



# 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](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

### VIA ELECTRONIC MAIL

January 3, 2019

Rodney Joujoute  
Smartlink, LLC  
85 Rangeway Road, Building 3, Suite 102  
Billerica, MA 01862

RE: **EM-AT&T-155-181203** – AT&T Mobility, LLC notice of intent to modify an existing telecommunications facility located at 3114 Albany Avenue, West Hartford, Connecticut.

Dear Mr. Joujoute:

The Connecticut Siting Council (Council) is in receipt of your correspondence of January 2, 2019 submitted in response to the Council's December 4, 2018 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders 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

MAB/FOC/emr

## Robidoux, Evan

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**From:** Rodney Jougoute <rodney.jougoute@smartlinkllc.com>  
**Sent:** Monday, December 31, 2018 11:19 AM  
**To:** Robidoux, Evan  
**Cc:** CSC-DL Siting Council; Sharon Keefe; April Grasso  
**Subject:** RE: Council Incomplete Letter for EM-AT&T-155-181203-AlbanyAve-WestHartford  
**Attachments:** CSC Exempt Modification Supplement 12-31-18 CTL01154.pdf

Good Morning,

Please see the attached AT&T Exempt Modification Supplement Filings for the following telecommunications facility:

- CTL01154 – 3114 Albany Ave, West Hartford, CT - CTL01154

The hard copies will be delivered as soon as possible.

Thank You,



**Rodney Jougoute | Real Estate Specialist**  
**Smartlink**

85 Rangeway Road  
Bldg. #3 Suite 102  
North Billerica, MA 01862

(o) 781-309-2301

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prohibited. If you have received this message in error, please notify us immediately by reply email that we may correct our internal records. Please then delete the original message (including any attachments) in its entirety. Thank you.

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**From:** Robidoux, Evan

**Sent:** Thursday, December 6, 2018 11:30 AM

**To:** Rodney Joujoute

**Cc:** CSC-DL Siting Council

**Subject:** Council Incomplete Letter for EM-AT&T-155-181203-AlbanyAve-WestHartford

Please see the attached correspondence.

Evan Robidoux

Clerk Typist

Connecticut Siting Council

10 Franklin Square

New Britain, CT 06051



December 31, 2018

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

**Re:**  
**Property Address:**  
**Applicant:**

**Notice of Exempt Modification – Antenna Swap and RRU Add  
3114 Albany Ave, West Hartford, CT  
AT&T Mobility, LLC**

Dear Ms. Bachman:

I am submitting Delivery proofs to the principal property owner, Educational Media Foundation at 3114 Albany Ave as demonstrated on the property card attached, as well as a revised structural Analysis that demonstrates the approved equipment by T-mobile as requested. This submission includes all the exhibits as requested by the Connecticut Siting Council's letter dated December 4th, 2018. Please feel free to reach out if you have any questions.

Sincerely,

Rodney Joujoute

CC w/enclosures:  
Shari Cantor, Mayor of West Hartford  
Structure Owner – SBA Communications  
Tim Mikloiche, The Supervisor of Inspections  
Education Media Foundation – Property Owner





# 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](mailto:siting.council@ct.gov)

[www.ct.gov/csc](http://www.ct.gov/csc)

December 4, 2018

Rodney Joujoute  
Smartlink, LLC  
85 Rangeway Road, Building 3, Suite 102  
Billerica, MA 01862

RE: **EM-AT&T-155-181203** – AT&T Mobility, LLC notice of intent to modify an existing telecommunications facility located at 3114 Albany Avenue, West Hartford, Connecticut.

Dear Mr. Joujoute:

The Connecticut Siting Council (Council) received a notice of intent to modify the above-referenced facility on December 3, 2018.

According to Section 16-50j-71 of the Regulations of Connecticut State Agencies, "...any modification, as defined in Section 16-50j-2a of the Regulations of Connecticut State Agencies, to an existing tower site, except as specified in Sections 16-50j-72 and 16-50j-88 of the Regulations of Connecticut State Agencies, may have a substantial adverse environmental effect."

Staff has reviewed this exempt modification request for completeness and has identified a deficiency in the Structural Analysis Report provided with the request. The Structural Analysis Report provided is dated November 8, 2018. The Council had received a request for exempt modification from T-Mobile for the same facility in June of 2017. The above-referenced request for exempt modification does not include T-Mobile's approved equipment. Please see T-Mobile's exempt modification filing for this facility, which may be found on the Council's website under the Decisions page in West Hartford under the filing number EM-T-Mobile-115-170605 or by following the link:

[https://www.ct.gov/csc/lib/csc/ems/westhartford/albanyave/t\\_mobile/em-t-mobile-115-170605\\_filing\\_albanyave.pdf](https://www.ct.gov/csc/lib/csc/ems/westhartford/albanyave/t_mobile/em-t-mobile-115-170605_filing_albanyave.pdf)

Also the above referenced request for exempt modification lacks proof that the entire request for exempt modification was physically mailed to the underlying property owner listed in the property card as Educational Media Foundation.

Therefore, the exempt modification request is incomplete at this time. The Council recommends that Smartlink provide an updated Structural Analysis Report for the facility that includes proposed and approved equipment by T-Mobile and other entities that are located at this facility and proof of proper notice of this exempt modification request to the underlying property owner on or before January 11, 2018. If additional time is needed to gather the requested information, please submit a written request for an extension of time prior to January 11, 2018.

This notice of incompleteness shall have the effect of tolling the Federal Communications Commission (FCC) 60-day timeframe in accordance with Paragraph 217 of the FCC Wireless Infrastructure Report and Order issued on October 21, 2014 (FCC 14-153).

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 860-827-2951.

Sincerely,

Melanie Bachman  
Executive Director

MAB/FOC/in

c: The Honorable Shari Cantor, Mayor, Town of West Hartford  
Matthew Hart, Town Manager, Town of West Hartford  
Todd Dumais, Town Planner, Town of West Hartford

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Affirmative Action / Equal Opportunity Employer



December 31,2018

Dear Customer:

The following is the proof-of-delivery for tracking number **774020063795**.

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**Delivery Information:**

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<b>Status:</b>	Delivered	<b>Delivered to:</b>	Shipping/Receiving
<b>Signed for by:</b>	A.ANDERSON	<b>Delivery location:</b>	5700 W OAKS BLVD ROCKLIN, CA 95765
<b>Service type:</b>	FedEx First Overnight	<b>Delivery date:</b>	Dec 20, 2018 14:19
<b>Special Handling:</b>	Deliver Weekday		
	No Signature Required		



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**Shipping Information:**

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<b>Tracking number:</b>	774020063795	<b>Ship date:</b>	Dec 19, 2018
		<b>Weight:</b>	1.0 lbs/0.5 kg

**Recipient:**  
Educational Media Foundation  
Educational Media Foundation  
5700 West Oaks Blvd  
ROCKLIN, CA 95765 US

**Shipper:**  
Rodney Joujoute  
Smartlink LLC  
85 Rangeway Road  
Bldg. 3 - Suite 102  
North Billerica, MA 01862 US

Thank you for choosing FedEx.





**Tower Engineering Solutions**

Phone (972) 483-0607, Fax (972) 975-9615  
1320 Greenway Drive, Suite 600, Irving, Texas 75038

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## Structural Analysis Report

**Existing 310 ft Guyed Tower**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT15879-A**

**Customer Site Name: West Hartford**

**Carrier Name: AT&T**

**Carrier Site ID / Name: CTL01154 / West Hartford-Albany Ave**

**Site Location: 3114 Albany Avenue**

**West Hartford, Connecticut**

**County**

**Latitude: 41.796802**

**Longitude: -72.796830**

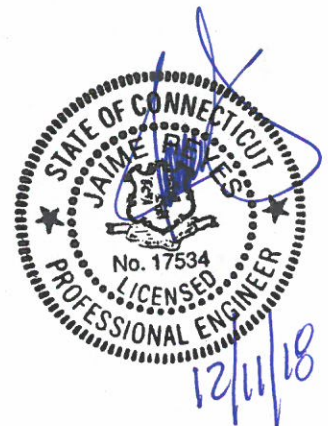
### Analysis Result:

**Max Structural Usage: 71.6% [Pass]**

**Max Foundation Usage: 78.0% [Pass]**

**Additional Usage Caused by Mount Modification: +2%**

**Report Prepared By : Tawfeeq Alajaj**





**Tower Engineering Solutions**

Phone (972) 483-0607, Fax (972) 975-9615  
1320 Greenway Drive, Suite 600, Irving, Texas 75038

---

## **Structural Analysis Report**

**Existing 310 ft Guyed Tower**

**Customer Name: SBA Communications Corp**

**Customer Site Number: CT15879-A**

**Customer Site Name: West Hartford**

**Carrier Name: AT&T**

**Carrier Site ID / Name: CTL01154 / West Hartford-Albany Ave**

**Site Location: 3114 Albany Avenue**

**West Hartford, Connecticut**

**County**

**Latitude: 41.796802**

**Longitude: -72.796830**

### **Analysis Result:**

**Max Structural Usage: 71.6% [Pass]**

**Max Foundation Usage: 78.0% [Pass]**

**Additional Usage Caused by Mount Modification: +2%**

**Report Prepared By : Tawfeeq Alajaj**



## Introduction

The purpose of this report is to summarize the analysis results on the 310ft Guyed Tower 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

<b>Tower Drawings</b>	Tower Engineering Professional Tower Mapping, Project #112343 dated July 12, 2011 FDH, Inc. Tower Mapping, Job #14629H1500 dated May 9, 2014
<b>Foundation Drawing</b>	FDH Engineering, Inc. Mapping, Project #14620E1500 dated May 22, 2014
<b>Geotechnical Report</b>	Clarence Welti Associates, Inc., Site Location: West Hartford, CT dated May 22, 2000
<b>Modification Drawings</b>	N/A

## 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 **TESTowers**, 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.

<b>Wind Speed Used in the Analysis:</b>	Ultimate Design Wind Speed $V_{ult} = 125.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 97.0$ mph (3-Sec. Gust)
<b>Wind Speed with Ice:</b>	50 mph (3-Sec. Gust) with 1" radial ice concurrent
<b>Operational Wind Speed:</b>	60 mph + 0" Radial ice
<b>Standard/Codes:</b>	ANSI/TIA/EIA 222-G / 2012 IBC / 2016 Connecticut State Building Code
<b>Exposure Category:</b>	C
<b>Structure Class:</b>	II
<b>Topographic Category:</b>	1
<b>Crest Height:</b>	0 ft
<b>Seismic Parameters:</b>	$S_S = 0.181$ , $S_1 = 0.064$

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	Mount Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	332.0	1	ERI 3 Bay FM w/ Radome	Direct	(1) 3"	WCCC
2	308.3	1	Scala SCA 4DR-8S	(1) Pipe Mount	(1) 3"	ZGS Hartford
3	265.0	1	SCA CA-2-FM-CP	(1) Pipe Mount	(1) 1/2"	WSDK
4	251.8	1	Antenna Concepts ACB16A	(1) Pipe Mount	(1) 1 5/8" (1) 3/8"	WRDM
5	251.0	1	Decibel DB420-B - Whip	(1) Standoff	(1) 7/8"	Master Combiner
6	243.0	1	Antel WPA-800120/6CF	Pipe Mount (SitePro R5)	(1) 7/8"	Town of West Hartford
7		2	Combilent CP00732 - TMA			
8	235.0	1	Scala 6 ft x 3 ft Grid Dish	Direct	(1) 7/8"	WCCC
9	232.0	2	Site Pro CIS04 - Ice Shield	Pipe Mount	(2) 1/2"	Town of West Hartford
10		2	RFS SC3-W100AC - Dish			
11	225.5	2	34" x 7" x 2" Panel	(2) Pipe Mount	(2) 3/8"	SNEW ISP
12	220.0	1	Antel WPA-800120/6CF	Pipe Mount	(1) 1 5/8"	Town of West Hartford
13	203.0	1	Decibel DB420-B - Whip	(1) Standoff	(1) 1/2"	Master Combiner
14	196.0	1	Cablewave PA6-112 - Dish	(1) Standoff	(1) EW71	WRDM
15		1	T.S. 3"x 3" x 6.5'			
16	180.0	1	Micronetixx LP-1900-B-12	(1) Pipe Mount	(1) 1 5/8"	WRNT (R&C) Tyche Media
17	165.0	1	Antel BCD-80010 - Whip	Pipe Mount	(1) 1 5/8"	Town of West Hartford
18	164.5	1	6810 1 Bay FM	(1) Pipe Mount	(1) 1/2"	91.9 FM
19	160.0	2	RFS APX16DWV_16DWVS-E-A20 - Panel	(3) T-Frame	(8) 1 5/8"	T-Mobile
20		2	CommScope TMAT1921B78-21A			
21		2	Ericsson KRY 112 71			
22		4	RFS FDAP5002-1A20			
23	146.5	1	2 ft Dish	(1) Pipe Mount	(1) 3/8"	SNEW ISP
24		1	12" x 4.5" x 6.25" TMA			
25	145.0	1	12' x 1" - Omni	(1) Standoff	(1) 1 5/8"	Ham Radio
26	142.5	-	-	-	(1) 1 5/8"	-
27	140.5	-	-	-	(1) 1 5/8"	-
28	136.5	1	5'x10" Detuner	Direct	(1) 1/4"	Ham Radio

## Existing Antennas, Mounts and Transmission Lines (continued)

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

29	130.0	2	Andrew HBX-6517DS - Panel	(3) T-Frame	(8) 1 5/8" (1) 1 5/8" Fiber	Verizon
30		2	Andrew LNX-6514DS - Panel			
31		2	Swedcom SLCP 2x6015 - Panel			
32		2	Swedcom SACP 2x5516 - Panel			
33		4	RFS FD9R6004/2C			
34		2	Alcatel Lucent RRH2x40-AWS			
35		1	RFS DB-T1-6Z-8AB-0Z			
36	120.5	3	RFS APXV18-206517S - Panel	(1) Pipe Mount	(6) 1 5/8"	Metro PCS
-	112.0	6	Kathrein 800 10121 - Panel	(3) T-Frame	(12) 1 5/8" (4) 3/4" DC (2) 3/8" Fiber	AT&T
-		2	CCI HPA-65R-BUU-H8 - Panel			
-		1	CCI HPA-65R-BUU-H6 - Panel			
-		3	Ericsson RRUS-11			
-		3	Ericsson RRUS-12			
-		3	Ericsson RRUS A2			
-		6	CCI DTMABP7819VG12A			
-		12	Kathrein 860 10025			
-		1	Raycap DC6-48-60-18-8F			
54	48.0	1	GPS	Direct	(1) 3/8"	Metro PCS
55	21.0	1	14-Element 4.5 ft Yagi	(1) Standoff	(1) 1/2"	Ham Radio

