	-10.1995	0
407	1.7288	0.00	-10.3245	0
408	1.7288	6.00	-10.3245	0
409	4.6268	6.00	-15.344	0
410	4.8433	0.00	-15.219	0
411	4.6268	0.00	-15.344	0
412	4.6268	-2.00	-15.344	0
413	1.7288	-2.00	-10.3245	0
414	5.3433	0.00	-16.085	0
415	-1.9717	0.00	-3.415	0
416	6.8489	0.00	-11.5942	0
417	4.7183	0.00	-15.0024	0
418	-1.3882	0.00	-4.4257	0
419	2.6377	0.00	-4.3003	0
420	5.1499	0.00	-7.75	0
421	5.1499	2.00	-7.75	0
422	5.1499	-2.00	-7.75	0
423	6.016	2.00	-7.25	0
424	6.016	-2.00	-7.25	0
425	7.315	0.00	0.00	0
426	13.713	0.00	0.00	0
427	13.713	0.00	0.25	0
428	13.713	-2.00	0.25	0
429	13.713	6.00	0.25	0
430	6.796	0.00	0.00	0
431	6.796	0.00	0.25	0
432	6.796	6.00	0.25	0
433	1.00	6.00	0.25	0
434	1.00	0.00	0.00	0
435	1.00	0.00	0.25	0
436	1.00	-2.00	0.25	0
437	6.796	-2.00	0.25	0
438	0.00	0.00	0.00	0
439	14.63	0.00	0.00	0
440	3.0388	0.00	-3.4929	0
441	1.25	0.00	0.00	0
442	13.463	0.00	0.00	0
443	11.4612	0.00	-3.4929	0
444	7.315	0.00	-4.00	0
445	7.315	2.00	-4.00	0
446	7.315	-2.00	-4.00	0
447	7.315	2.00	-5.00	0
448	7.315	-2.00	-5.00	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
351	1	1	1	1	1	1
352	1	1	1	1	1	1
423	1	1	1	1	1	1
424	1	1	1	1	1	1
447	1	1	1	1	1	1
448	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
131	316	315		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
132	332	331		PIPE 3-1_2x0.226	A53 GrB	0.00	0.00	0.00
135	324	329		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
136	325	328		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
151	344	345		L 4X4X1_4	A36	0.00	0.00	0.00
152	346	347		L 4X4X1_4	A36	0.00	0.00	0.00
153	348	7		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
154	349	350		PIPE 4x0.237	A53 GrB	0.00	0.00	0.00
155	349	351		PL 6x1/2	A36	0.00	0.00	0.00
156	350	352		PL 6x1/2	A36	0.00	0.00	0.00
184	405	404		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
185	415	414		PIPE 3-1_2x0.226	A53 GrB	0.00	0.00	0.00
187	408	413		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
188	409	412		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
190	416	417		L 4X4X1_4	A36	0.00	0.00	0.00
191	418	419		L 4X4X1_4	A36	0.00	0.00	0.00
192	420	401		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
193	421	422		PIPE 4x0.237	A53 GrB	0.00	0.00	0.00
194	421	423		PL 6x1/2	A36	0.00	0.00	0.00
195	422	424		PL 6x1/2	A36	0.00	0.00	0.00
197	429	428		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
198	439	438		PIPE 3-1_2x0.226	A53 GrB	0.00	0.00	0.00
200	432	437		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
201	433	436		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
203	440	441		L 4X4X1_4	A36	0.00	0.00	0.00
204	442	443		L 4X4X1_4	A36	0.00	0.00	0.00
205	444	425		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
206	445	446		PIPE 4x0.237	A53 GrB	0.00	0.00	0.00
207	445	447		PL 6x1/2	A36	0.00	0.00	0.00
208	446	448		PL 6x1/2	A36	0.00	0.00	0.00
209	419	440		L 2X2X1_4	A36	0.00	0.00	0.00
210	344	443		L 2X2X1_4	A36	0.00	0.00	0.00
211	347	416		L 2X2X1_4	A36	0.00	0.00	0.00

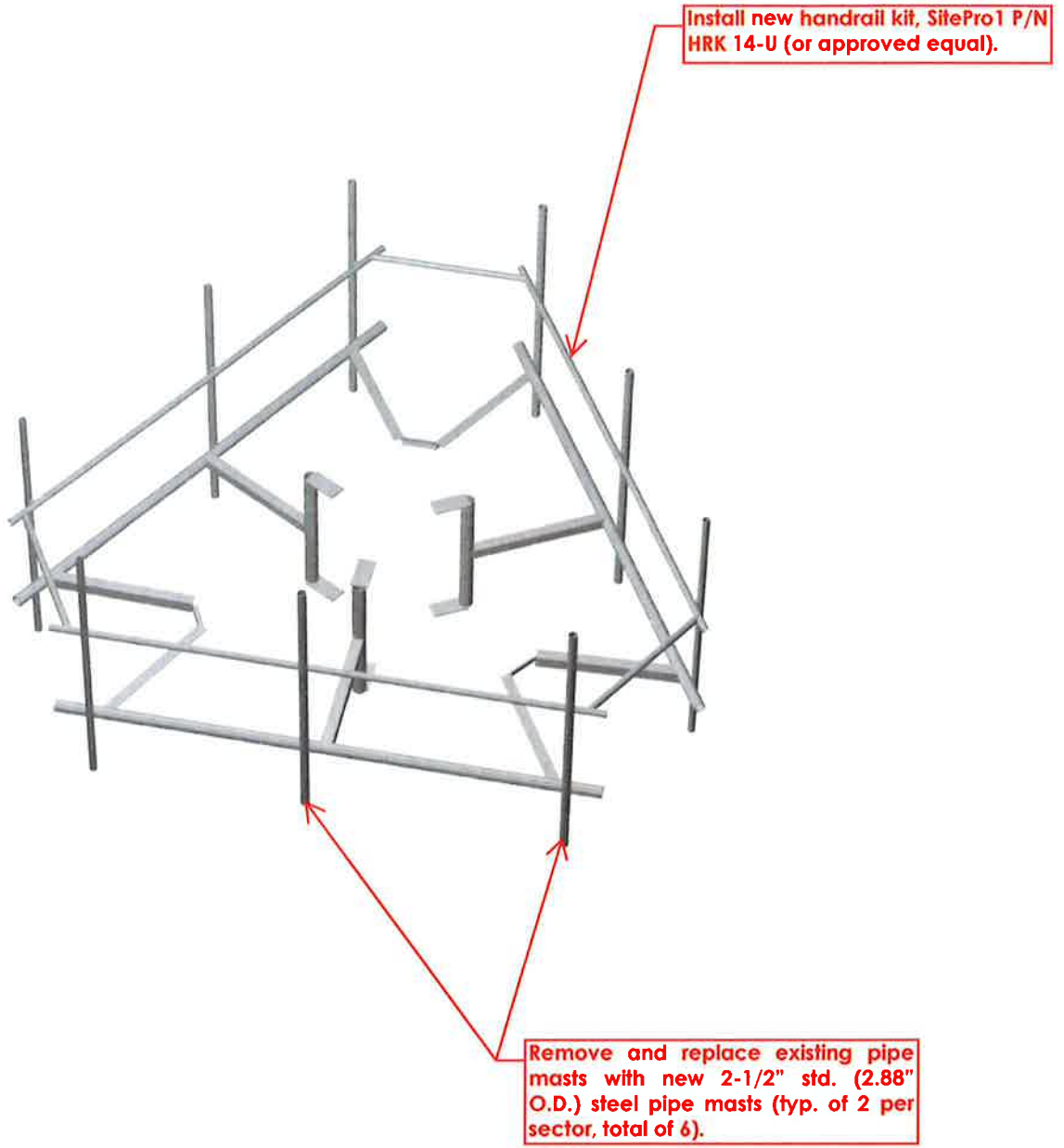
Orientation of local axes

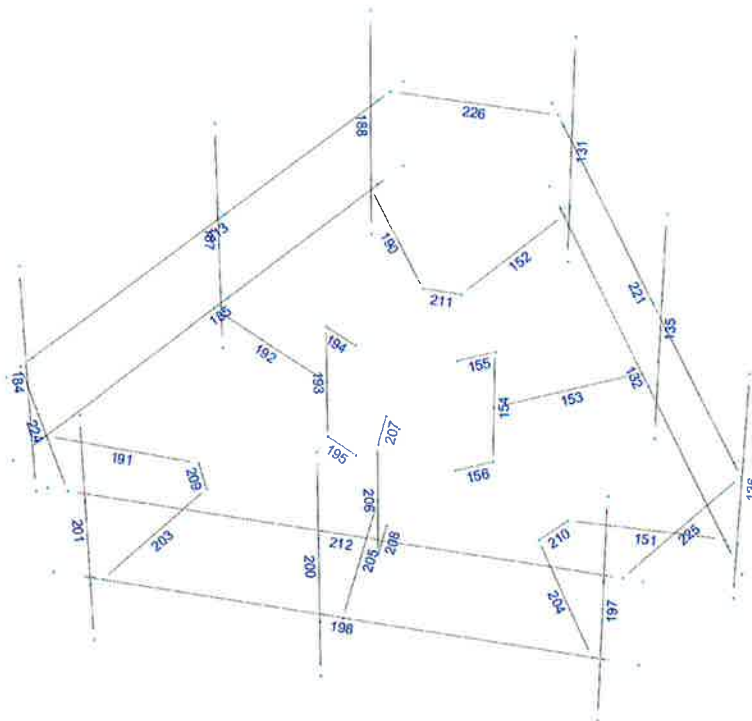
Member	Rotation [Deg]	Axes23	NX	NY	NZ
131	0.00	2	-0.50	0.00	-0.866
135	0.00	2	-0.50	0.00	-0.866
136	0.00	2	-0.50	0.00	-0.866
151	180.00	0	0.00	0.00	0.00
152	180.00	0	0.00	0.00	0.00
154	0.00	2	-0.50	0.00	-0.866
155	90.00	0	0.00	0.00	0.00
156	90.00	0	0.00	0.00	0.00
184	0.00	2	-0.50	0.00	0.866
187	0.00	2	-0.50	0.00	0.866
188	0.00	2	-0.50	0.00	0.866
190	180.00	0	0.00	0.00	0.00
191	180.00	0	0.00	0.00	0.00
193	0.00	2	-0.50	0.00	0.866
194	90.00	0	0.00	0.00	0.00
195	90.00	0	0.00	0.00	0.00
203	180.00	0	0.00	0.00	0.00
204	180.00	0	0.00	0.00	0.00
207	90.00	0	0.00	0.00	0.00
208	90.00	0	0.00	0.00	0.00
209	270.00	0	0.00	0.00	0.00
211	270.00	0	0.00	0.00	0.00







HUDSON
Design Group LLC

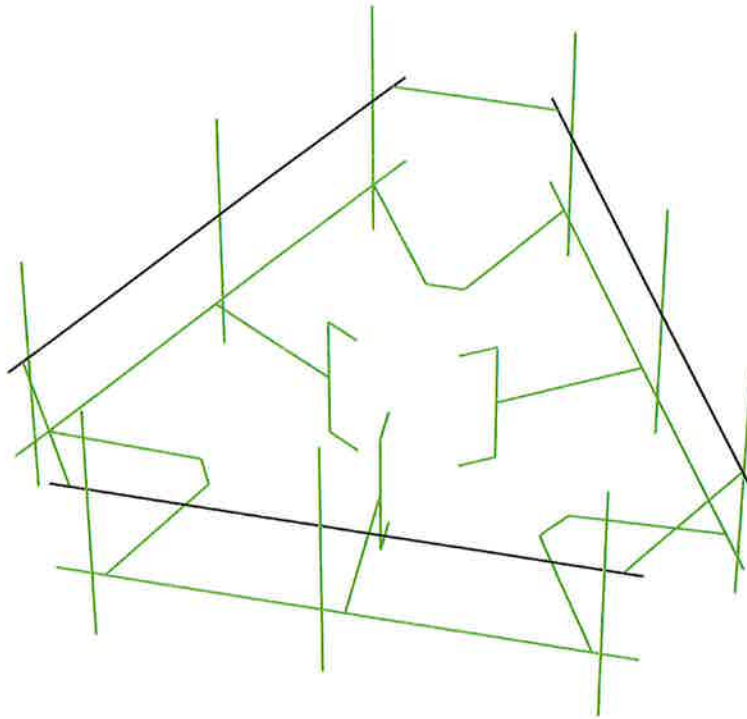
**Mount Calculations
(Proposed Conditions)**





Design status

-  Not designed
-  Error on design
-  Design O.K.
-  With warnings



Current Date: 3/19/2018 12:39 PM

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File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT2079\CT2079 (MOD.).etx

Steel Code Check

Report: Summary - For all selected load conditions

Load conditions to be included in design :

- W180=-W0
- W210=-W30
- Wi180=-Wi0
- Wi210=-Wi30
- LC1=1.2DL+1.6W0
- LC2=1.2DL+1.6W30
- LC3=1.2DL-1.6W0
- LC4=1.2DL-1.6W30
- LC5=0.9DL+1.6W0
- LC6=0.9DL+1.6W30
- LC7=0.9DL-1.6W0
- LC8=0.9DL-1.6W30
- LC9=1.2DL+Di+Wi0
- LC10=1.2DL+Di+Wi30
- LC11=1.2DL+Di-Wi0
- LC12=1.2DL+Di-Wi30
- LC13=1.2DL
- LC14=0.9DL

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X1_4	153	LC1 at 0.00%	0.56	OK	
			LC10 at 0.00%	0.32	OK	
			LC11 at 0.00%	0.33	OK	
			LC12 at 0.00%	0.39	OK	
			LC13 at 0.00%	0.19	OK	
			LC14 at 0.00%	0.14	OK	
			LC2 at 0.00%	0.34	OK	
			LC3 at 100.00%	0.35	OK	Eq. H1-1b
			LC4 at 0.00%	0.72	OK	Eq. H1-1b
			LC5 at 0.00%	0.51	OK	
			LC6 at 0.00%	0.39	OK	
			LC7 at 100.00%	0.34	OK	
			LC8 at 0.00%	0.67	OK	
			LC9 at 0.00%	0.37	OK	
			W180 at 0.00%	0.23	OK	
			W210 at 0.00%	0.33	OK	
			Wi180 at 0.00%	0.05	OK	
			Wi210 at 0.00%	0.07	OK	
		192	LC1 at 0.00%	0.62	OK	
			LC10 at 0.00%	0.40	OK	
			LC11 at 0.00%	0.34	OK	
			LC12 at 0.00%	0.32	OK	
			LC13 at 0.00%	0.19	OK	
			LC14 at 0.00%	0.14	OK	
			LC2 at 0.00%	0.75	OK	Eq. H1-1b
			LC3 at 0.00%	0.34	OK	
			LC4 at 0.00%	0.37	OK	
			LC5 at 0.00%	0.57	OK	
			LC6 at 0.00%	0.71	OK	
			LC7 at 100.00%	0.32	OK	