## 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
37	112.0	3	Kathrein - 800 10121 - Panel	(3) Modified T-Frame with (3) Reinforcement Kit (Site Pro 1 P/N SFR-K-L, and (3) Addition of Horizontal Pipe 2.0 Std. And (3) Addition of Crossover Plate Kit (Site-Pro 1 P/N SCX1-K)	(12) 1 5/8" (6) 3/4" DC (2) 3/8" Fiber	AT&T
38		2	Kathrein - 800-10966 - Panel			
39		1	Kathrein - 800-10965 - Panel			
40		2	CCI - HPA65R-BU8A - Panel			
41		1	CCI - HPA65R-BU6A - Panel			
42		3	Ericsson RRUS 11			
43		3	Ericsson RRUS 12			
44		3	Ericsson RRUS A2			
45		3	Ericsson RRUS 4478 B14			
46		3	Ericsson RRUS 4478 B5			
47		3	Ericsson RRUS 4478 B66			
48		6	Kaelus DBCT108F1V92-1			
49		6	Cci DTMABP7819VG12A TMA			
50		12	Kathrein 860 10025 -			
51		2	Raycap DC6-48-60-18-8F ("Squid")			
52		1	Raycap DC6-48-60-18-8F			
53		3	Ericsson RRUS 32			



## **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:

Tower Component	Legs	Diagonals	Horizontals	Guy Wires
Max. Usage:	<b>50.8%</b>	<b>57.4%</b>	<b>23.4%</b>	<b>71.6%</b>
Pass/Fail	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

## **Foundations**

Reactions (kips)	Base Reactions		Inner Anchors	
	Axial	Shear	Uplift	Shear
Analysis Reactions	373.3	9.7	65.2	77.9

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):**

The maximum twist and sway of the microwave dishes under the operational wind speed as specified in the Analysis Criteria are listed in the table below:

Elevation (ft)	Antenna / Dish	Carrier	Twist (deg)	Sway (deg)
235.0	6 ft x 3 ft Grid Dish	WCCC	0.582	0.021
232.0	SC3-W100AC - Dish	Town of West Hartford	0.584	0.022
196.0	PA6-112 - Dish	WRDM	0.615	0.027
146.5	2 ft Dish - Dish	SNEW ISP	0.542	0.026

It is recommended that the carriers review the twist and sway values of the microwave dishes.

### **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.

## Structure: CT15879-A-SBA

<b>Site Name:</b> West Hartford	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Type:</b> Guyed	<b>Base Shape:</b> Triangle	<b>Basic WS:</b> 97.00
<b>Height:</b> 309.00 (ft)	<b>Base Width:</b> 0.00	<b>Basic Ice WS:</b> 50.00
<b>Base Elev:</b> 0.00 (ft)	<b>Top Width:</b> 5.00	<b>Operational WS:</b> 60.00

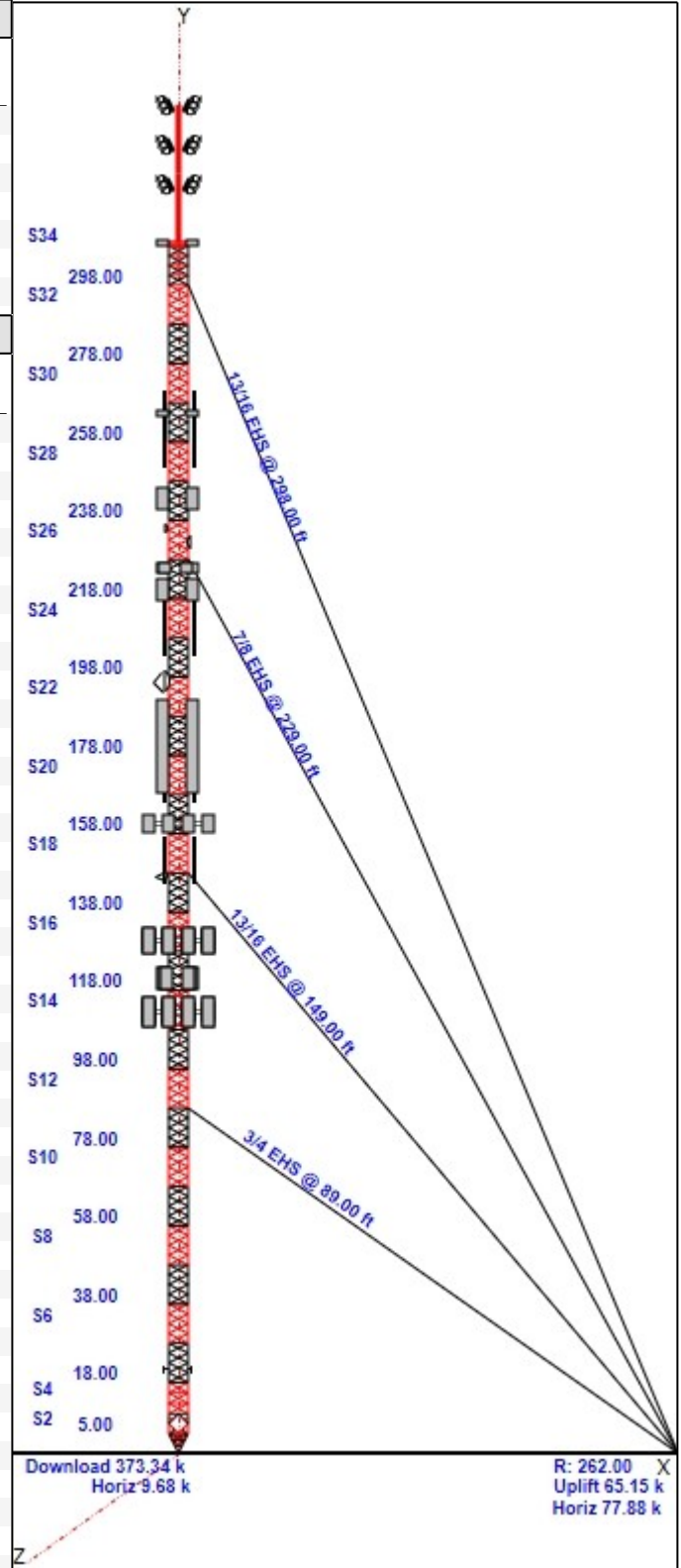


### Section Properties

Sect	Leg Members	Diagonal Members	Horizontal Members
1-3	SOL 3" SOLID	SOL 1 1/4" SOLID	PLT 6" x 3/4"
4	SOL 3" SOLID	SOL 1" SOLID	SOL 7/8" SOLID
5-16	SOL 3" SOLID	SOL 7/8" SOLID	SOL 1" SOLID
17-18	SOL 3" SOLID	SOL 1" SOLID	SOL 1 1/4" SOLID
19-32	SOL 2 7/8" SOLID	SOL 7/8" SOLID	SOL 1" SOLID
33	SOL 2 7/8" SOLID	SOL 7/8" SOLID	SOL 1 1/4" SOLID
34	SOL 2 7/8" SOLID		PLT 6"x1"

### Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description
344.00	344.00	1	Beacon
344.00	344.00	1	Lightning Rod
342.00	342.00	1	ERI 3 Bay FM w/ Radome
332.00	332.00	1	ERI 3 Bay FM w/ Radome
332.00	332.00	1	2.4" x 18" Pipe
322.00	322.00	1	ERI 3 Bay FM w/ Radome
309.50	309.50	1	10' Mount
308.30	308.30	1	Scala SCA 4DR-8S
265.00	265.00	1	Pipe Mount
265.00	265.00	1	SCA CA-2-FM-CP
251.80	258.50	1	ACB16A
251.80	251.80	1	2.4" x 25' Mount Pipe
251.00	260.71	1	DB420-B
251.00	251.00	1	Side Arm Mount
243.00	243.00	1	WPA-800120/6CF
243.00	243.00	1	SitePro R5 Pipe Mount
243.00	243.00	2	Combilent CP00732
235.00	235.00	1	6 ft x 3 ft Grid Dish
232.00	232.00	2	SitePro R5 Pipe Mount
232.00	232.00	2	SC3-W100AC
232.00	232.00	2	SitePro CIS04
225.50	225.50	2	Pipe Mount
225.50	225.50	2	34" x 7" x 2" Panel
220.00	220.00	1	WPA-800120/6CF
220.00	220.00	1	SitePro R5 Pipe Mount
203.00	203.00	1	Side Arm Mount
203.00	212.71	1	DB420-B
196.00	196.00	1	PA6-112 w/ Radome
196.00	196.00	1	T.S. 3"x 3" x 6.5'
196.00	196.00	1	2.4" x 6.5' Mount Pipe
180.00	180.00	1	LP-1900-B-12
180.00	180.00	1	2.5" x 25' Mount Pipe
165.00	170.67	1	BCD-80010
165.00	165.00	1	SitePro R5 Pipe Mount
164.50	164.50	1	2.4"x 10' Mount Pipe
164.50	164.50	1	6810 1 Bay FM
160.00	160.00	2	APX16DWV-16DWVS
160.00	160.00	2	KRY 112 71
160.00	160.00	3	T-Frame
160.00	160.00	2	TMAT1921B78-21A
160.00	160.00	4	FDAP5002-1A20
146.50	146.50	1	2.4"x 4' Mount Pipe





**Structure: CT15879-A-SBA**

<b>Site Name:</b> West Hartford	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Type:</b> Guyed	<b>Base Shape:</b> Triangle	<b>Basic WS:</b> 97.00
<b>Height:</b> 309.00 (ft)	<b>Base Width:</b> 0.00	<b>Basic Ice WS:</b> 50.00
<b>Base Elev:</b> 0.00 (ft)	<b>Top Width:</b> 5.00	<b>Operational WS:</b> 60.00



146.50	146.50	1	2 ft Dish w/Radome
146.50	146.50	1	12" x 4.5" x 6.25" TMA
145.00	151.00	1	12' Omni
145.00	145.00	1	30" Sidearm
136.50	136.50	1	5' x 10" Detuner
130.00	130.00	2	HBX-6517DS
130.00	130.00	2	LNx-6514DS
130.00	130.00	2	SLCP 2x6015
130.00	130.00	2	SACP 2x5516
130.00	130.00	4	FD9R6004/2C
130.00	130.00	2	RRH2x40-AWS
130.00	130.00	1	DB-T1-6Z-8AB-0Z
130.00	130.00	3	T-Frame
120.50	120.50	3	APXV18-206517S
112.00	112.00	3	800 10121
112.00	112.00	3	Ericsson RRUS 11
112.00	112.00	3	Ericsson RRUS 12
112.00	112.00	3	Ericsson RRUS A2
112.00	112.00	6	Cci DTMAPB7819VG12A TMA
112.00	112.00	12	Kathrein 860 10025
112.00	112.00	2	Raycap DC6-48-60-18-8F ("Squid")
112.00	112.00	1	Raycap DC6-48-60-18-8F
112.00	112.00	1	REINFORCING KIT
112.00	112.00	2	800-10966
112.00	112.00	1	800-10965
112.00	112.00	2	HPA65R-BU8A
112.00	112.00	1	HPA65R-BU6A
112.00	112.00	3	Ericsson RRUS 4478 B14
112.00	112.00	3	Ericsson RRUS 4478 B5
112.00	112.00	3	Ericsson RRUS 4478 B66
112.00	112.00	3	Ericsson RRUS 32
112.00	112.00	6	Kaelus DBCT108F1V92-1
112.00	112.00	3	T-Frame
48.00	48.00	1	1" x 16" Pipe
48.00	48.00	1	GPS
21.00	21.00	1	14-Element 4.5 ft Yagi
21.00	21.00	1	1-ft Side Arm

**Linear Appurtenances**

Elev From (ft)	Elev To (ft)	Qty	Description
0.00	344.00	1	1" Light Conduit
0.00	332.00	1	3" Coax
0.00	308.30	1	3" Coax
0.00	308.00	1	Safety Cable
0.00	290.00	3	Detuner
0.00	265.00	1	1/2" Coax
0.00	251.80	1	1 5/8" Coax
0.00	251.80	1	3/8" Coax
0.00	251.00	1	7/8" Coax
0.00	243.00	1	7/8" Coax
0.00	235.00	1	7/8" Coax
0.00	232.00	2	1/2" Coax
0.00	225.50	2	3/8" Coax
0.00	220.00	1	1 5/8" Coax
0.00	203.00	1	1/2" Coax
0.00	196.00	1	EW71

**Structure: CT15879-A-SBA**

**Site Name:** West Hartford      **Code:** EIA/TIA-222-G      12/10/2018  
**Type:** Guyed      **Base Shape:** Triangle      **Basic WS:** 97.00  
**Height:** 309.00 (ft)      **Base Width:** 0.00      **Basic Ice WS:** 50.00  
**Base Elev:** 0.00 (ft)      **Top Width:** 5.00      **Operational WS:** 60.00      Page: 3



0.00	180.00	1	1 5/8" Coax
0.00	165.00	1	1 5/8" Coax
0.00	164.50	1	1/2" Coax
0.00	160.00	8	1 5/8" Coax
0.00	146.50	1	3/8" Coax
0.00	145.00	1	1 5/8" Coax
0.00	142.50	1	1 5/8" Coax
0.00	140.50	1	1 5/8" Coax
0.00	136.50	1	1/4" Coax
0.00	130.00	8	1 5/8" Coax
0.00	130.00	1	1 5/8" Fiber
0.00	120.50	6	1 5/8" Coax
0.00	112.00	12	1 5/8" Coax
0.00	112.00	6	3/4" DC
0.00	112.00	2	3/8" Fiber
0.00	48.00	1	3/8" Coax
0.00	21.00	1	1/2" Coax