	LC8 at 0.00%	0.42	OK	
	LC9 at 0.00%	0.38	OK	
	W180 at 0.00%	0.27	OK	
	W210 at 0.00%	0.35	OK	
	Wi180 at 0.00%	0.06	OK	
	Wi210 at 0.00%	0.07	OK	
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205	LC1 at 100.00%	0.15	OK	
	LC10 at 0.00%	0.30	OK	
	LC11 at 0.00%	0.33	OK	
	LC12 at 0.00%	0.31	OK	
	LC13 at 0.00%	0.18	OK	
	LC14 at 0.00%	0.14	OK	
	LC2 at 0.00%	0.30	OK	
	LC3 at 0.00%	0.52	OK	Eq. H1-1b
	LC4 at 0.00%	0.36	OK	
	LC5 at 0.00%	0.20	OK	
	LC6 at 0.00%	0.26	OK	
	LC7 at 0.00%	0.48	OK	
	LC8 at 0.00%	0.31	OK	
	LC9 at 0.00%	0.25	OK	
	W180 at 0.00%	0.21	OK	
	W210 at 100.00%	0.14	OK	
	Wi180 at 0.00%	0.04	OK	
	Wi210 at 100.00%	0.03	OK	
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L 2X2X1_4	209	LC1 at 0.00%	0.47	OK
		LC10 at 0.00%	0.21	OK
		LC11 at 0.00%	0.23	OK
		LC12 at 0.00%	0.10	OK
		LC13 at 0.00%	0.10	OK
		LC14 at 0.00%	0.07	OK
		LC2 at 100.00%	0.69	OK
		LC3 at 0.00%	0.66	OK
		LC4 at 100.00%	0.52	OK
		LC5 at 0.00%	0.49	OK
		LC6 at 100.00%	0.67	OK
		LC7 at 0.00%	0.64	OK
		LC8 at 100.00%	0.54	OK
		LC9 at 100.00%	0.11	OK
		W180 at 0.00%	0.35	OK
		W210 at 100.00%	0.37	OK
		Wi180 at 0.00%	0.07	OK
		Wi210 at 100.00%	0.08	OK
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	210	LC1 at 0.00%	0.33	OK
		LC10 at 100.00%	0.08	OK
		LC11 at 100.00%	0.18	OK
		LC12 at 100.00%	0.25	OK
		LC13 at 100.00%	0.10	OK
		LC14 at 100.00%	0.07	OK
		LC2 at 100.00%	0.55	OK
		LC3 at 0.00%	0.43	OK
		LC4 at 100.00%	0.75	OK
		LC5 at 0.00%	0.33	OK
		LC6 at 100.00%	0.57	OK
		LC7 at 0.00%	0.41	OK
		LC8 at 100.00%	0.72	OK
		LC9 at 100.00%	0.15	OK
		W180 at 0.00%	0.22	OK
		W210 at 100.00%	0.41	OK
		Wi180 at 0.00%	0.05	OK
		Wi210 at 100.00%	0.08	OK
<hr/>				

L 4X4X1_4	211	LC1 at 100.00%	0.69	OK	Eq. H2-1
		LC10 at 0.00%	0.22	OK	
		LC11 at 0.00%	0.10	OK	
		LC12 at 100.00%	0.16	OK	
		LC13 at 0.00%	0.09	OK	
		LC14 at 0.00%	0.07	OK	
		LC2 at 0.00%	0.52	OK	
		LC3 at 100.00%	0.53	OK	
		LC4 at 0.00%	0.34	OK	
		LC5 at 100.00%	0.67	OK	
		LC6 at 0.00%	0.50	OK	
		LC7 at 100.00%	0.54	OK	
		LC8 at 0.00%	0.36	OK	
		LC9 at 0.00%	0.23	OK	
		W180 at 100.00%	0.38	OK	
		W210 at 0.00%	0.27	OK	
		Wi180 at 100.00%	0.08	OK	
		Wi210 at 0.00%	0.05	OK	
	151	LC1 at 100.00%	0.15	OK	Eq. H2-1
		LC10 at 100.00%	0.05	OK	
		LC11 at 100.00%	0.05	OK	
		LC12 at 100.00%	0.11	OK	
		LC13 at 100.00%	0.04	OK	
		LC14 at 100.00%	0.03	OK	
		LC2 at 100.00%	0.44	OK	
		LC3 at 0.00%	0.11	OK	
		LC4 at 100.00%	0.51	OK	
		LC5 at 100.00%	0.14	OK	
		LC6 at 100.00%	0.45	OK	
		LC7 at 0.00%	0.11	OK	
		LC8 at 100.00%	0.50	OK	
		LC9 at 100.00%	0.08	OK	
		W180 at 100.00%	0.07	OK	
		W210 at 100.00%	0.30	OK	
		Wi180 at 100.00%	0.01	OK	
		Wi210 at 100.00%	0.06	OK	
	152	LC1 at 0.00%	0.52	OK	Eq. H2-1
		LC10 at 6.25%	0.06	OK	
		LC11 at 0.00%	0.08	OK	
		LC12 at 0.00%	0.05	OK	
		LC13 at 100.00%	0.02	OK	
		LC14 at 100.00%	0.02	OK	
		LC2 at 0.00%	0.44	OK	
		LC3 at 0.00%	0.51	OK	
		LC4 at 0.00%	0.44	OK	
		LC5 at 0.00%	0.52	OK	
		LC6 at 0.00%	0.44	OK	
		LC7 at 0.00%	0.51	OK	
		LC8 at 0.00%	0.44	OK	
		LC9 at 0.00%	0.06	OK	
		W180 at 0.00%	0.32	OK	
		W210 at 0.00%	0.28	OK	
		Wi180 at 0.00%	0.07	OK	
		Wi210 at 0.00%	0.06	OK	
	190	LC1 at 100.00%	0.40	OK	Eq. H2-1
		LC10 at 100.00%	0.10	OK	
		LC11 at 100.00%	0.05	OK	
		LC12 at 0.00%	0.04	OK	
		LC13 at 100.00%	0.03	OK	
		LC14 at 100.00%	0.02	OK	
		LC2 at 100.00%	0.48	OK	

	LC3 at 100.00%	0.34	OK	
	LC4 at 100.00%	0.43	OK	
	LC5 at 100.00%	0.39	OK	
	LC6 at 100.00%	0.48	OK	
	LC7 at 100.00%	0.35	OK	
	LC8 at 100.00%	0.44	OK	
	LC9 at 100.00%	0.09	OK	
	W180 at 100.00%	0.23	OK	
	W210 at 100.00%	0.28	OK	
	Wi180 at 100.00%	0.05	OK	
	Wi210 at 100.00%	0.06	OK	
<hr/>				
191	LC1 at 100.00%	0.12	OK	
	LC10 at 0.00%	0.07	OK	
	LC11 at 100.00%	0.05	OK	
	LC12 at 0.00%	0.07	OK	
	LC13 at 100.00%	0.02	OK	
	LC14 at 100.00%	0.02	OK	
	LC2 at 0.00%	0.55	OK	
	LC3 at 100.00%	0.16	OK	Eq. H2-1
	LC4 at 0.00%	0.54	OK	
	LC5 at 100.00%	0.12	OK	
	LC6 at 0.00%	0.55	OK	Eq. H2-1
	LC7 at 100.00%	0.16	OK	
	LC8 at 0.00%	0.54	OK	
	LC9 at 0.00%	0.03	OK	
	W180 at 100.00%	0.09	OK	
	W210 at 0.00%	0.34	OK	
	Wi180 at 100.00%	0.02	OK	
	Wi210 at 0.00%	0.07	OK	
<hr/>				
203	LC1 at 100.00%	0.52	OK	
	LC10 at 100.00%	0.07	OK	
	LC11 at 100.00%	0.11	OK	
	LC12 at 100.00%	0.05	OK	
	LC13 at 100.00%	0.04	OK	
	LC14 at 100.00%	0.03	OK	
	LC2 at 100.00%	0.24	OK	
	LC3 at 100.00%	0.57	OK	Eq. H2-1
	LC4 at 100.00%	0.20	OK	
	LC5 at 100.00%	0.52	OK	
	LC6 at 100.00%	0.24	OK	
	LC7 at 100.00%	0.57	OK	
	LC8 at 100.00%	0.20	OK	
	LC9 at 100.00%	0.04	OK	
	W180 at 100.00%	0.34	OK	
	W210 at 100.00%	0.13	OK	
	Wi180 at 100.00%	0.07	OK	
	Wi210 at 100.00%	0.03	OK	
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204	LC1 at 0.00%	0.46	OK	Eq. H2-1
	LC10 at 0.00%	0.05	OK	
	LC11 at 0.00%	0.05	OK	
	LC12 at 100.00%	0.06	OK	
	LC13 at 100.00%	0.02	OK	
	LC14 at 100.00%	0.02	OK	
	LC2 at 0.00%	0.30	OK	
	LC3 at 0.00%	0.45	OK	
	LC4 at 0.00%	0.30	OK	
	LC5 at 0.00%	0.46	OK	
	LC6 at 0.00%	0.30	OK	
	LC7 at 0.00%	0.45	OK	
	LC8 at 0.00%	0.30	OK	
	LC9 at 0.00%	0.08	OK	

PIPE 2-1_2x0.203

	W180 at 0.00%	0.29	OK	
	W210 at 0.00%	0.19	OK	
	Wi180 at 0.00%	0.06	OK	
	Wi210 at 0.00%	0.04	OK	
131	LC1 at 35.42%	0.41	OK	
	LC10 at 72.92%	0.27	OK	
	LC11 at 72.92%	0.32	OK	
	LC12 at 72.92%	0.28	OK	
	LC13 at 72.92%	0.16	OK	
	LC14 at 72.92%	0.12	OK	
	LC2 at 35.42%	0.49	OK	Eq. H1-1b
	LC3 at 72.92%	0.55	OK	
	LC4 at 72.92%	0.67	OK	Eq. H1-1b
	LC5 at 35.42%	0.41	OK	
	LC6 at 72.92%	0.51	OK	
	LC7 at 72.92%	0.51	OK	
	LC8 at 72.92%	0.65	OK	
	LC9 at 72.92%	0.22	OK	
	W180 at 35.42%	0.25	OK	
	W210 at 72.92%	0.36	OK	
	Wi180 at 72.92%	0.05	OK	
	Wi210 at 72.92%	0.07	OK	
135	LC1 at 72.92%	0.63	OK	
	LC10 at 72.92%	0.22	OK	
	LC11 at 72.92%	0.15	OK	
	LC12 at 35.42%	0.05	OK	
	LC13 at 72.92%	0.07	OK	
	LC14 at 72.92%	0.05	OK	
	LC2 at 72.92%	0.85	OK	Eq. H1-1b
	LC3 at 72.92%	0.70	OK	
	LC4 at 72.92%	0.72	OK	
	LC5 at 72.92%	0.64	OK	
	LC6 at 72.92%	0.83	OK	
	LC7 at 72.92%	0.69	OK	
	LC8 at 72.92%	0.73	OK	
	LC9 at 72.92%	0.12	OK	
	W180 at 72.92%	0.41	OK	
	W210 at 72.92%	0.49	OK	
	Wi180 at 72.92%	0.09	OK	
	Wi210 at 72.92%	0.10	OK	
187	LC1 at 72.92%	0.60	OK	
	LC10 at 35.42%	0.05	OK	
	LC11 at 72.92%	0.17	OK	
	LC12 at 72.92%	0.21	OK	
	LC13 at 72.92%	0.06	OK	
	LC14 at 72.92%	0.04	OK	
	LC2 at 72.92%	0.87	OK	
	LC3 at 72.92%	0.69	OK	
	LC4 at 72.92%	0.97	OK	Eq. H1-1b
	LC5 at 72.92%	0.61	OK	
	LC6 at 72.92%	0.88	OK	
	LC7 at 72.92%	0.68	OK	
	LC8 at 72.92%	0.95	OK	
	LC9 at 72.92%	0.10	OK	
	W180 at 72.92%	0.40	OK	
	W210 at 72.92%	0.57	OK	
	Wi180 at 72.92%	0.08	OK	
	Wi210 at 72.92%	0.11	OK	
188	LC1 at 72.92%	0.08	OK	
	LC10 at 72.92%	0.24	OK	

	LC11 at 72.92%	0.25	OK		
	LC12 at 72.92%	0.21	OK		
	LC13 at 72.92%	0.13	OK		
	LC14 at 72.92%	0.10	OK		
	LC2 at 37.50%	0.46	OK	Eq. H1-1b	
	LC3 at 72.92%	0.34	OK		
	LC4 at 72.92%	0.35	OK		
	LC5 at 72.92%	0.11	OK		
	LC6 at 37.50%	0.44	OK		
	LC7 at 72.92%	0.30	OK		
	LC8 at 72.92%	0.36	OK		
	LC9 at 72.92%	0.20	OK		
	W180 at 72.92%	0.13	OK		
	W210 at 72.92%	0.24	OK		
	Wi180 at 72.92%	0.03	OK		
	Wi210 at 72.92%	0.05	OK		
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197	LC1 at 37.50%	0.23	OK		
	LC10 at 72.92%	0.29	OK		
	LC11 at 72.92%	0.26	OK		
	LC12 at 72.92%	0.25	OK		
	LC13 at 72.92%	0.16	OK		
	LC14 at 72.92%	0.12	OK		
	LC2 at 72.92%	0.34	OK		
	LC3 at 72.92%	0.35	OK	Eq. H1-1b	
	LC4 at 37.50%	0.07	OK		
	LC5 at 37.50%	0.23	OK		
	LC6 at 72.92%	0.30	OK		
	LC7 at 72.92%	0.33	OK		
	LC8 at 72.92%	0.07	OK		
	LC9 at 72.92%	0.27	OK		
	W180 at 72.92%	0.17	OK		
	W210 at 72.92%	0.11	OK		
	Wi180 at 72.92%	0.04	OK		
	Wi210 at 72.92%	0.02	OK		
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200	LC1 at 72.92%	0.42	OK	Eq. H1-1b	
	LC10 at 72.92%	0.11	OK		
	LC11 at 72.92%	0.07	OK		
	LC12 at 72.92%	0.14	OK		
	LC13 at 72.92%	0.07	OK		
	LC14 at 72.92%	0.05	OK		
	LC2 at 72.92%	0.36	OK		
	LC3 at 72.92%	0.35	OK		
	LC4 at 72.92%	0.29	OK		
	LC5 at 72.92%	0.41	OK		
	LC6 at 72.92%	0.35	OK		
	LC7 at 72.92%	0.36	OK		
	LC8 at 72.92%	0.29	OK		
	LC9 at 72.92%	0.15	OK		
	W180 at 72.92%	0.24	OK		
	W210 at 72.92%	0.20	OK		
	Wi180 at 72.92%	0.05	OK		
	Wi210 at 72.92%	0.04	OK		
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PIPE 2x0.154	136	LC1 at 37.50%	0.62	OK	Eq. H1-1b
		LC10 at 72.92%	0.36	OK	
		LC11 at 72.92%	0.30	OK	
		LC12 at 72.92%	0.31	OK	
		LC13 at 72.92%	0.21	OK	
		LC14 at 72.92%	0.15	OK	
		LC2 at 72.92%	0.41	OK	
		LC3 at 72.92%	0.31	OK	
		LC4 at 37.50%	0.34	OK	