**Max Guy Wire**

71.64% @ 88 ft - 3/4 EHS

**Structure: CT15879-A-SBA**

<b>Site Name:</b> West Hartford	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Type:</b> Guyed	<b>Base Shape:</b> Triangle	<b>Basic WS:</b> 97.00
<b>Height:</b> 309.00 (ft)	<b>Base Width:</b> 0.00	<b>Basic Ice WS:</b> 50.00
<b>Base Elev:</b> 0.00 (ft)	<b>Top Width:</b> 5.00	<b>Operational WS:</b> 60.00

Page: 4



## Anchor Drops with Guy Radius - Structure: CT15879-A-SBA

**Site Name:** West Hartford

**Code:** EIA/TIA-222-G

12/10/2018

**Type:** Guyed

**Base Shape:** Triangle

**Basic WS:** 97.00

**Height:** 309.00 (ft)

**Base Width:** 0.00

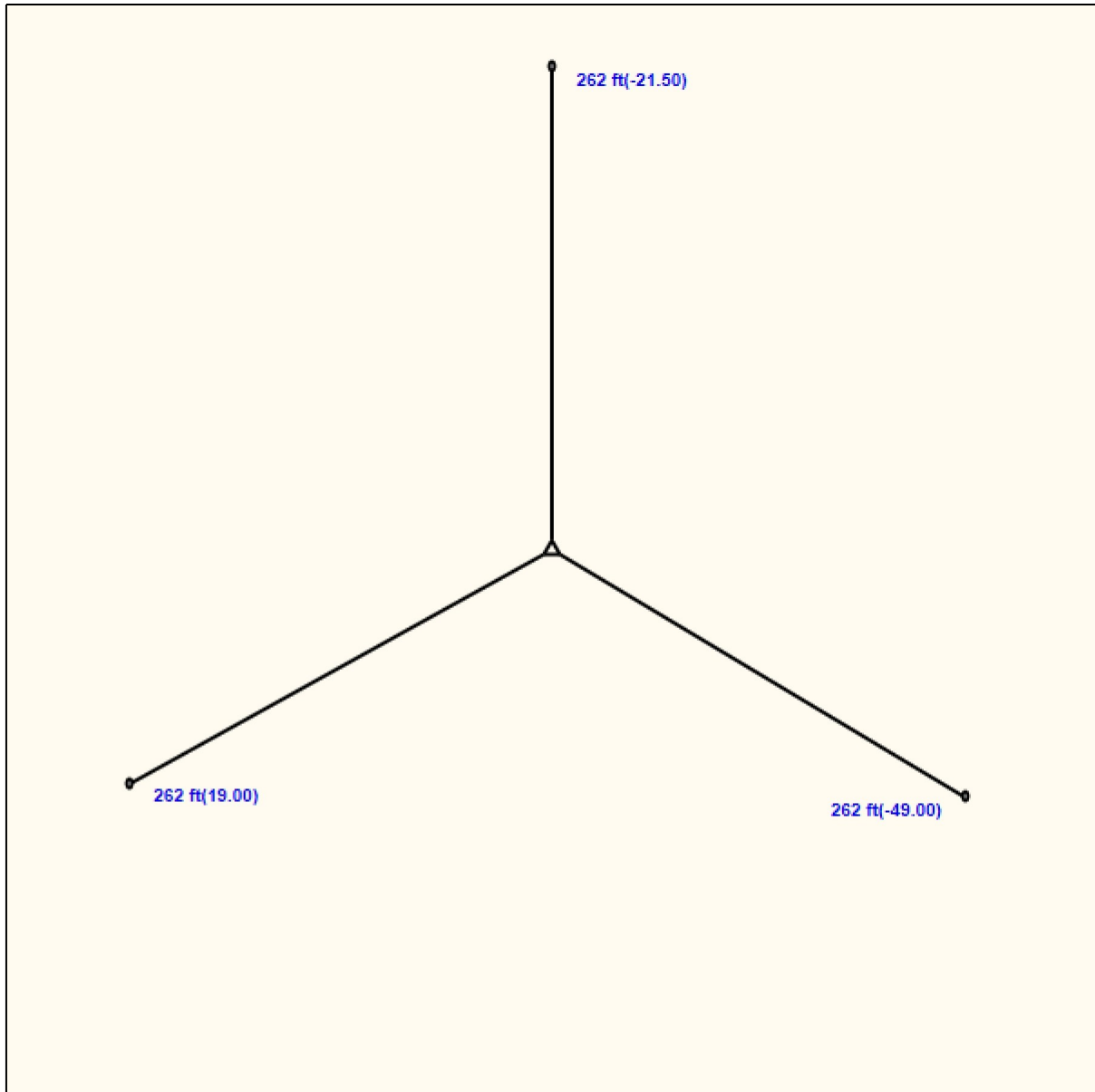
**Basic Ice WS:** 50.00

**Base Elev:** 0.00 (ft)

**Top Width:** 5.00

**Operational WS:** 60.00

Page: 5





**Structure: CT15879-A-SBA - Coax Line Placement**

**Type:** Guyed  
**Site Name:** West Hartford  
**Height:** 309.00 (ft)

12/10/2018

Page: 6



## Loading Summary

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



Page: 7

### Discrete Appurtenances Properties

Attach Elev (ft)	Description	Qty	No Ice		Ice		Len (in)	Width (in)	Depth (in)	Ka	Orientation Factor	Vert Ecc (ft)
			Weight (lb)	CaAa (sf)	Weight (lb)	CaAa (sf)						
344.00	Beacon	1	36.00	2.720	228.96	4.095	28.000	17.500	17.500	1.00	1.00	0.000
344.00	Lightning Rod	1	5.00	0.500	35.34	3.028	72.000	1.000	1.000	1.00	1.00	0.000
342.00	ERI 3 Bay FM w/ Radome	1	157.00	8.980	427.88	21.133	36.000	0.000	0.000	1.00	1.00	0.000
332.00	ERI 3 Bay FM w/ Radome	1	157.00	8.980	427.08	21.097	36.000	0.000	0.000	1.00	1.00	0.000
332.00	2.4" x 18" Pipe	1	10.00	0.240	20.08	0.482	0.000	0.000	0.000	1.00	1.00	0.000
322.00	ERI 3 Bay FM w/ Radome	1	157.00	8.980	426.25	21.060	36.000	0.000	0.000	1.00	1.00	0.000
309.50	10' Mount	1	40.00	4.170	80.02	8.342	0.000	0.000	0.000	1.00	1.00	0.000
308.30	Scala SCA 4DR-8S	1	50.00	16.980	870.58	189.67	24.000	19.500	13.000	1.00	1.00	0.000
265.00	Pipe Mount	1	20.00	1.200	39.69	2.381	0.000	0.000	0.000	1.00	1.00	0.000
265.00	SCA CA-2-FM-CP	1	10.00	2.020	171.81	22.276	24.000	19.500	13.000	1.00	1.00	0.000
251.80	ACB16A	1	80.00	19.230	639.96	75.695	160.800	18.000	2.500	1.00	1.00	6.700
251.80	2.4" x 25' Mount Pipe	1	90.00	5.950	178.27	11.785	0.000	0.000	0.000	1.00	1.00	0.000
251.00	DB420-B	1	34.50	4.480	226.75	19.493	233.000	0.000	0.000	1.00	1.00	9.708
251.00	Side Arm Mount	1	30.00	1.410	59.42	2.793	0.000	0.000	0.000	1.00	1.00	0.000
243.00	WPA-800120/6CF	1	11.00	4.380	154.80	7.606	70.900	5.600	5.600	1.00	1.00	0.000
243.00	SitePro R5 Pipe Mount	1	136.90	2.700	270.62	5.337	0.000	0.000	0.000	1.00	0.67	0.000
243.00	Combilent CP00732	2	12.00	1.270	23.72	2.510	0.000	0.000	0.000	1.00	1.00	0.000
235.00	6 ft x 3 ft Grid Dish	1	198.00	16.790	1160.96	48.370	0.000	0.000	0.000	1.00	1.00	0.000
232.00	SitePro R5 Pipe Mount	2	136.90	2.700	270.06	5.326	0.000	0.000	0.000	1.00	1.00	0.000
232.00	SC3-W100AC	2	40.00	10.740	273.45	13.561	39.500	39.500	15.000	1.00	1.00	0.000
232.00	SitePro CIS04	2	290.10	2.920	955.19	6.706	14.000	75.000	48.000	1.00	0.67	0.000
225.50	Pipe Mount	2	40.00	2.600	78.74	5.118	0.000	0.000	0.000	1.00	1.00	0.000
225.50	34" x 7" x 2" Panel	2	20.00	1.900	77.74	3.749	34.000	6.000	3.000	1.00	1.00	0.000
220.00	WPA-800120/6CF	1	11.00	4.380	153.57	7.578	70.900	5.600	5.600	1.00	1.00	0.000
220.00	SitePro R5 Pipe Mount	1	136.90	2.700	269.48	5.315	0.000	0.000	0.000	1.00	0.67	0.000
203.00	Side Arm Mount	1	30.00	1.410	58.78	2.763	0.000	0.000	0.000	1.00	1.00	0.000
203.00	DB420-B	1	34.50	4.480	222.57	19.166	233.000	0.000	0.000	1.00	1.00	9.708
196.00	PA6-112 w/ Radome	1	308.00	24.410	1279.37	27.649	72.000	72.000	0.000	1.00	1.00	0.000
196.00	T.S. 3"x 3" x 6.5'	1	60.00	3.250	117.27	6.352	0.000	0.000	0.000	1.00	1.00	0.000
196.00	2.4" x 6.5' Mount Pipe	1	20.00	1.540	39.09	3.010	0.000	0.000	0.000	1.00	1.00	0.000
180.00	LP-1900-B-12	1	50.00	7.300	184.68	17.357	282.000	3.500	3.500	1.00	1.00	0.000
180.00	2.5" x 25' Mount Pipe	1	90.00	5.950	175.45	11.599	0.000	0.000	0.000	1.00	1.00	0.000
165.00	BCD-80010	1	26.50	2.950	239.20	7.646	136.000	2.600	2.600	1.00	1.00	5.667
165.00	SitePro R5 Pipe Mount	1	136.90	2.700	265.39	5.234	0.000	0.000	0.000	1.00	1.00	0.000
164.50	2.4"x 10' Mount Pipe	1	40.00	2.380	77.54	4.614	0.000	0.000	0.000	1.00	1.00	0.000
164.50	6810 1 Bay FM	1	12.00	0.560	19.41	1.270	7.900	7.900	0.000	1.00	1.00	0.000
160.00	APX16DWV-16DWVS	2	39.60	6.080	229.24	7.555	53.000	13.000	3.200	0.80	0.62	0.000
160.00	KRY 112 71	2	13.20	0.680	37.87	1.550	12.500	5.600	3.700	0.80	0.50	0.000
160.00	T-Frame	3	339.80	11.700	696.99	19.606	0.000	0.000	0.000	0.75	0.75	0.000
160.00	TMAT1921B78-21A	2	17.60	0.660	41.11	1.121	9.100	4.100	8.100	0.80	0.75	0.000
160.00	FDAP5002-1A20	4	13.00	1.170	48.74	2.222	12.000	10.000	4.000	0.80	0.70	0.000
146.50	2.4"x 4' Mount Pipe	1	10.00	0.870	19.26	1.676	0.000	0.000	0.000	1.00	1.00	0.000
146.50	2 ft Dish w/Radome	1	17.00	2.710	313.43	3.775	0.000	0.000	0.000	1.00	1.00	0.000
146.50	12" x 4.5" x 6.25" TMA	1	20.00	0.450	52.77	0.869	12.000	4.500	6.250	1.00	1.00	0.000
145.00	12' Omni	1	40.00	1.200	160.72	3.104	144.000	3.000	3.000	1.00	1.00	6.000
145.00	30" Sidearm	1	20.00	0.350	38.53	0.674	0.000	0.000	0.000	1.00	1.00	0.000
136.50	5' x 10" Detuner	1	30.00	1.250	57.59	2.400	0.000	0.000	0.000	1.00	1.00	0.000
130.00	HBX-6517DS	2	12.10	5.240	137.45	8.469	74.900	6.500	3.300	0.80	0.75	0.000

## Loading Summary

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Page:</b> 8
	<b>Struct Class:</b> II	