	LC5 at 37.50%	0.58	OK	
	LC6 at 72.92%	0.36	OK	
	LC7 at 37.50%	0.34	OK	
	LC8 at 37.50%	0.30	OK	
	LC9 at 72.92%	0.38	OK	
	W180 at 37.50%	0.28	OK	
	W210 at 72.92%	0.15	OK	
	Wi180 at 37.50%	0.06	OK	
	Wi210 at 72.92%	0.03	OK	
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184	LC1 at 35.42%	0.79	OK	
	LC10 at 72.92%	0.38	OK	
	LC11 at 72.92%	0.39	OK	
	LC12 at 72.92%	0.50	OK	
	LC13 at 72.92%	0.26	OK	
	LC14 at 72.92%	0.19	OK	
	LC2 at 35.42%	0.94	OK	Eq. H1-1b
	LC3 at 35.42%	0.79	OK	
	LC4 at 35.42%	0.94	OK	
	LC5 at 35.42%	0.78	OK	
	LC6 at 35.42%	0.94	OK	
	LC7 at 35.42%	0.78	OK	
	LC8 at 35.42%	0.94	OK	
	LC9 at 72.92%	0.48	OK	
	W180 at 35.42%	0.49	OK	
	W210 at 35.42%	0.58	OK	
	Wi180 at 35.42%	0.09	OK	
	Wi210 at 35.42%	0.10	OK	
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201	LC1 at 72.92%	0.45	OK	
	LC10 at 72.92%	0.32	OK	
	LC11 at 72.92%	0.34	OK	
	LC12 at 72.92%	0.36	OK	
	LC13 at 72.92%	0.20	OK	
	LC14 at 72.92%	0.15	OK	
	LC2 at 72.92%	0.20	OK	
	LC3 at 37.50%	0.68	OK	Eq. H1-1b
	LC4 at 72.92%	0.35	OK	
	LC5 at 72.92%	0.46	OK	
	LC6 at 72.92%	0.21	OK	
	LC7 at 37.50%	0.64	OK	
	LC8 at 72.92%	0.30	OK	
	LC9 at 72.92%	0.34	OK	
	W180 at 37.50%	0.34	OK	
	W210 at 72.92%	0.16	OK	
	Wi180 at 37.50%	0.07	OK	
	Wi210 at 72.92%	0.03	OK	
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212	LC1 at 6.25%	0.45	With warnings	Eq. H3-6
	LC10 at 53.13%	0.29	With warnings	
	LC11 at 54.17%	0.26	With warnings	
	LC12 at 54.17%	0.29	With warnings	
	LC13 at 53.13%	0.16	With warnings	
	LC14 at 53.13%	0.12	With warnings	
	LC2 at 95.83%	0.41	With warnings	Eq. H1-1b
	LC3 at 93.75%	0.52	With warnings	Eq. H3-6
	LC4 at 92.71%	0.38	With warnings	Eq. H1-1b
	LC5 at 6.25%	0.43	With warnings	
	LC6 at 95.83%	0.39	With warnings	
	LC7 at 93.75%	0.50	With warnings	
	LC8 at 92.71%	0.38	With warnings	
	LC9 at 53.13%	0.28	With warnings	
	W180 at 93.75%	0.24	With warnings	
	W210 at 92.71%	0.24	With warnings	

	Wi180 at 4.17%	0.05	With warnings	
	Wi210 at 92.71%	0.04	With warnings	
213	LC1 at 53.13%	0.55	With warnings	Eq. H1-1b
	LC10 at 54.17%	0.29	With warnings	
	LC11 at 54.17%	0.30	With warnings	
	LC12 at 53.13%	0.34	With warnings	
	LC13 at 53.13%	0.18	With warnings	
	LC14 at 53.13%	0.13	With warnings	
	LC2 at 93.75%	0.74	With warnings	Eq. H3-6
	LC3 at 6.25%	0.47	With warnings	Eq. H3-6
	LC4 at 93.75%	0.53	With warnings	
	LC5 at 53.13%	0.50	With warnings	
	LC6 at 93.75%	0.72	With warnings	
	LC7 at 6.25%	0.46	With warnings	
	LC8 at 93.75%	0.54	With warnings	
	LC9 at 53.13%	0.35	With warnings	
	W180 at 53.13%	0.26	With warnings	
	W210 at 93.75%	0.31	With warnings	
	Wi180 at 53.13%	0.05	With warnings	
	Wi210 at 93.75%	0.06	With warnings	
221	LC1 at 54.17%	0.49	With warnings	Eq. H1-1b
	LC10 at 54.17%	0.29	With warnings	
	LC11 at 53.13%	0.32	With warnings	
	LC12 at 53.13%	0.29	With warnings	
	LC13 at 53.13%	0.16	With warnings	
	LC14 at 53.13%	0.12	With warnings	
	LC2 at 6.25%	0.78	With warnings	Eq. H3-6
	LC3 at 53.13%	0.54	With warnings	Eq. H1-1b
	LC4 at 6.25%	0.69	With warnings	
	LC5 at 54.17%	0.45	With warnings	
	LC6 at 6.25%	0.77	With warnings	
	LC7 at 53.13%	0.50	With warnings	
	LC8 at 6.25%	0.70	With warnings	
	LC9 at 54.17%	0.31	With warnings	
	W180 at 7.29%	0.27	With warnings	
	W210 at 6.25%	0.38	With warnings	
	Wi180 at 7.29%	0.05	With warnings	
	Wi210 at 6.25%	0.07	With warnings	
224	LC1 at 0.00%	0.49	OK	Eq. H1-1b
	LC10 at 0.00%	0.21	OK	
	LC11 at 0.00%	0.22	OK	
	LC12 at 0.00%	0.17	OK	
	LC13 at 0.00%	0.12	OK	
	LC14 at 0.00%	0.09	OK	
	LC2 at 100.00%	0.45	OK	
	LC3 at 0.00%	0.48	OK	
	LC4 at 100.00%	0.56	OK	Eq. H1-1b
	LC5 at 0.00%	0.49	OK	
	LC6 at 100.00%	0.46	OK	
	LC7 at 0.00%	0.49	OK	
	LC8 at 100.00%	0.55	OK	
	LC9 at 0.00%	0.15	OK	
	W180 at 0.00%	0.31	OK	
	W210 at 100.00%	0.32	OK	
	Wi180 at 0.00%	0.06	OK	
	Wi210 at 100.00%	0.06	OK	
225	LC1 at 0.00%	0.47	OK	Eq. H1-1b
	LC10 at 100.00%	0.18	OK	
	LC11 at 100.00%	0.17	OK	
	LC12 at 100.00%	0.24	OK	

		LC13 at 100.00%	0.14	OK	
		LC14 at 100.00%	0.10	OK	
		LC2 at 100.00%	0.28	OK	
		LC3 at 0.00%	0.37	OK	
		LC4 at 100.00%	0.39	OK	
		LC5 at 0.00%	0.45	OK	
		LC6 at 100.00%	0.28	OK	
		LC7 at 0.00%	0.38	OK	
		LC8 at 100.00%	0.36	OK	
		LC9 at 100.00%	0.25	OK	
		W180 at 0.00%	0.26	OK	
		W210 at 100.00%	0.17	OK	
		Wi180 at 0.00%	0.06	OK	
		Wi210 at 100.00%	0.04	OK	
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	226	LC1 at 0.00%	0.25	OK	
		LC10 at 0.00%	0.26	OK	
		LC11 at 0.00%	0.21	OK	
		LC12 at 0.00%	0.19	OK	
		LC13 at 0.00%	0.12	OK	
		LC14 at 0.00%	0.09	OK	
		LC2 at 100.00%	0.78	OK	Eq. H1-1b
		LC3 at 100.00%	0.27	OK	
		LC4 at 100.00%	0.68	OK	
		LC5 at 0.00%	0.22	OK	
		LC6 at 100.00%	0.77	OK	
		LC7 at 100.00%	0.26	OK	
		LC8 at 100.00%	0.69	OK	
		LC9 at 0.00%	0.24	OK	
		W180 at 100.00%	0.14	OK	
		W210 at 100.00%	0.46	OK	
		Wi180 at 100.00%	0.03	OK	
		Wi210 at 100.00%	0.09	OK	
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PIPE 3-1_2x0.226	132	LC1 at 49.11%	0.67	OK	Eq. H1-1b
		LC10 at 49.11%	0.31	OK	
		LC11 at 49.11%	0.35	OK	
		LC12 at 49.11%	0.30	OK	
		LC13 at 49.11%	0.18	OK	
		LC14 at 49.11%	0.14	OK	
		LC2 at 50.00%	0.66	OK	Eq. H3-6
		LC3 at 49.11%	0.47	OK	
		LC4 at 50.00%	0.81	OK	Eq. H1-1b
		LC5 at 49.11%	0.64	OK	
		LC6 at 50.00%	0.65	OK	
		LC7 at 49.11%	0.47	OK	
		LC8 at 50.00%	0.78	OK	
		LC9 at 49.11%	0.28	OK	
		W180 at 49.11%	0.35	OK	
		W210 at 50.00%	0.44	OK	
		Wi180 at 49.11%	0.07	OK	
		Wi210 at 50.00%	0.09	OK	
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	185	LC1 at 50.00%	0.79	OK	Eq. H1-1b
		LC10 at 49.11%	0.29	OK	
		LC11 at 50.00%	0.33	OK	
		LC12 at 49.11%	0.35	OK	
		LC13 at 49.11%	0.18	OK	
		LC14 at 49.11%	0.13	OK	
		LC2 at 49.11%	0.80	OK	Eq. H1-1b
		LC3 at 50.00%	0.56	OK	
		LC4 at 49.11%	0.56	OK	
		LC5 at 50.00%	0.76	OK	
		LC6 at 49.11%	0.77	OK	

LC7 at 50.00%	0.59	OK
LC8 at 49.11%	0.59	OK
LC9 at 49.11%	0.33	OK
W180 at 50.00%	0.43	OK
W210 at 49.11%	0.42	OK
Wi180 at 50.00%	0.09	OK
Wi210 at 49.11%	0.09	OK

198

LC1 at 50.00%	0.48	OK	Eq. H3-6
LC10 at 49.11%	0.31	OK	
LC11 at 49.11%	0.26	OK	Eq. H1-1b
LC12 at 50.00%	0.28	OK	
LC13 at 49.11%	0.18	OK	
LC14 at 49.11%	0.14	OK	
LC2 at 50.00%	0.44	OK	
LC3 at 49.11%	0.65	OK	Eq. H1-1b
LC4 at 49.11%	0.34	OK	
LC5 at 50.00%	0.47	OK	
LC6 at 50.00%	0.42	OK	
LC7 at 49.11%	0.62	OK	
LC8 at 49.11%	0.31	OK	
LC9 at 49.11%	0.32	OK	
W180 at 49.11%	0.33	OK	
W210 at 50.00%	0.22	OK	
Wi180 at 49.11%	0.07	OK	
Wi210 at 50.00%	0.05	OK	

PIPE 4x0.237

154

LC1 at 46.88%	0.58	OK	
LC10 at 50.00%	0.26	OK	
LC11 at 50.00%	0.29	OK	
LC12 at 50.00%	0.30	OK	
LC13 at 50.00%	0.17	OK	
LC14 at 50.00%	0.13	OK	
LC2 at 46.88%	0.42	OK	
LC3 at 46.88%	0.31	OK	
LC4 at 46.88%	0.67	OK	Eq. H1-1b
LC5 at 46.88%	0.55	OK	
LC6 at 46.88%	0.45	OK	
LC7 at 46.88%	0.34	OK	
LC8 at 46.88%	0.64	OK	
LC9 at 46.88%	0.29	OK	
W180 at 46.88%	0.28	OK	
W210 at 46.88%	0.34	OK	
Wi180 at 46.88%	0.06	OK	
Wi210 at 46.88%	0.07	OK	

193

LC1 at 46.88%	0.57	OK	
LC10 at 46.88%	0.30	OK	
LC11 at 50.00%	0.28	OK	
LC12 at 50.00%	0.29	OK	
LC13 at 50.00%	0.16	OK	
LC14 at 50.00%	0.12	OK	
LC2 at 46.88%	0.74	OK	Eq. H1-1b
LC3 at 46.88%	0.34	OK	
LC4 at 46.88%	0.49	OK	
LC5 at 46.88%	0.54	OK	
LC6 at 46.88%	0.71	OK	
LC7 at 46.88%	0.35	OK	
LC8 at 46.88%	0.52	OK	
LC9 at 50.00%	0.29	OK	
W180 at 46.88%	0.28	OK	
W210 at 46.88%	0.38	OK	
Wi180 at 46.88%	0.06	OK	
Wi210 at 46.88%	0.08	OK	