130.00 LNX-6514DS	2	33.10	8.090	263.26	11.773	72.000	11.900	7.100	0.80	0.80	0.000
130.00 SLCP 2x6015	2	30.00	9.960	355.14	13.871	77.000	14.000	11.000	0.80	0.89	0.000
130.00 SACP 2x5516	2	16.00	5.090	171.49	7.964	56.000	9.700	6.500	0.80	0.84	0.000
130.00 FD9R6004/2C	4	3.10	0.370	13.67	0.970	5.800	6.500	1.500	0.80	0.62	0.000
130.00 RRH2x40-AWS	2	44.00	2.160	124.00	3.541	24.400	10.600	6.700	0.80	0.67	0.000
130.00 DB-T1-6Z-8AB-0Z	1	18.90	4.800	219.16	5.976	24.000	24.000	10.000	0.80	0.71	0.000
130.00 T-Frame	3	356.40	10.900	723.50	18.117	0.000	0.000	0.000	0.75	0.75	0.000
120.50 APXV18-206517S	3	22.00	5.030	187.07	6.667	71.700	6.600	3.200	1.00	1.00	0.000
112.00 800 10121	3	46.30	5.150	195.18	7.881	54.500	10.300	5.900	0.80	0.67	0.000
112.00 Ericsson RRUS 11	3	51.00	2.520	144.67	3.341	17.000	17.800	7.200	0.80	0.67	0.000
112.00 Ericsson RRUS 12	3	60.00	2.700	146.86	3.555	18.200	17.800	8.000	0.80	0.67	0.000
112.00 Ericsson RRUS A2	3	21.20	1.860	68.00	3.122	12.800	15.000	3.400	0.80	0.62	0.000
112.00 Cci DTMABP7819VG12A TMA	6	19.20	1.140	52.28	2.137	10.600	11.000	3.800	0.80	0.67	0.000
112.00 Kathrein 860 10025	12	1.20	0.180	8.97	0.671	7.600	2.400	2.000	0.80	0.92	0.000
112.00 Raycap DC6-48-60-18-8F ("Squid")	2	31.80	0.920	111.93	1.488	24.000	11.000	11.000	0.80	0.75	0.000
112.00 Raycap DC6-48-60-18-8F	1	31.80	0.920	111.93	1.488	24.000	11.000	11.000	0.80	1.00	0.000
112.00 REINFORCING KIT	1	650.00	18.000	1708.60	42.429	0.000	0.000	0.000	1.00	1.00	0.000
112.00 800-10966	2	125.70	17.360	609.05	19.733	96.000	20.000	6.900	0.80	0.72	0.000
112.00 800-10965	1	108.60	13.810	512.25	15.885	78.700	20.000	6.900	0.80	1.00	0.000
112.00 HPA65R-BU8A	2	54.00	11.230	418.15	13.399	96.000	11.700	7.600	0.80	0.93	0.000
112.00 HPA65R-BU6A	1	51.00	7.840	327.83	9.524	71.000	11.700	7.600	0.80	1.00	0.000
112.00 Ericsson RRUS 4478 B14	3	59.40	1.650	113.14	2.322	15.000	13.200	7.300	0.80	0.67	0.000
112.00 Ericsson RRUS 4478 B5	3	59.90	1.840	123.26	2.551	16.500	13.400	7.700	0.80	0.67	0.000
112.00 Ericsson RRUS 4478 B66	3	48.50	1.150	104.71	1.786	14.900	9.300	4.000	0.80	0.67	0.000
112.00 Ericsson RRUS 32	3	53.00	2.740	175.29	3.706	27.200	12.100	7.000	0.80	0.67	0.000
112.00 Kaelus DBCT108F1V92-1	6	6.60	0.410	24.34	0.826	8.000	6.200	3.700	0.80	0.80	0.000
112.00 T-Frame	3	344.92	17.500	694.45	28.900	0.000	0.000	0.000	0.75	0.75	0.000
48.00 1" x 16" Pipe	1	10.00	0.110	18.21	0.200	0.000	0.000	0.000	1.00	1.00	0.000
48.00 GPS	1	10.00	1.000	44.50	1.838	12.000	9.000	6.000	1.00	1.00	0.000
21.00 14-Element 4.5 ft Yagi	1	6.50	1.500	65.76	4.734	16.500	44.000	0.000	1.00	1.00	0.000
21.00 1-ft Side Arm	1	30.00	0.350	53.15	0.620	0.000	0.000	0.000	1.00	1.00	0.000

<b>Totals:</b>	<b>147</b>	<b>9,765.06</b>	<b>31,515.48</b>	<b>Number of Appurtenances : 79</b>
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## Loading Summary

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



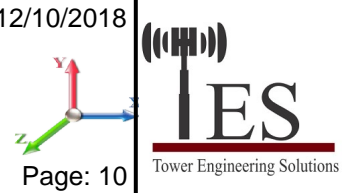
Page: 9

### Linear Appurtenances Properties

Elev. From (ft)	Elev. To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	344.00	1" Light Conduit	1	1.00	1.00	100.00	3	Individual NR		N	1.00	1.00	
0.00	332.00	3" Coax	1	3.02	1.78	100.00	1	Individual NR		N	1.00	1.00	
0.00	308.30	3" Coax	1	3.02	1.78	100.00	1	Individual NR		N	1.00	1.00	
0.00	308.00	Safety Cable	1	0.38	0.27	100.00	1	Individual NR		N	1.00	1.00	
0.00	290.00	Detuner	3	0.19	0.02	100.00	1,2,3	Individual NR		Y	1.00	1.00	
0.00	265.00	1/2" Coax	1	0.65	0.16	100.00	2	Individual NR		N	1.00	1.00	
0.00	251.80	1 5/8" Coax	1	1.98	1.04	100.00	3	Individual NR		N	1.00	1.00	
0.00	251.80	3/8" Coax	1	0.44	0.08	100.00	3	Individual NR		N	1.00	1.00	
0.00	251.00	7/8" Coax	1	1.11	0.52	100.00	3	Individual NR		N	1.00	1.00	
0.00	243.00	7/8" Coax	1	1.11	0.52	100.00	1	Individual NR		N	1.00	1.00	
0.00	235.00	7/8" Coax	1	1.11	0.52	100.00	1	Individual NR		N	1.00	1.00	
0.00	232.00	1/2" Coax	2	0.65	0.16	100.00	1	Individual NR		N	1.00	1.00	
0.00	225.50	3/8" Coax	2	0.44	0.08	100.00	1	Individual NR		N	1.00	1.00	
0.00	220.00	1 5/8" Coax	1	1.98	1.04	100.00	1	Individual NR		N	1.00	1.00	
0.00	203.00	1/2" Coax	1	0.65	0.16	100.00	3	Individual NR		N	1.00	1.00	
0.00	196.00	EW71	1	1.11	0.29	100.00	3	Individual NR		N	1.00	1.00	
0.00	180.00	1 5/8" Coax	1	1.98	1.04	100.00	3	Individual NR		N	1.00	1.00	
0.00	165.00	1 5/8" Coax	1	1.98	1.04	100.00	1	Individual NR		N	1.00	1.00	
0.00	164.50	1/2" Coax	1	0.65	0.16	100.00	3	Individual NR		N	1.00	1.00	
0.00	160.00	1 5/8" Coax	8	1.98	1.04	50.00	2	Block		N	1.00	1.00	
0.00	146.50	3/8" Coax	1	0.44	0.08	100.00	1	Individual NR		N	1.00	1.00	
0.00	145.00	1 5/8" Coax	1	1.98	1.04	100.00	1	Individual NR		N	1.00	1.00	
0.00	142.50	1 5/8" Coax	1	1.98	1.04	100.00	2	Individual NR		N	1.00	1.00	
0.00	140.50	1 5/8" Coax	1	1.98	1.04	100.00	2	Individual NR		N	1.00	1.00	
0.00	136.50	1/4" Coax	1	0.25	0.04	100.00	1	Individual NR		N	1.00	1.00	
0.00	130.00	1 5/8" Coax	8	1.98	1.04	100.00	3	Individual NR		N	1.00	1.00	
0.00	130.00	1 5/8" Fiber	1	2.00	1.10	100.00	3	Individual NR		N	1.00	1.00	
0.00	120.50	1 5/8" Coax	6	1.98	1.04	100.00	1	Individual NR		N	1.00	1.00	
0.00	112.00	1 5/8" Coax	12	1.98	1.04	50.00	2	Block		N	1.00	1.00	
0.00	112.00	3/4" DC	6	0.75	0.40	50.00	2	Block		N	1.00	1.00	
0.00	112.00	3/8" Fiber	2	0.38	0.06	100.00	2	Individual NR		N	1.00	1.00	
0.00	48.00	3/8" Coax	1	0.44	0.08	100.00	1	Individual NR		N	1.00	1.00	
0.00	21.00	1/2" Coax	1	0.65	0.16	100.00	3	Individual NR		N	1.00	1.00	

## Section Forces

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II

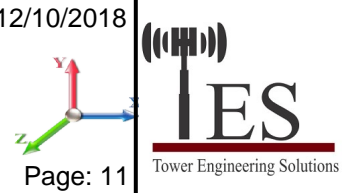


<b>Load Case:</b> 1.2D + 1.6W Normal Wind	1.2D + 1.6W 97 mph Wind at Normal To Face
<b>Wind Load Factor:</b> 1.60	<b>Wind Importance Factor:</b> 1.00
<b>Dead Load Factor:</b> 1.20	
<b>Ice Dead Load Factor:</b> 0.00	<b>Ice Importance Factor:</b> 1.00

Sect Seq	Wind Height (ft)	Total Flat Area (psf)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
											Linear Area (sqft)	Linear Area (sqft)						
1	2.5	17.40	0.578	4.75	0.00	0.39	2.09	1.00	1.00	0.00	3.64	39.76	0.00	1,638.3	0.0	179.92	729.53	909.45
2	6.3	17.40	0.290	2.25	0.00	0.19	2.62	1.00	1.00	0.00	1.60	19.88	0.00	787.4	0.0	99.18	364.76	463.95
3	8.8	17.40	0.290	2.11	0.00	0.18	2.66	1.00	1.00	0.00	1.52	19.88	0.00	775.1	0.0	95.23	364.76	459.99
4	14.0	17.40	0.000	7.75	0.00	0.18	2.65	1.00	1.00	0.00	4.53	63.61	0.00	1,652.6	0.0	284.22	1167.25	1,451.46
5	23.0	19.02	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	79.13	0.00	1,943.0	0.0	361.93	1587.29	1,949.22
6	33.0	20.52	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	78.97	0.00	1,894.3	0.0	375.71	1709.36	2,085.07
7	43.0	21.69	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	78.97	0.00	1,942.4	0.0	412.89	1807.32	2,220.21
8	53.0	22.67	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	78.60	0.00	1,893.3	0.0	415.12	1880.52	2,295.63
9	63.0	23.51	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	78.60	0.00	1,941.4	0.0	447.46	1950.20	2,397.67
10	73.0	24.25	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	78.60	0.00	1,893.3	0.0	444.06	2011.64	2,455.70
11	83.0	24.92	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	78.60	0.00	1,941.4	0.0	474.20	2066.75	2,540.95
12	93.0	25.52	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	78.60	0.00	1,893.3	0.0	467.29	2116.84	2,584.13
13	103.0	26.07	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	78.60	0.00	1,941.4	0.0	496.25	2162.85	2,659.10
14	113.0	26.59	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	67.53	0.00	1,785.3	0.0	486.85	1862.32	2,349.17
15	123.0	27.07	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	52.73	0.00	1,705.3	0.0	515.14	1466.20	1,981.34
16	133.0	27.52	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	38.33	0.00	1,547.9	0.0	503.84	1102.55	1,606.39
17	143.0	27.94	0.000	9.55	0.00	0.18	2.66	1.00	1.00	0.00	5.58	32.48	0.00	1,707.9	0.0	563.78	959.59	1,523.37
18	153.0	28.34	0.000	9.05	0.00	0.17	2.69	1.00	1.00	0.00	5.27	29.86	0.00	1,614.5	0.0	546.79	900.59	1,447.39
19	163.0	28.72	0.000	8.70	0.00	0.17	2.71	1.00	1.00	0.00	5.06	21.90	0.00	1,380.1	0.0	536.13	637.52	1,173.65
20	173.0	29.08	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	18.57	0.00	1,302.0	0.0	521.78	537.86	1,059.63
21	183.0	29.43	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	17.25	0.00	1,340.2	0.0	549.34	506.22	1,055.56
22	193.0	29.76	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	16.74	0.00	1,288.9	0.0	533.93	496.91	1,030.85
23	203.0	30.08	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	15.72	0.00	1,333.2	0.0	561.46	472.46	1,033.92
24	213.0	30.38	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	15.45	0.00	1,284.1	0.0	545.13	469.21	1,014.34
25	223.0	30.68	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	13.95	0.00	1,321.8	0.0	572.68	428.60	1,001.28
26	233.0	30.96	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	12.14	0.00	1,265.6	0.0	555.53	377.77	933.30
27	243.0	31.24	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	10.60	0.00	1,304.7	0.0	583.13	333.92	917.05
28	253.0	31.50	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	8.24	0.00	1,240.7	0.0	565.24	263.96	829.20
29	263.0	31.76	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	7.03	0.00	1,281.3	0.0	592.92	228.60	821.52
30	273.0	32.01	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	6.65	0.00	1,231.8	0.0	574.37	218.52	792.89
31	283.0	32.26	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	6.65	0.00	1,279.9	0.0	602.14	220.18	822.32
32	293.0	32.49	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	6.27	0.00	1,231.3	0.0	582.98	201.64	784.63
33	303.0	32.72	0.000	8.41	0.00	0.16	2.73	1.00	1.00	0.00	4.88	6.18	0.00	1,258.2	0.0	593.08	198.00	791.08
34	308.5	32.85	0.793	0.48	0.00	0.24	2.46	1.00	1.00	0.00	1.07	0.41	0.00	818.7	0.0	117.86	13.20	131.06
													<b>50,660.8</b>	<b>0.0</b>			<b>47,572.49</b>	

## Section Forces

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	<b>12/10/2018</b>
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



Page: 11

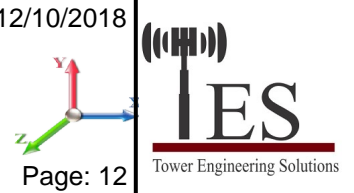
<b>Load Case:</b> 1.2D + 1.6W 60° Wind	<b>1.2D + 1.6W 97 mph Wind at 60° From Face</b>
<b>Wind Load Factor:</b> 1.60	<b>Wind Importance Factor:</b> 1.00
<b>Dead Load Factor:</b> 1.20	
<b>Ice Dead Load Factor:</b> 0.00	<b>Ice Importance Factor:</b> 1.00

Sect Seq	Wind Height (ft)	Wind qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
												Linear Area (sqft)	Linear Area (sqft)					
1	2.5	17.40	0.578	4.75	0.00	0.39	2.09	0.80	1.00	0.00	3.52	39.76	0.00	1,638.3	0.0	174.20	729.53	903.73
2	6.3	17.40	0.290	2.25	0.00	0.19	2.62	0.80	1.00	0.00	1.54	19.88	0.00	787.4	0.0	95.58	364.76	460.35
3	8.8	17.40	0.290	2.11	0.00	0.18	2.66	0.80	1.00	0.00	1.46	19.88	0.00	775.1	0.0	91.58	364.76	456.34
4	14.0	17.40	0.000	7.75	0.00	0.18	2.65	0.80	1.00	0.00	4.53	63.61	0.00	1,652.6	0.0	284.22	1167.25	1,451.46
5	23.0	19.02	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	79.13	0.00	1,943.0	0.0	361.93	1587.29	1,949.22
6	33.0	20.52	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	78.97	0.00	1,894.3	0.0	375.71	1709.36	2,085.07
7	43.0	21.69	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	78.97	0.00	1,942.4	0.0	412.89	1807.32	2,220.21
8	53.0	22.67	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	78.60	0.00	1,893.3	0.0	415.12	1880.52	2,295.63
9	63.0	23.51	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	78.60	0.00	1,941.4	0.0	447.46	1950.20	2,397.67
10	73.0	24.25	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	78.60	0.00	1,893.3	0.0	444.06	2011.64	2,455.70
11	83.0	24.92	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	78.60	0.00	1,941.4	0.0	474.20	2066.75	2,540.95
12	93.0	25.52	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	78.60	0.00	1,893.3	0.0	467.29	2116.84	2,584.13
13	103.0	26.07	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	78.60	0.00	1,941.4	0.0	496.25	2162.85	2,659.10
14	113.0	26.59	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	67.53	0.00	1,785.3	0.0	486.85	1862.32	2,349.17
15	123.0	27.07	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	52.73	0.00	1,705.3	0.0	515.14	1466.20	1,981.34
16	133.0	27.52	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	38.33	0.00	1,547.9	0.0	503.84	1102.55	1,606.39
17	143.0	27.94	0.000	9.55	0.00	0.18	2.66	0.80	1.00	0.00	5.58	32.48	0.00	1,707.9	0.0	563.78	959.59	1,523.37
18	153.0	28.34	0.000	9.05	0.00	0.17	2.69	0.80	1.00	0.00	5.27	29.86	0.00	1,614.5	0.0	546.79	900.59	1,447.39
19	163.0	28.72	0.000	8.70	0.00	0.17	2.71	0.80	1.00	0.00	5.06	21.90	0.00	1,380.1	0.0	536.13	637.52	1,173.65
20	173.0	29.08	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	18.57	0.00	1,302.0	0.0	521.78	537.86	1,059.63
21	183.0	29.43	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	17.25	0.00	1,340.2	0.0	549.34	506.22	1,055.56
22	193.0	29.76	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	16.74	0.00	1,288.9	0.0	533.93	496.91	1,030.85
23	203.0	30.08	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	15.72	0.00	1,333.2	0.0	561.46	472.46	1,033.92
24	213.0	30.38	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	15.45	0.00	1,284.1	0.0	545.13	469.21	1,014.34
25	223.0	30.68	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	13.95	0.00	1,321.8	0.0	572.68	428.60	1,001.28
26	233.0	30.96	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	12.14	0.00	1,265.6	0.0	555.53	377.77	933.30
27	243.0	31.24	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	10.60	0.00	1,304.7	0.0	583.13	333.92	917.05
28	253.0	31.50	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	8.24	0.00	1,240.7	0.0	565.24	263.96	829.20
29	263.0	31.76	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	7.03	0.00	1,281.3	0.0	592.92	228.60	821.52
30	273.0	32.01	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	6.65	0.00	1,231.8	0.0	574.37	218.52	792.89
31	283.0	32.26	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	6.65	0.00	1,279.9	0.0	602.14	220.18	822.32
32	293.0	32.49	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	6.27	0.00	1,231.3	0.0	582.98	201.64	784.63
33	303.0	32.72	0.000	8.41	0.00	0.16	2.73	0.80	1.00	0.00	4.88	6.18	0.00	1,258.2	0.0	593.08	198.00	791.08
34	308.5	32.85	0.793	0.48	0.00	0.24	2.46	0.80	1.00	0.00	0.91	0.41	0.00	818.7	0.0	100.43	13.20	113.63
														<b>50,660.8</b>	<b>0.0</b>			<b>47,542.09</b>



## Section Forces

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



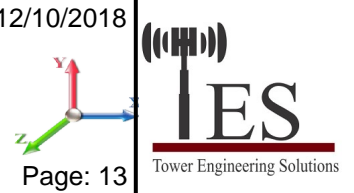
Page: 12

<b>Load Case:</b> 1.2D + 1.6W 90° Wind	1.2D + 1.6W 97 mph Wind at 90° From Face
<b>Wind Load Factor:</b> 1.60	<b>Wind Importance Factor:</b> 1.00
<b>Dead Load Factor:</b> 1.20	
<b>Ice Dead Load Factor:</b> 0.00	<b>Ice Importance Factor:</b> 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total		Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
			Flat Area (sqft)	Round Area (sqft)								Linear Area (sqft)	Linear Area (sqft)					
1	2.5	17.40	0.578	4.75	0.00	0.39	2.09	0.85	1.00	0.00	3.55	39.76	0.00	1,638.3	0.0	175.63	729.53	905.16
2	6.3	17.40	0.290	2.25	0.00	0.19	2.62	0.85	1.00	0.00	1.56	19.88	0.00	787.4	0.0	96.48	364.76	461.25
3	8.8	17.40	0.290	2.11	0.00	0.18	2.66	0.85	1.00	0.00	1.47	19.88	0.00	775.1	0.0	92.49	364.76	457.25
4	14.0	17.40	0.000	7.75	0.00	0.18	2.65	0.85	1.00	0.00	4.53	63.61	0.00	1,652.6	0.0	284.22	1167.25	1,451.46
5	23.0	19.02	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	79.13	0.00	1,943.0	0.0	361.93	1587.29	1,949.22
6	33.0	20.52	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	78.97	0.00	1,894.3	0.0	375.71	1709.36	2,085.07
7	43.0	21.69	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	78.97	0.00	1,942.4	0.0	412.89	1807.32	2,220.21
8	53.0	22.67	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	78.60	0.00	1,893.3	0.0	415.12	1880.52	2,295.63
9	63.0	23.51	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	78.60	0.00	1,941.4	0.0	447.46	1950.20	2,397.67
10	73.0	24.25	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	78.60	0.00	1,893.3	0.0	444.06	2011.64	2,455.70
11	83.0	24.92	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	78.60	0.00	1,941.4	0.0	474.20	2066.75	2,540.95
12	93.0	25.52	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	78.60	0.00	1,893.3	0.0	467.29	2116.84	2,584.13
13	103.0	26.07	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	78.60	0.00	1,941.4	0.0	496.25	2162.85	2,659.10
14	113.0	26.59	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	67.53	0.00	1,785.3	0.0	486.85	1862.32	2,349.17
15	123.0	27.07	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	52.73	0.00	1,705.3	0.0	515.14	1466.20	1,981.34
16	133.0	27.52	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	38.33	0.00	1,547.9	0.0	503.84	1102.55	1,606.39
17	143.0	27.94	0.000	9.55	0.00	0.18	2.66	0.85	1.00	0.00	5.58	32.48	0.00	1,707.9	0.0	563.78	959.59	1,523.37
18	153.0	28.34	0.000	9.05	0.00	0.17	2.69	0.85	1.00	0.00	5.27	29.86	0.00	1,614.5	0.0	546.79	900.59	1,447.39
19	163.0	28.72	0.000	8.70	0.00	0.17	2.71	0.85	1.00	0.00	5.06	21.90	0.00	1,380.1	0.0	536.13	637.52	1,173.65
20	173.0	29.08	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	18.57	0.00	1,302.0	0.0	521.78	537.86	1,059.63
21	183.0	29.43	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	17.25	0.00	1,340.2	0.0	549.34	506.22	1,055.56
22	193.0	29.76	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	16.74	0.00	1,288.9	0.0	533.93	496.91	1,030.85
23	203.0	30.08	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	15.72	0.00	1,333.2	0.0	561.46	472.46	1,033.92
24	213.0	30.38	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	15.45	0.00	1,284.1	0.0	545.13	469.21	1,014.34
25	223.0	30.68	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	13.95	0.00	1,321.8	0.0	572.68	428.60	1,001.28
26	233.0	30.96	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	12.14	0.00	1,265.6	0.0	555.53	377.77	933.30
27	243.0	31.24	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	10.60	0.00	1,304.7	0.0	583.13	333.92	917.05
28	253.0	31.50	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	8.24	0.00	1,240.7	0.0	565.24	263.96	829.20
29	263.0	31.76	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	7.03	0.00	1,281.3	0.0	592.92	228.60	821.52
30	273.0	32.01	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	6.65	0.00	1,231.8	0.0	574.37	218.52	792.89
31	283.0	32.26	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	6.65	0.00	1,279.9	0.0	602.14	220.18	822.32
32	293.0	32.49	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	6.27	0.00	1,231.3	0.0	582.98	201.64	784.63
33	303.0	32.72	0.000	8.41	0.00	0.16	2.73	0.85	1.00	0.00	4.88	6.18	0.00	1,258.2	0.0	593.08	198.00	791.08
34	308.5	32.85	0.793	0.48	0.00	0.24	2.46	0.85	1.00	0.00	0.95	0.41	0.00	818.7	0.0	104.79	13.20	117.99
<b>50,660.8</b>														<b>0.0</b>	<b>47,549.69</b>			

## Section Forces

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II

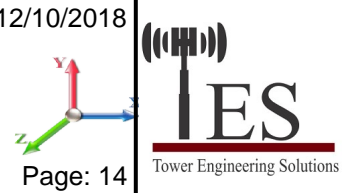


<b>Load Case:</b> 0.9D + 1.6W Normal Wind	0.9D + 1.6W 97 mph Wind at Normal To Face
<b>Wind Load Factor:</b> 1.60	<b>Wind Importance Factor:</b> 1.00
<b>Dead Load Factor:</b> 0.90	
<b>Ice Dead Load Factor:</b> 0.00	<b>Ice Importance Factor:</b> 1.00

Sect Seq	Wind Height (ft)	Total Flat Area (psf)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
											Linear Area (sqft)	Linear Area (sqft)						
1	2.5	17.40	0.578	4.75	0.00	0.39	2.09	1.00	1.00	0.00	3.64	39.76	0.00	1,228.8	0.0	179.92	729.53	909.45
2	6.3	17.40	0.290	2.25	0.00	0.19	2.62	1.00	1.00	0.00	1.60	19.88	0.00	590.6	0.0	99.18	364.76	463.95
3	8.8	17.40	0.290	2.11	0.00	0.18	2.66	1.00	1.00	0.00	1.52	19.88	0.00	581.3	0.0	95.23	364.76	459.99
4	14.0	17.40	0.000	7.75	0.00	0.18	2.65	1.00	1.00	0.00	4.53	63.61	0.00	1,239.5	0.0	284.22	1167.25	1,451.46
5	23.0	19.02	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	79.13	0.00	1,457.2	0.0	361.93	1587.29	1,949.22
6	33.0	20.52	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	78.97	0.00	1,420.7	0.0	375.71	1709.36	2,085.07
7	43.0	21.69	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	78.97	0.00	1,456.8	0.0	412.89	1807.32	2,220.21
8	53.0	22.67	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	78.60	0.00	1,420.0	0.0	415.12	1880.52	2,295.63
9	63.0	23.51	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	78.60	0.00	1,456.1	0.0	447.46	1950.20	2,397.67
10	73.0	24.25	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	78.60	0.00	1,420.0	0.0	444.06	2011.64	2,455.70
11	83.0	24.92	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	78.60	0.00	1,456.1	0.0	474.20	2066.75	2,540.95
12	93.0	25.52	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	78.60	0.00	1,420.0	0.0	467.29	2116.84	2,584.13
13	103.0	26.07	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	78.60	0.00	1,456.1	0.0	496.25	2162.85	2,659.10
14	113.0	26.59	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	67.53	0.00	1,339.0	0.0	486.85	1862.32	2,349.17
15	123.0	27.07	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	52.73	0.00	1,279.0	0.0	515.14	1466.20	1,981.34
16	133.0	27.52	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	38.33	0.00	1,161.0	0.0	503.84	1102.55	1,606.39
17	143.0	27.94	0.000	9.55	0.00	0.18	2.66	1.00	1.00	0.00	5.58	32.48	0.00	1,280.9	0.0	563.78	959.59	1,523.37
18	153.0	28.34	0.000	9.05	0.00	0.17	2.69	1.00	1.00	0.00	5.27	29.86	0.00	1,210.9	0.0	546.79	900.59	1,447.39
19	163.0	28.72	0.000	8.70	0.00	0.17	2.71	1.00	1.00	0.00	5.06	21.90	0.00	1,035.1	0.0	536.13	637.52	1,173.65
20	173.0	29.08	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	18.57	0.00	976.5	0.0	521.78	537.86	1,059.63
21	183.0	29.43	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	17.25	0.00	1,005.1	0.0	549.34	506.22	1,055.56
22	193.0	29.76	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	16.74	0.00	966.6	0.0	533.93	496.91	1,030.85
23	203.0	30.08	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	15.72	0.00	999.9	0.0	561.46	472.46	1,033.92
24	213.0	30.38	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	15.45	0.00	963.1	0.0	545.13	469.21	1,014.34
25	223.0	30.68	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	13.95	0.00	991.3	0.0	572.68	428.60	1,001.28
26	233.0	30.96	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	12.14	0.00	949.2	0.0	555.53	377.77	933.30
27	243.0	31.24	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	10.60	0.00	978.5	0.0	583.13	333.92	917.05
28	253.0	31.50	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	8.24	0.00	930.5	0.0	565.24	263.96	829.20
29	263.0	31.76	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	7.03	0.00	961.0	0.0	592.92	228.60	821.52
30	273.0	32.01	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	6.65	0.00	923.9	0.0	574.37	218.52	792.89
31	283.0	32.26	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	6.65	0.00	960.0	0.0	602.14	220.18	822.32
32	293.0	32.49	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	6.27	0.00	923.4	0.0	582.98	201.64	784.63
33	303.0	32.72	0.000	8.41	0.00	0.16	2.73	1.00	1.00	0.00	4.88	6.18	0.00	943.6	0.0	593.08	198.00	791.08
34	308.5	32.85	0.793	0.48	0.00	0.24	2.46	1.00	1.00	0.00	1.07	0.41	0.00	614.0	0.0	117.86	13.20	131.06
												<b>37,995.6</b>	<b>0.0</b>			<b>47,572.49</b>		