206	LC1 at 46.88%	0.28	OK	
	LC10 at 50.00%	0.26	OK	Eq. H1-1b
	LC11 at 46.88%	0.25	OK	
	LC12 at 50.00%	0.24	OK	
	LC13 at 50.00%	0.16	OK	
	LC14 at 50.00%	0.12	OK	
	LC2 at 46.88%	0.26	OK	
	LC3 at 46.88%	0.53	OK	Eq. H1-1b
	LC4 at 46.88%	0.33	OK	
	LC5 at 46.88%	0.31	OK	
	LC6 at 46.88%	0.24	OK	
	LC7 at 46.88%	0.50	OK	
	LC8 at 46.88%	0.30	OK	
	LC9 at 50.00%	0.25	OK	
	W180 at 46.88%	0.25	OK	
	W210 at 46.88%	0.13	OK	
	Wi180 at 46.88%	0.05	OK	
	Wi210 at 46.88%	0.03	OK	
155	LC1 at 100.00%	0.60	OK	
	LC10 at 100.00%	0.41	OK	
	LC11 at 100.00%	0.41	OK	
	LC12 at 0.00%	0.45	OK	
	LC13 at 100.00%	0.25	OK	
	LC14 at 100.00%	0.19	OK	
	LC2 at 100.00%	0.27	OK	
	LC3 at 100.00%	0.38	OK	
	LC4 at 100.00%	0.68	OK	Eq. H1-1b
	LC5 at 100.00%	0.54	OK	
	LC6 at 100.00%	0.27	OK	
	LC7 at 100.00%	0.32	OK	
	LC8 at 100.00%	0.62	OK	
	LC9 at 100.00%	0.45	OK	
	W180 at 100.00%	0.22	OK	
	W210 at 100.00%	0.28	OK	
	Wi180 at 100.00%	0.05	OK	
	Wi210 at 100.00%	0.06	OK	
156	LC1 at 100.00%	0.50	OK	
	LC10 at 0.00%	0.43	OK	
	LC11 at 100.00%	0.43	OK	
	LC12 at 100.00%	0.46	OK	
	LC13 at 0.00%	0.26	OK	
	LC14 at 0.00%	0.19	OK	
	LC2 at 100.00%	0.34	OK	
	LC3 at 100.00%	0.37	OK	
	LC4 at 100.00%	0.60	OK	Eq. H1-1b
	LC5 at 100.00%	0.43	OK	
	LC6 at 100.00%	0.27	OK	
	LC7 at 100.00%	0.30	OK	
	LC8 at 100.00%	0.53	OK	
	LC9 at 0.00%	0.45	OK	
	W180 at 100.00%	0.16	OK	
	W210 at 100.00%	0.21	OK	
	Wi180 at 100.00%	0.03	OK	
	Wi210 at 100.00%	0.04	OK	
194	LC1 at 100.00%	0.65	OK	
	LC10 at 100.00%	0.47	OK	
	LC11 at 100.00%	0.43	OK	
	LC12 at 100.00%	0.41	OK	
	LC13 at 0.00%	0.24	OK	
	LC14 at 0.00%	0.18	OK	

	LC2 at 100.00%	0.72	OK	Eq. H1-1b
	LC3 at 100.00%	0.44	OK	
	LC4 at 100.00%	0.29	OK	
	LC5 at 100.00%	0.59	OK	
	LC6 at 100.00%	0.66	OK	
	LC7 at 100.00%	0.38	OK	
	LC8 at 100.00%	0.30	OK	
	LC9 at 100.00%	0.46	OK	
	W180 at 100.00%	0.26	OK	
	W210 at 100.00%	0.30	OK	
	Wi180 at 100.00%	0.05	OK	
	Wi210 at 100.00%	0.06	OK	
195	LC1 at 100.00%	0.57	OK	
	LC10 at 0.00%	0.46	OK	
	LC11 at 0.00%	0.44	OK	
	LC12 at 0.00%	0.43	OK	
	LC13 at 0.00%	0.25	OK	
	LC14 at 0.00%	0.19	OK	
	LC2 at 100.00%	0.59	OK	Eq. H1-1b
	LC3 at 100.00%	0.43	OK	
	LC4 at 100.00%	0.34	OK	
	LC5 at 100.00%	0.51	OK	
	LC6 at 100.00%	0.53	OK	
	LC7 at 100.00%	0.37	OK	
	LC8 at 100.00%	0.28	OK	
	LC9 at 100.00%	0.46	OK	
	W180 at 100.00%	0.20	OK	
	W210 at 100.00%	0.22	OK	
	Wi180 at 100.00%	0.04	OK	
	Wi210 at 100.00%	0.04	OK	
207	LC1 at 100.00%	0.06	OK	
	LC10 at 100.00%	0.38	OK	
	LC11 at 0.00%	0.41	OK	
	LC12 at 100.00%	0.39	OK	
	LC13 at 100.00%	0.23	OK	
	LC14 at 100.00%	0.18	OK	
	LC2 at 100.00%	0.40	OK	
	LC3 at 0.00%	0.52	OK	Eq. H1-1b
	LC4 at 100.00%	0.42	OK	
	LC5 at 0.00%	0.12	OK	
	LC6 at 100.00%	0.35	OK	
	LC7 at 0.00%	0.46	OK	
	LC8 at 100.00%	0.36	OK	
	LC9 at 100.00%	0.34	OK	
	W180 at 0.00%	0.18	OK	
	W210 at 100.00%	0.11	OK	
	Wi180 at 0.00%	0.04	OK	
	Wi210 at 100.00%	0.02	OK	
208	LC1 at 0.00%	0.15	OK	
	LC10 at 100.00%	0.40	OK	Eq. H1-1b
	LC11 at 0.00%	0.40	OK	
	LC12 at 0.00%	0.40	OK	
	LC13 at 0.00%	0.24	OK	
	LC14 at 0.00%	0.18	OK	
	LC2 at 100.00%	0.37	OK	
	LC3 at 100.00%	0.41	OK	Eq. H1-1b
	LC4 at 100.00%	0.36	OK	
	LC5 at 0.00%	0.09	OK	
	LC6 at 100.00%	0.31	OK	
	LC7 at 100.00%	0.35	OK	
	LC8 at 100.00%	0.31	OK	

LC9 at 0.00%	0.37	OK
W180 at 100.00%	0.11	OK
W210 at 100.00%	0.08	OK
Wi180 at 100.00%	0.02	OK
Wi210 at 100.00%	0.02	OK

Current Date: 3/19/2018 12:39 PM

Units system: English

File name: W:\STRUCTURAL DEPARTMENT\ANALYSIS SOFTWARE\RAM Elements\RAM Projects\AT&T\CT\CT2079\CT2079 (MOD.).etx\

Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
7	12.9442	0.00	-9.75	0
221	7.315	0.00	-6.50	0
313	9.7452	0.00	-15.2908	0
314	9.9617	0.00	-15.4158	0
315	9.9617	-2.00	-15.4158	0
316	9.9617	6.00	-15.4158	0
322	13.2037	0.00	-9.3005	0
323	13.4202	0.00	-9.4255	0
324	13.4202	6.00	-9.4255	0
325	16.3182	6.00	-4.406	0
326	16.1017	0.00	-4.281	0
327	16.3182	0.00	-4.406	0
328	16.3182	-2.00	-4.406	0
329	13.4202	-2.00	-9.4255	0
331	16.6017	0.00	-3.415	0
332	9.2867	0.00	-16.085	0
344	12.0573	0.00	-4.3003	0
345	15.9767	0.00	-4.4976	0
346	9.8702	0.00	-15.0743	0
347	7.8461	0.00	-11.5942	0
348	9.4801	0.00	-7.75	0
349	9.4801	2.00	-7.75	0