## Section Forces

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



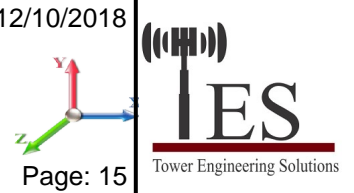
Page: 14

<b>Load Case:</b> 0.9D + 1.6W 60° Wind	0.9D + 1.6W 97 mph Wind at 60° From Face
<b>Wind Load Factor:</b> 1.60	<b>Wind Importance Factor:</b> 1.00
<b>Dead Load Factor:</b> 0.90	
<b>Ice Dead Load Factor:</b> 0.00	<b>Ice Importance Factor:</b> 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
												Linear Area (sqft)	Linear Area (sqft)					
1	2.5	17.40	0.578	4.75	0.00	0.39	2.09	0.80	1.00	0.00	3.52	39.76	0.00	1,228.8	0.0	174.20	729.53	903.73
2	6.3	17.40	0.290	2.25	0.00	0.19	2.62	0.80	1.00	0.00	1.54	19.88	0.00	590.6	0.0	95.58	364.76	460.35
3	8.8	17.40	0.290	2.11	0.00	0.18	2.66	0.80	1.00	0.00	1.46	19.88	0.00	581.3	0.0	91.58	364.76	456.34
4	14.0	17.40	0.000	7.75	0.00	0.18	2.65	0.80	1.00	0.00	4.53	63.61	0.00	1,239.5	0.0	284.22	1167.25	1,451.46
5	23.0	19.02	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	79.13	0.00	1,457.2	0.0	361.93	1587.29	1,949.22
6	33.0	20.52	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	78.97	0.00	1,420.7	0.0	375.71	1709.36	2,085.07
7	43.0	21.69	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	78.97	0.00	1,456.8	0.0	412.89	1807.32	2,220.21
8	53.0	22.67	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	78.60	0.00	1,420.0	0.0	415.12	1880.52	2,295.63
9	63.0	23.51	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	78.60	0.00	1,456.1	0.0	447.46	1950.20	2,397.67
10	73.0	24.25	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	78.60	0.00	1,420.0	0.0	444.06	2011.64	2,455.70
11	83.0	24.92	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	78.60	0.00	1,456.1	0.0	474.20	2066.75	2,540.95
12	93.0	25.52	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	78.60	0.00	1,420.0	0.0	467.29	2116.84	2,584.13
13	103.0	26.07	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	78.60	0.00	1,456.1	0.0	496.25	2162.85	2,659.10
14	113.0	26.59	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	67.53	0.00	1,339.0	0.0	486.85	1862.32	2,349.17
15	123.0	27.07	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	52.73	0.00	1,279.0	0.0	515.14	1466.20	1,981.34
16	133.0	27.52	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	38.33	0.00	1,161.0	0.0	503.84	1102.55	1,606.39
17	143.0	27.94	0.000	9.55	0.00	0.18	2.66	0.80	1.00	0.00	5.58	32.48	0.00	1,280.9	0.0	563.78	959.59	1,523.37
18	153.0	28.34	0.000	9.05	0.00	0.17	2.69	0.80	1.00	0.00	5.27	29.86	0.00	1,210.9	0.0	546.79	900.59	1,447.39
19	163.0	28.72	0.000	8.70	0.00	0.17	2.71	0.80	1.00	0.00	5.06	21.90	0.00	1,035.1	0.0	536.13	637.52	1,173.65
20	173.0	29.08	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	18.57	0.00	976.5	0.0	521.78	537.86	1,059.63
21	183.0	29.43	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	17.25	0.00	1,005.1	0.0	549.34	506.22	1,055.56
22	193.0	29.76	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	16.74	0.00	966.6	0.0	533.93	496.91	1,030.85
23	203.0	30.08	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	15.72	0.00	999.9	0.0	561.46	472.46	1,033.92
24	213.0	30.38	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	15.45	0.00	963.1	0.0	545.13	469.21	1,014.34
25	223.0	30.68	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	13.95	0.00	991.3	0.0	572.68	428.60	1,001.28
26	233.0	30.96	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	12.14	0.00	949.2	0.0	555.53	377.77	933.30
27	243.0	31.24	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	10.60	0.00	978.5	0.0	583.13	333.92	917.05
28	253.0	31.50	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	8.24	0.00	930.5	0.0	565.24	263.96	829.20
29	263.0	31.76	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	7.03	0.00	961.0	0.0	592.92	228.60	821.52
30	273.0	32.01	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	6.65	0.00	923.9	0.0	574.37	218.52	792.89
31	283.0	32.26	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	6.65	0.00	960.0	0.0	602.14	220.18	822.32
32	293.0	32.49	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	6.27	0.00	923.4	0.0	582.98	201.64	784.63
33	303.0	32.72	0.000	8.41	0.00	0.16	2.73	0.80	1.00	0.00	4.88	6.18	0.00	943.6	0.0	593.08	198.00	791.08
34	308.5	32.85	0.793	0.48	0.00	0.24	2.46	0.80	1.00	0.00	0.91	0.41	0.00	614.0	0.0	100.43	13.20	113.63
													<b>37,995.6</b>	<b>0.0</b>	<b>47,542.09</b>			

## Section Forces

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



Page: 15

<b>Load Case:</b> 0.9D + 1.6W 90° Wind	0.9D + 1.6W 97 mph Wind at 90° From Face
<b>Wind Load Factor:</b> 1.60	<b>Wind Importance Factor:</b> 1.00
<b>Dead Load Factor:</b> 0.90	
<b>Ice Dead Load Factor:</b> 0.00	<b>Ice Importance Factor:</b> 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total		Ice Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
			Flat Area (sqft)	Round Area (sqft)								Linear Area (sqft)	Linear Area (sqft)					
1	2.5	17.40	0.578	4.75	0.00	0.39	2.09	0.85	1.00	0.00	3.55	39.76	0.00	1,228.8	0.0	175.63	729.53	905.16
2	6.3	17.40	0.290	2.25	0.00	0.19	2.62	0.85	1.00	0.00	1.56	19.88	0.00	590.6	0.0	96.48	364.76	461.25
3	8.8	17.40	0.290	2.11	0.00	0.18	2.66	0.85	1.00	0.00	1.47	19.88	0.00	581.3	0.0	92.49	364.76	457.25
4	14.0	17.40	0.000	7.75	0.00	0.18	2.65	0.85	1.00	0.00	4.53	63.61	0.00	1,239.5	0.0	284.22	1167.25	1,451.46
5	23.0	19.02	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	79.13	0.00	1,457.2	0.0	361.93	1587.29	1,949.22
6	33.0	20.52	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	78.97	0.00	1,420.7	0.0	375.71	1709.36	2,085.07
7	43.0	21.69	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	78.97	0.00	1,456.8	0.0	412.89	1807.32	2,220.21
8	53.0	22.67	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	78.60	0.00	1,420.0	0.0	415.12	1880.52	2,295.63
9	63.0	23.51	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	78.60	0.00	1,456.1	0.0	447.46	1950.20	2,397.67
10	73.0	24.25	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	78.60	0.00	1,420.0	0.0	444.06	2011.64	2,455.70
11	83.0	24.92	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	78.60	0.00	1,456.1	0.0	474.20	2066.75	2,540.95
12	93.0	25.52	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	78.60	0.00	1,420.0	0.0	467.29	2116.84	2,584.13
13	103.0	26.07	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	78.60	0.00	1,456.1	0.0	496.25	2162.85	2,659.10
14	113.0	26.59	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	67.53	0.00	1,339.0	0.0	486.85	1862.32	2,349.17
15	123.0	27.07	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	52.73	0.00	1,279.0	0.0	515.14	1466.20	1,981.34
16	133.0	27.52	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	38.33	0.00	1,161.0	0.0	503.84	1102.55	1,606.39
17	143.0	27.94	0.000	9.55	0.00	0.18	2.66	0.85	1.00	0.00	5.58	32.48	0.00	1,280.9	0.0	563.78	959.59	1,523.37
18	153.0	28.34	0.000	9.05	0.00	0.17	2.69	0.85	1.00	0.00	5.27	29.86	0.00	1,210.9	0.0	546.79	900.59	1,447.39
19	163.0	28.72	0.000	8.70	0.00	0.17	2.71	0.85	1.00	0.00	5.06	21.90	0.00	1,035.1	0.0	536.13	637.52	1,173.65
20	173.0	29.08	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	18.57	0.00	976.5	0.0	521.78	537.86	1,059.63
21	183.0	29.43	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	17.25	0.00	1,005.1	0.0	549.34	506.22	1,055.56
22	193.0	29.76	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	16.74	0.00	966.6	0.0	533.93	496.91	1,030.85
23	203.0	30.08	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	15.72	0.00	999.9	0.0	561.46	472.46	1,033.92
24	213.0	30.38	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	15.45	0.00	963.1	0.0	545.13	469.21	1,014.34
25	223.0	30.68	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	13.95	0.00	991.3	0.0	572.68	428.60	1,001.28
26	233.0	30.96	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	12.14	0.00	949.2	0.0	555.53	377.77	933.30
27	243.0	31.24	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	10.60	0.00	978.5	0.0	583.13	333.92	917.05
28	253.0	31.50	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	8.24	0.00	930.5	0.0	565.24	263.96	829.20
29	263.0	31.76	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	7.03	0.00	961.0	0.0	592.92	228.60	821.52
30	273.0	32.01	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	6.65	0.00	923.9	0.0	574.37	218.52	792.89
31	283.0	32.26	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	6.65	0.00	960.0	0.0	602.14	220.18	822.32
32	293.0	32.49	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	6.27	0.00	923.4	0.0	582.98	201.64	784.63
33	303.0	32.72	0.000	8.41	0.00	0.16	2.73	0.85	1.00	0.00	4.88	6.18	0.00	943.6	0.0	593.08	198.00	791.08
34	308.5	32.85	0.793	0.48	0.00	0.24	2.46	0.85	1.00	0.00	0.95	0.41	0.00	614.0	0.0	104.79	13.20	117.99
<b>37,995.6</b>														<b>0.0</b>	<b>47,549.69</b>			

## Section Forces

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



Page: 16

<b>Load Case:</b> 1.2D + 1.0Di + 1.0Wi Normal Wind	1.2D + 1.0Di + 1.0Wi 50 mph Wind at Normal From Face
<b>Wind Load Factor:</b> 1.00	<b>Wind Importance Factor:</b> 1.00
<b>Dead Load Factor:</b> 1.20	
<b>Ice Dead Load Factor:</b> 1.00	<b>Ice Importance Factor:</b> 1.00

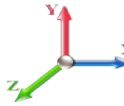
Sect Seq	Wind Height (ft)	Total Flat Area (psf)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
											Linear Area (sqft)	Linear Area (sqft)						
1	2.5	4.62	0.578	14.19	9.44	0.98	2.06	1.00	1.00	1.55	15.36	43.51	60.52	4,149.5	2511.2	124.55	28.27	152.82
2	6.3	4.62	0.290	7.07	4.82	0.53	1.86	1.00	1.00	1.69	5.28	21.94	33.16	2,221.1	1433.7	38.66	132.12	170.77
3	8.8	4.62	0.290	7.09	4.98	0.53	1.86	1.00	1.00	1.75	5.30	22.02	34.30	2,242.9	1467.8	38.78	134.82	173.60
4	14.0	4.62	0.000	27.63	19.89	0.62	1.79	1.00	1.00	1.84	21.07	70.79	115.0	6,277.4	4624.7	148.44	366.99	515.43
5	23.0	5.05	0.000	32.93	24.02	0.59	1.81	1.00	1.00	1.93	24.45	88.57	148.8	7,966.1	6023.1	190.01	550.40	740.41
6	33.0	5.45	0.000	31.75	23.24	0.57	1.83	1.00	1.00	2.00	23.12	88.76	153.3	8,122.4	6228.1	195.72	635.80	831.51
7	43.0	5.76	0.000	34.48	25.58	0.62	1.79	1.00	1.00	2.05	26.15	89.03	157.4	8,538.2	6595.8	229.97	615.39	845.36
8	53.0	6.02	0.000	32.88	24.37	0.59	1.81	1.00	1.00	2.10	24.31	88.88	157.2	8,517.2	6623.9	225.62	687.48	913.10
9	63.0	6.25	0.000	35.48	26.57	0.63	1.79	1.00	1.00	2.13	27.28	89.06	160.0	8,863.4	6921.9	258.94	649.42	908.36
10	73.0	6.44	0.000	33.67	25.16	0.60	1.80	1.00	1.00	2.17	25.17	89.22	162.3	8,846.5	6953.2	248.69	730.54	979.23
11	83.0	6.62	0.000	36.22	27.31	0.65	1.78	1.00	1.00	2.19	28.15	89.36	164.4	9,160.2	7218.8	282.39	680.93	963.32
12	93.0	6.78	0.000	34.29	25.78	0.61	1.80	1.00	1.00	2.22	25.85	89.49	166.3	9,108.0	7214.6	267.88	764.17	1,032.05
13	103.0	6.93	0.000	36.82	27.91	0.65	1.78	1.00	1.00	2.24	28.85	89.60	168.0	9,402.8	7461.3	302.43	705.95	1,008.39
14	113.0	7.06	0.000	34.80	26.28	0.62	1.79	1.00	1.00	2.26	26.41	74.24	165.1	8,676.1	6890.8	284.52	726.50	1,011.01
15	123.0	7.19	0.000	37.32	28.41	0.66	1.78	1.00	1.00	2.28	29.44	56.53	146.3	7,925.7	6220.4	320.11	567.67	887.78
16	133.0	7.31	0.000	35.23	26.72	0.63	1.79	1.00	1.00	2.30	26.90	42.16	113.6	6,650.4	5102.5	299.33	500.07	799.40
17	143.0	7.42	0.000	38.39	28.84	0.68	1.78	1.00	1.00	2.32	30.80	36.34	97.46	6,592.8	4884.8	345.20	393.02	738.22
18	153.0	7.53	0.000	36.15	27.09	0.64	1.78	1.00	1.00	2.33	28.00	33.75	89.38	6,160.4	4545.9	319.75	408.10	727.85
19	163.0	7.63	0.000	37.93	29.22	0.67	1.78	1.00	1.00	2.35	30.20	22.68	87.40	5,635.7	4255.7	348.05	345.36	693.41
20	173.0	7.73	0.000	35.74	27.43	0.63	1.79	1.00	1.00	2.36	27.50	18.57	82.61	5,224.1	3922.1	322.70	352.93	675.63
21	183.0	7.82	0.000	38.27	29.56	0.68	1.78	1.00	1.00	2.37	30.62	17.25	79.91	5,345.1	4005.0	361.44	315.55	676.99
22	193.0	7.91	0.000	36.04	27.73	0.64	1.78	1.00	1.00	2.39	27.85	16.74	78.75	5,135.9	3847.0	334.06	341.75	675.81
23	203.0	7.99	0.000	38.58	29.87	0.68	1.78	1.00	1.00	2.40	31.00	15.72	73.95	5,235.6	3902.3	373.94	300.48	674.42
24	213.0	8.07	0.000	36.31	28.00	0.64	1.78	1.00	1.00	2.41	28.17	15.45	72.30	5,022.5	3738.4	344.69	323.84	668.53
25	223.0	8.15	0.000	38.86	30.15	0.69	1.78	1.00	1.00	2.42	31.35	13.95	67.39	5,094.5	3772.7	385.68	282.63	668.31
26	233.0	8.23	0.000	36.57	28.26	0.65	1.78	1.00	1.00	2.43	28.46	12.14	54.71	4,617.7	3352.1	354.69	266.28	620.97
27	243.0	8.30	0.000	39.12	30.41	0.69	1.78	1.00	1.00	2.44	31.67	10.60	46.80	4,633.6	3328.9	396.78	223.71	620.49
28	253.0	8.37	0.000	36.80	28.49	0.65	1.78	1.00	1.00	2.45	28.74	8.24	37.02	4,173.1	2932.4	364.16	205.51	569.67
29	263.0	8.44	0.000	39.36	30.65	0.70	1.78	1.00	1.00	2.46	31.97	7.03	31.59	4,244.7	2963.4	407.32	177.50	584.83
30	273.0	8.51	0.000	37.02	28.71	0.66	1.78	1.00	1.00	2.47	28.99	6.65	28.82	3,990.8	2759.0	373.16	179.09	552.25
31	283.0	8.57	0.000	39.58	30.88	0.70	1.78	1.00	1.00	2.48	32.26	6.65	28.93	4,213.7	2933.7	417.38	172.04	589.42
32	293.0	8.63	0.000	37.22	28.91	0.66	1.78	1.00	1.00	2.49	29.23	6.27	19.08	3,827.7	2596.5	381.75	91.25	473.00
33	303.0	8.69	0.000	37.42	29.01	0.66	1.78	1.00	1.00	2.50	29.48	6.18	16.64	3,831.4	2573.2	387.49	68.49	455.98
34	308.5	8.73	0.793	5.48	5.00	1.00	2.10	1.00	1.00	2.50	6.55	0.41	0.96	1,600.9	782.3	102.02	0.00	102.02
													<b>201,248.2</b>	<b>150587.4</b>				<b>22,700.34</b>