350	9.4801	-2.00	-7.75	0
351	8.614	2.00	-7.25	0
352	8.614	-2.00	-7.25	0
401	1.6858	0.00	-9.75	0
402	-1.5132	0.00	-4.2092	0
403	-1.7297	0.00	-4.3342	0
404	-1.7297	-2.00	-4.3342	0
405	-1.7297	6.00	-4.3342	0
406	1.9453	0.00	-10.1995	0
407	1.7288	0.00	-10.3245	0
408	1.7288	6.00	-10.3245	0
409	4.6268	6.00	-15.344	0
410	4.8433	0.00	-15.219	0
411	4.6268	0.00	-15.344	0
412	4.6268	-2.00	-15.344	0
413	1.7288	-2.00	-10.3245	0
414	5.3433	0.00	-16.085	0
415	-1.9717	0.00	-3.415	0
416	6.8489	0.00	-11.5942	0
417	4.7183	0.00	-15.0024	0
418	-1.3882	0.00	-4.4257	0
419	2.6377	0.00	-4.3003	0
420	5.1499	0.00	-7.75	0
421	5.1499	2.00	-7.75	0
422	5.1499	-2.00	-7.75	0
423	6.016	2.00	-7.25	0
424	6.016	-2.00	-7.25	0
425	7.315	0.00	0.00	0
426	13.713	0.00	0.00	0
427	13.713	0.00	0.25	0
428	13.713	-2.00	0.25	0
429	13.713	6.00	0.25	0
430	6.796	0.00	0.00	0
431	6.796	0.00	0.25	0
432	6.796	6.00	0.25	0
433	1.00	6.00	0.25	0
434	1.00	0.00	0.00	0
435	1.00	0.00	0.25	0
436	1.00	-2.00	0.25	0
437	6.796	-2.00	0.25	0
438	0.00	0.00	0.00	0
439	14.63	0.00	0.00	0
440	3.0388	0.00	-3.4929	0
441	1.25	0.00	0.00	0
442	13.463	0.00	0.00	0
443	11.4612	0.00	-3.4929	0
444	7.315	0.00	-4.00	0
445	7.315	2.00	-4.00	0
446	7.315	-2.00	-4.00	0
447	7.315	2.00	-5.00	0
448	7.315	-2.00	-5.00	0
449	13.713	3.00	0.00	0
450	13.713	3.00	0.25	0
451	6.796	3.00	0.00	0
452	6.796	3.00	0.25	0
453	1.00	3.00	0.00	0
454	1.00	3.00	0.25	0
455	-1.5132	3.00	-4.2092	0
456	-1.7297	3.00	-4.3342	0
457	1.9453	3.00	-10.1995	0

458	1.7288	3.00	-10.3245	0
459	4.8433	3.00	-15.219	0
460	4.6268	3.00	-15.344	0
461	9.7452	3.00	-15.2908	0
462	9.9617	3.00	-15.4158	0
463	13.2037	3.00	-9.3005	0
464	13.4202	3.00	-9.4255	0
465	16.1017	3.00	-4.281	0
466	16.3182	3.00	-4.406	0
467	14.63	3.00	0.00	0
468	0.00	3.00	0.00	0
469	-1.9717	3.00	-3.415	0
470	5.3433	3.00	-16.085	0
471	9.2867	3.00	-16.085	0
472	16.6017	3.00	-3.415	0
473	16.3517	3.00	-3.848	0
474	9.5367	3.00	-15.652	0
479	5.0933	3.00	-15.652	0
480	-1.7217	3.00	-3.848	0
481	0.50	3.00	0.00	0
482	14.13	3.00	0.00	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
351	1	1	1	1	1	1
352	1	1	1	1	1	1
423	1	1	1	1	1	1
424	1	1	1	1	1	1
447	1	1	1	1	1	1
448	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
131	316	315		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
132	332	331		PIPE 3-1_2x0.226	A53 GrB	0.00	0.00	0.00
135	324	329		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
136	325	328		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
151	344	345		L 4X4X1_4	A36	0.00	0.00	0.00
152	346	347		L 4X4X1_4	A36	0.00	0.00	0.00
153	348	7		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
154	349	350		PIPE 4x0.237	A53 GrB	0.00	0.00	0.00
155	349	351		PL 6x1/2	A36	0.00	0.00	0.00
156	350	352		PL 6x1/2	A36	0.00	0.00	0.00
184	405	404		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
185	415	414		PIPE 3-1_2x0.226	A53 GrB	0.00	0.00	0.00
187	408	413		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
188	409	412		PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
190	416	417		L 4X4X1_4	A36	0.00	0.00	0.00

191	418	419	L 4X4X1_4	A36	0.00	0.00	0.00
192	420	401	HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
193	421	422	PIPE 4x0.237	A53 GrB	0.00	0.00	0.00
194	421	423	PL 6x1/2	A36	0.00	0.00	0.00
195	422	424	PL 6x1/2	A36	0.00	0.00	0.00
197	429	428	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
198	439	438	PIPE 3-1_2x0.226	A53 GrB	0.00	0.00	0.00
200	432	437	PIPE 2-1_2x0.203	A53 GrB	0.00	0.00	0.00
201	433	436	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
203	440	441	L 4X4X1_4	A36	0.00	0.00	0.00
204	442	443	L 4X4X1_4	A36	0.00	0.00	0.00
205	444	425	HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
206	445	446	PIPE 4x0.237	A53 GrB	0.00	0.00	0.00
207	445	447	PL 6x1/2	A36	0.00	0.00	0.00
208	446	448	PL 6x1/2	A36	0.00	0.00	0.00
209	419	440	L 2X2X1_4	A36	0.00	0.00	0.00
210	344	443	L 2X2X1_4	A36	0.00	0.00	0.00
211	347	416	L 2X2X1_4	A36	0.00	0.00	0.00
212	467	468	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
213	469	470	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
221	471	472	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
224	481	480	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
225	482	473	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
226	479	474	PIPE 2x0.154	A53 GrB	0.00	0.00	0.00

Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
131	0.00	2	-0.50	0.00	-0.866
135	0.00	2	-0.50	0.00	-0.866
136	0.00	2	-0.50	0.00	-0.866
151	180.00	0	0.00	0.00	0.00
152	180.00	0	0.00	0.00	0.00
154	0.00	2	-0.50	0.00	-0.866
155	90.00	0	0.00	0.00	0.00
156	90.00	0	0.00	0.00	0.00
184	0.00	2	-0.50	0.00	0.866
187	0.00	2	-0.50	0.00	0.866
188	0.00	2	-0.50	0.00	0.866
190	180.00	0	0.00	0.00	0.00
191	180.00	0	0.00	0.00	0.00
193	0.00	2	-0.50	0.00	0.866
194	90.00	0	0.00	0.00	0.00
195	90.00	0	0.00	0.00	0.00
203	180.00	0	0.00	0.00	0.00
204	180.00	0	0.00	0.00	0.00
207	90.00	0	0.00	0.00	0.00
208	90.00	0	0.00	0.00	0.00
209	270.00	0	0.00	0.00	0.00
211	270.00	0	0.00	0.00	0.00