## Section Forces

**Structure:** CT15879-A-SBA  
**Site Name:** West Hartford  
**Height:** 309.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 0.85

**Topography:** 1

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

12/10/2018  
  
 Page: 17



**Load Case:** 1.2D + 1.0Di + 1.0Wi 60° Wind

1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° From Face

**Wind Load Factor:** 1.00

**Wind Importance Factor:** 1.00

**Dead Load Factor:** 1.20

**Ice Dead Load Factor:** 1.00

**Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	Total Flat Area (psf)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
											Linear Area (sqft)	Linear Area (sqft)						
1	2.5	4.62	0.578	14.19	9.44	0.98	2.06	0.80	1.00	1.55	15.25	43.51	60.52	4,149.5	2511.2	123.61	28.27	151.88
2	6.3	4.62	0.290	7.07	4.82	0.53	1.86	0.80	1.00	1.69	5.22	21.94	33.16	2,221.1	1433.7	38.23	132.12	170.35
3	8.8	4.62	0.290	7.09	4.98	0.53	1.86	0.80	1.00	1.75	5.24	22.02	34.30	2,242.9	1467.8	38.35	134.82	173.17
4	14.0	4.62	0.000	27.63	19.89	0.62	1.79	0.80	1.00	1.84	21.07	70.79	115.0	6,277.4	4624.7	148.44	366.99	515.43
5	23.0	5.05	0.000	32.93	24.02	0.59	1.81	0.80	1.00	1.93	24.45	88.57	148.8	7,966.1	6023.1	190.01	550.40	740.41
6	33.0	5.45	0.000	31.75	23.24	0.57	1.83	0.80	1.00	2.00	23.12	88.76	153.3	8,122.4	6228.1	195.72	635.80	831.51
7	43.0	5.76	0.000	34.48	25.58	0.62	1.79	0.80	1.00	2.05	26.15	89.03	157.4	8,538.2	6595.8	229.97	615.39	845.36
8	53.0	6.02	0.000	32.88	24.37	0.59	1.81	0.80	1.00	2.10	24.31	88.88	157.2	8,517.2	6623.9	225.62	687.48	913.10
9	63.0	6.25	0.000	35.48	26.57	0.63	1.79	0.80	1.00	2.13	27.28	89.06	160.0	8,863.4	6921.9	258.94	649.42	908.36
10	73.0	6.44	0.000	33.67	25.16	0.60	1.80	0.80	1.00	2.17	25.17	89.22	162.3	8,846.5	6953.2	248.69	730.54	979.23
11	83.0	6.62	0.000	36.22	27.31	0.65	1.78	0.80	1.00	2.19	28.15	89.36	164.4	9,160.2	7218.8	282.39	680.93	963.32
12	93.0	6.78	0.000	34.29	25.78	0.61	1.80	0.80	1.00	2.22	25.85	89.49	166.3	9,108.0	7214.6	267.88	764.17	1,032.05
13	103.0	6.93	0.000	36.82	27.91	0.65	1.78	0.80	1.00	2.24	28.85	89.60	168.0	9,402.8	7461.3	302.43	705.95	1,008.39
14	113.0	7.06	0.000	34.80	26.28	0.62	1.79	0.80	1.00	2.26	26.41	74.24	165.1	8,676.1	6890.8	284.52	726.50	1,011.01
15	123.0	7.19	0.000	37.32	28.41	0.66	1.78	0.80	1.00	2.28	29.44	56.53	146.3	7,925.7	6220.4	320.11	567.67	887.78
16	133.0	7.31	0.000	35.23	26.72	0.63	1.79	0.80	1.00	2.30	26.90	42.16	113.6	6,650.4	5102.5	299.33	500.07	799.40
17	143.0	7.42	0.000	38.39	28.84	0.68	1.78	0.80	1.00	2.32	30.80	36.34	97.46	6,592.8	4884.8	345.20	393.02	738.22
18	153.0	7.53	0.000	36.15	27.09	0.64	1.78	0.80	1.00	2.33	28.00	33.75	89.38	6,160.4	4545.9	319.75	408.10	727.85
19	163.0	7.63	0.000	37.93	29.22	0.67	1.78	0.80	1.00	2.35	30.20	22.68	87.40	5,635.7	4255.7	348.05	345.36	693.41
20	173.0	7.73	0.000	35.74	27.43	0.63	1.79	0.80	1.00	2.36	27.50	18.57	82.61	5,224.1	3922.1	322.70	352.93	675.63
21	183.0	7.82	0.000	38.27	29.56	0.68	1.78	0.80	1.00	2.37	30.62	17.25	79.91	5,345.1	4005.0	361.44	315.55	676.99
22	193.0	7.91	0.000	36.04	27.73	0.64	1.78	0.80	1.00	2.39	27.85	16.74	78.75	5,135.9	3847.0	334.06	341.75	675.81
23	203.0	7.99	0.000	38.58	29.87	0.68	1.78	0.80	1.00	2.40	31.00	15.72	73.95	5,235.6	3902.3	373.94	300.48	674.42
24	213.0	8.07	0.000	36.31	28.00	0.64	1.78	0.80	1.00	2.41	28.17	15.45	72.30	5,022.5	3738.4	344.69	323.84	668.53
25	223.0	8.15	0.000	38.86	30.15	0.69	1.78	0.80	1.00	2.42	31.35	13.95	67.39	5,094.5	3772.7	385.68	282.63	668.31
26	233.0	8.23	0.000	36.57	28.26	0.65	1.78	0.80	1.00	2.43	28.46	12.14	54.71	4,617.7	3352.1	354.69	266.28	620.97
27	243.0	8.30	0.000	39.12	30.41	0.69	1.78	0.80	1.00	2.44	31.67	10.60	46.80	4,633.6	3328.9	396.78	223.71	620.49
28	253.0	8.37	0.000	36.80	28.49	0.65	1.78	0.80	1.00	2.45	28.74	8.24	37.02	4,173.1	2932.4	364.16	205.51	569.67
29	263.0	8.44	0.000	39.36	30.65	0.70	1.78	0.80	1.00	2.46	31.97	7.03	31.59	4,244.7	2963.4	407.32	177.50	584.83
30	273.0	8.51	0.000	37.02	28.71	0.66	1.78	0.80	1.00	2.47	28.99	6.65	28.82	3,990.8	2759.0	373.16	179.09	552.25
31	283.0	8.57	0.000	39.58	30.88	0.70	1.78	0.80	1.00	2.48	32.26	6.65	28.93	4,213.7	2933.7	417.38	172.04	589.42
32	293.0	8.63	0.000	37.22	28.91	0.66	1.78	0.80	1.00	2.49	29.23	6.27	19.08	3,827.7	2596.5	381.75	91.25	473.00
33	303.0	8.69	0.000	37.42	29.01	0.66	1.78	0.80	1.00	2.50	29.48	6.18	16.64	3,831.4	2573.2	387.49	68.49	455.98
34	308.5	8.73	0.793	5.48	5.00	1.00	2.10	0.80	1.00	2.50	6.39	0.41	0.96	1,600.9	782.3	99.55	0.00	99.55
													<b>201,248.2</b>	<b>150587.4</b>				<b>22,696.08</b>

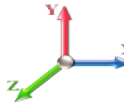


## Section Forces

**Structure:** CT15879-A-SBA  
**Site Name:** West Hartford  
**Height:** 309.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 0.85

**Topography:** 1

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

12/10/2018  
  
 Page: 18



**Load Case:** 1.2D + 1.0Di + 1.0Wi 90° Wind

1.2D + 1.0Di + 1.0Wi 50 mph Wind at 90° From Face

**Wind Load Factor:** 1.00

**Wind Importance Factor:** 1.00

**Dead Load Factor:** 1.20

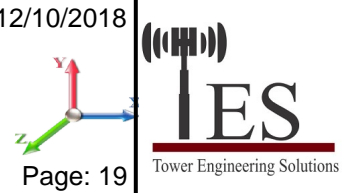
**Ice Dead Load Factor:** 1.00

**Ice Importance Factor:** 1.00

Sect Seq	Wind Height (ft)	Total Flat Area (psf)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
											Linear Area (sqft)	Linear Area (sqft)						
1	2.5	4.62	0.578	14.19	9.44	0.98	2.06	0.85	1.00	1.55	15.27	43.51	60.52	4,149.5	2511.2	123.85	28.27	152.11
2	6.3	4.62	0.290	7.07	4.82	0.53	1.86	0.85	1.00	1.69	5.24	21.94	33.16	2,221.1	1433.7	38.34	132.12	170.46
3	8.8	4.62	0.290	7.09	4.98	0.53	1.86	0.85	1.00	1.75	5.26	22.02	34.30	2,242.9	1467.8	38.46	134.82	173.28
4	14.0	4.62	0.000	27.63	19.89	0.62	1.79	0.85	1.00	1.84	21.07	70.79	115.0	6,277.4	4624.7	148.44	366.99	515.43
5	23.0	5.05	0.000	32.93	24.02	0.59	1.81	0.85	1.00	1.93	24.45	88.57	148.8	7,966.1	6023.1	190.01	550.40	740.41
6	33.0	5.45	0.000	31.75	23.24	0.57	1.83	0.85	1.00	2.00	23.12	88.76	153.3	8,122.4	6228.1	195.72	635.80	831.51
7	43.0	5.76	0.000	34.48	25.58	0.62	1.79	0.85	1.00	2.05	26.15	89.03	157.4	8,538.2	6595.8	229.97	615.39	845.36
8	53.0	6.02	0.000	32.88	24.37	0.59	1.81	0.85	1.00	2.10	24.31	88.88	157.2	8,517.2	6623.9	225.62	687.48	913.10
9	63.0	6.25	0.000	35.48	26.57	0.63	1.79	0.85	1.00	2.13	27.28	89.06	160.0	8,863.4	6921.9	258.94	649.42	908.36
10	73.0	6.44	0.000	33.67	25.16	0.60	1.80	0.85	1.00	2.17	25.17	89.22	162.3	8,846.5	6953.2	248.69	730.54	979.23
11	83.0	6.62	0.000	36.22	27.31	0.65	1.78	0.85	1.00	2.19	28.15	89.36	164.4	9,160.2	7218.8	282.39	680.93	963.32
12	93.0	6.78	0.000	34.29	25.78	0.61	1.80	0.85	1.00	2.22	25.85	89.49	166.3	9,108.0	7214.6	267.88	764.17	1,032.05
13	103.0	6.93	0.000	36.82	27.91	0.65	1.78	0.85	1.00	2.24	28.85	89.60	168.0	9,402.8	7461.3	302.43	705.95	1,008.39
14	113.0	7.06	0.000	34.80	26.28	0.62	1.79	0.85	1.00	2.26	26.41	74.24	165.1	8,676.1	6890.8	284.52	726.50	1,011.01
15	123.0	7.19	0.000	37.32	28.41	0.66	1.78	0.85	1.00	2.28	29.44	56.53	146.3	7,925.7	6220.4	320.11	567.67	887.78
16	133.0	7.31	0.000	35.23	26.72	0.63	1.79	0.85	1.00	2.30	26.90	42.16	113.6	6,650.4	5102.5	299.33	500.07	799.40
17	143.0	7.42	0.000	38.39	28.84	0.68	1.78	0.85	1.00	2.32	30.80	36.34	97.46	6,592.8	4884.8	345.20	393.02	738.22
18	153.0	7.53	0.000	36.15	27.09	0.64	1.78	0.85	1.00	2.33	28.00	33.75	89.38	6,160.4	4545.9	319.75	408.10	727.85
19	163.0	7.63	0.000	37.93	29.22	0.67	1.78	0.85	1.00	2.35	30.20	22.68	87.40	5,635.7	4255.7	348.05	345.36	693.41
20	173.0	7.73	0.000	35.74	27.43	0.63	1.79	0.85	1.00	2.36	27.50	18.57	82.61	5,224.1	3922.1	322.70	352.93	675.63
21	183.0	7.82	0.000	38.27	29.56	0.68	1.78	0.85	1.00	2.37	30.62	17.25	79.91	5,345.1	4005.0	361.44	315.55	676.99
22	193.0	7.91	0.000	36.04	27.73	0.64	1.78	0.85	1.00	2.39	27.85	16.74	78.75	5,135.9	3847.0	334.06	341.75	675.81
23	203.0	7.99	0.000	38.58	29.87	0.68	1.78	0.85	1.00	2.40	31.00	15.72	73.95	5,235.6	3902.3	373.94	300.48	674.42
24	213.0	8.07	0.000	36.31	28.00	0.64	1.78	0.85	1.00	2.41	28.17	15.45	72.30	5,022.5	3738.4	344.69	323.84	668.53
25	223.0	8.15	0.000	38.86	30.15	0.69	1.78	0.85	1.00	2.42	31.35	13.95	67.39	5,094.5	3772.7	385.68	282.63	668.31
26	233.0	8.23	0.000	36.57	28.26	0.65	1.78	0.85	1.00	2.43	28.46	12.14	54.71	4,617.7	3352.1	354.69	266.28	620.97
27	243.0	8.30	0.000	39.12	30.41	0.69	1.78	0.85	1.00	2.44	31.67	10.60	46.80	4,633.6	3328.9	396.78	223.71	620.49
28	253.0	8.37	0.000	36.80	28.49	0.65	1.78	0.85	1.00	2.45	28.74	8.24	37.02	4,173.1	2932.4	364.16	205.51	569.67
29	263.0	8.44	0.000	39.36	30.65	0.70	1.78	0.85	1.00	2.46	31.97	7.03	31.59	4,244.7	2963.4	407.32	177.50	584.83
30	273.0	8.51	0.000	37.02	28.71	0.66	1.78	0.85	1.00	2.47	28.99	6.65	28.82	3,990.8	2759.0	373.16	179.09	552.25
31	283.0	8.57	0.000	39.58	30.88	0.70	1.78	0.85	1.00	2.48	32.26	6.65	28.93	4,213.7	2933.7	417.38	172.04	589.42
32	293.0	8.63	0.000	37.22	28.91	0.66	1.78	0.85	1.00	2.49	29.23	6.27	19.08	3,827.7	2596.5	381.75	91.25	473.00
33	303.0	8.69	0.000	37.42	29.01	0.66	1.78	0.85	1.00	2.50	29.48	6.18	16.64	3,831.4	2573.2	387.49	68.49	455.98
34	308.5	8.73	0.793	5.48	5.00	1.00	2.10	0.85	1.00	2.50	6.43	0.41	0.96	1,600.9	782.3	100.17	0.00	100.17
													<b>201,248.2</b>	<b>150587.4</b>				<b>22,697.15</b>

## Section Forces

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II

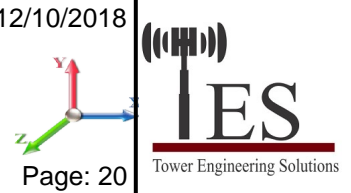


<b>Load Case:</b> 1.0D + 1.0W Normal Wind	1.0D + 1.0W 60 mph Wind at Normal To Face
<b>Wind Load Factor:</b> 1.00	<b>Wind Importance Factor:</b> 1.00
<b>Dead Load Factor:</b> 1.00	
<b>Ice Dead Load Factor:</b> 0.00	<b>Ice Importance Factor:</b> 1.00

Sect Seq	Wind Height (ft)	Total Flat Area (psf)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
											Linear Area (sqft)	Linear Area (sqft)						
1	2.5	6.66	0.578	4.75	0.00	0.39	2.09	1.00	1.00	0.00	3.64	39.76	0.00	1,365.3	0.0	43.02	174.45	217.48
2	6.3	6.66	0.290	2.25	0.00	0.19	2.62	1.00	1.00	0.00	1.60	19.88	0.00	656.2	0.0	23.72	87.23	110.94
3	8.8	6.66	0.290	2.11	0.00	0.18	2.66	1.00	1.00	0.00	1.52	19.88	0.00	645.9	0.0	22.77	87.23	110.00
4	14.0	6.66	0.000	7.75	0.00	0.18	2.65	1.00	1.00	0.00	4.53	63.61	0.00	1,377.2	0.0	67.97	279.13	347.09
5	23.0	7.28	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	79.13	0.00	1,619.1	0.0	86.55	379.57	466.12
6	33.0	7.85	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	78.97	0.00	1,578.6	0.0	89.84	408.76	498.61
7	43.0	8.30	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	78.97	0.00	1,618.7	0.0	98.74	432.19	530.93
8	53.0	8.67	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	78.60	0.00	1,577.8	0.0	99.27	449.69	548.96
9	63.0	9.00	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	78.60	0.00	1,617.9	0.0	107.00	466.36	573.36
10	73.0	9.28	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	78.60	0.00	1,577.8	0.0	106.19	481.05	587.24
11	83.0	9.53	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	78.60	0.00	1,617.9	0.0	113.40	494.23	607.62
12	93.0	9.76	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	78.60	0.00	1,577.8	0.0	111.74	506.21	617.95
13	103.0	9.98	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	78.60	0.00	1,617.9	0.0	118.67	517.21	635.88
14	113.0	10.17	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	67.53	0.00	1,487.8	0.0	116.42	445.34	561.76
15	123.0	10.36	0.000	8.91	0.00	0.17	2.70	1.00	1.00	0.00	5.18	52.73	0.00	1,421.1	0.0	123.19	350.62	473.80
16	133.0	10.53	0.000	8.51	0.00	0.16	2.73	1.00	1.00	0.00	4.94	38.33	0.00	1,289.9	0.0	120.48	263.66	384.14
17	143.0	10.69	0.000	9.55	0.00	0.18	2.66	1.00	1.00	0.00	5.58	32.48	0.00	1,423.3	0.0	134.82	229.47	364.29
18	153.0	10.84	0.000	9.05	0.00	0.17	2.69	1.00	1.00	0.00	5.27	29.86	0.00	1,345.4	0.0	130.76	215.36	346.12
19	163.0	10.99	0.000	8.70	0.00	0.17	2.71	1.00	1.00	0.00	5.06	21.90	0.00	1,150.1	0.0	128.21	152.45	280.66
20	173.0	11.13	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	18.57	0.00	1,085.0	0.0	124.77	128.62	253.39
21	183.0	11.26	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	17.25	0.00	1,116.8	0.0	131.36	121.05	252.42
22	193.0	11.39	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	16.74	0.00	1,074.0	0.0	127.68	118.83	246.51
23	203.0	11.51	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	15.72	0.00	1,111.0	0.0	134.26	112.98	247.24
24	213.0	11.63	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	15.45	0.00	1,070.1	0.0	130.36	112.20	242.56
25	223.0	11.74	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	13.95	0.00	1,101.5	0.0	136.95	102.49	239.44
26	233.0	11.85	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	12.14	0.00	1,054.6	0.0	132.85	90.34	223.18
27	243.0	11.95	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	10.60	0.00	1,087.2	0.0	139.45	79.85	219.30
28	253.0	12.05	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	8.24	0.00	1,033.9	0.0	135.17	63.12	198.29
29	263.0	12.15	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	7.03	0.00	1,067.7	0.0	141.79	54.67	196.45
30	273.0	12.25	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	6.65	0.00	1,026.5	0.0	137.35	52.25	189.61
31	283.0	12.34	0.000	8.71	0.00	0.17	2.71	1.00	1.00	0.00	5.06	6.65	0.00	1,066.6	0.0	143.99	52.65	196.64
32	293.0	12.43	0.000	8.31	0.00	0.16	2.74	1.00	1.00	0.00	4.81	6.27	0.00	1,026.0	0.0	139.41	48.22	187.63
33	303.0	12.52	0.000	8.41	0.00	0.16	2.73	1.00	1.00	0.00	4.88	6.18	0.00	1,048.5	0.0	141.83	47.35	189.17
34	308.5	12.57	0.793	0.48	0.00	0.24	2.46	1.00	1.00	0.00	1.07	0.41	0.00	682.2	0.0	28.18	3.16	31.34
												<b>42,217.3</b>	<b>0.0</b>			<b>11,376.14</b>		

## Section Forces

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



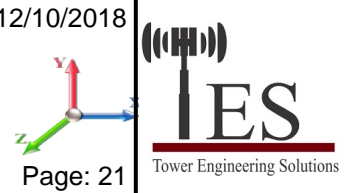
Page: 20

<b>Load Case:</b> 1.0D + 1.0W 60° Wind	1.0D + 1.0W 60 mph Wind at 60° From Face
<b>Wind Load Factor:</b> 1.00	<b>Wind Importance Factor:</b> 1.00
<b>Dead Load Factor:</b> 1.00	
<b>Ice Dead Load Factor:</b> 0.00	<b>Ice Importance Factor:</b> 1.00

Sect Seq	Wind Height (ft)	qz (psf)	Total Flat Area (sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)
												Linear Area (sqft)	Linear Area (sqft)					
1	2.5	6.66	0.578	4.75	0.00	0.39	2.09	0.80	1.00	0.00	3.52	39.76	0.00	1,365.3	0.0	41.66	174.45	216.11
2	6.3	6.66	0.290	2.25	0.00	0.19	2.62	0.80	1.00	0.00	1.54	19.88	0.00	656.2	0.0	22.86	87.23	110.08
3	8.8	6.66	0.290	2.11	0.00	0.18	2.66	0.80	1.00	0.00	1.46	19.88	0.00	645.9	0.0	21.90	87.23	109.13
4	14.0	6.66	0.000	7.75	0.00	0.18	2.65	0.80	1.00	0.00	4.53	63.61	0.00	1,377.2	0.0	67.97	279.13	347.09
5	23.0	7.28	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	79.13	0.00	1,619.1	0.0	86.55	379.57	466.12
6	33.0	7.85	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	78.97	0.00	1,578.6	0.0	89.84	408.76	498.61
7	43.0	8.30	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	78.97	0.00	1,618.7	0.0	98.74	432.19	530.93
8	53.0	8.67	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	78.60	0.00	1,577.8	0.0	99.27	449.69	548.96
9	63.0	9.00	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	78.60	0.00	1,617.9	0.0	107.00	466.36	573.36
10	73.0	9.28	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	78.60	0.00	1,577.8	0.0	106.19	481.05	587.24
11	83.0	9.53	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	78.60	0.00	1,617.9	0.0	113.40	494.23	607.62
12	93.0	9.76	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	78.60	0.00	1,577.8	0.0	111.74	506.21	617.95
13	103.0	9.98	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	78.60	0.00	1,617.9	0.0	118.67	517.21	635.88
14	113.0	10.17	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	67.53	0.00	1,487.8	0.0	116.42	445.34	561.76
15	123.0	10.36	0.000	8.91	0.00	0.17	2.70	0.80	1.00	0.00	5.18	52.73	0.00	1,421.1	0.0	123.19	350.62	473.80
16	133.0	10.53	0.000	8.51	0.00	0.16	2.73	0.80	1.00	0.00	4.94	38.33	0.00	1,289.9	0.0	120.48	263.66	384.14
17	143.0	10.69	0.000	9.55	0.00	0.18	2.66	0.80	1.00	0.00	5.58	32.48	0.00	1,423.3	0.0	134.82	229.47	364.29
18	153.0	10.84	0.000	9.05	0.00	0.17	2.69	0.80	1.00	0.00	5.27	29.86	0.00	1,345.4	0.0	130.76	215.36	346.12
19	163.0	10.99	0.000	8.70	0.00	0.17	2.71	0.80	1.00	0.00	5.06	21.90	0.00	1,150.1	0.0	128.21	152.45	280.66
20	173.0	11.13	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	18.57	0.00	1,085.0	0.0	124.77	128.62	253.39
21	183.0	11.26	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	17.25	0.00	1,116.8	0.0	131.36	121.05	252.42
22	193.0	11.39	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	16.74	0.00	1,074.0	0.0	127.68	118.83	246.51
23	203.0	11.51	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	15.72	0.00	1,111.0	0.0	134.26	112.98	247.24
24	213.0	11.63	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	15.45	0.00	1,070.1	0.0	130.36	112.20	242.56
25	223.0	11.74	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	13.95	0.00	1,101.5	0.0	136.95	102.49	239.44
26	233.0	11.85	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	12.14	0.00	1,054.6	0.0	132.85	90.34	223.18
27	243.0	11.95	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	10.60	0.00	1,087.2	0.0	139.45	79.85	219.30
28	253.0	12.05	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	8.24	0.00	1,033.9	0.0	135.17	63.12	198.29
29	263.0	12.15	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	7.03	0.00	1,067.7	0.0	141.79	54.67	196.45
30	273.0	12.25	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	6.65	0.00	1,026.5	0.0	137.35	52.25	189.61
31	283.0	12.34	0.000	8.71	0.00	0.17	2.71	0.80	1.00	0.00	5.06	6.65	0.00	1,066.6	0.0	143.99	52.65	196.64
32	293.0	12.43	0.000	8.31	0.00	0.16	2.74	0.80	1.00	0.00	4.81	6.27	0.00	1,026.0	0.0	139.41	48.22	187.63
33	303.0	12.52	0.000	8.41	0.00	0.16	2.73	0.80	1.00	0.00	4.88	6.18	0.00	1,048.5	0.0	141.83	47.35	189.17
34	308.5	12.57	0.793	0.48	0.00	0.24	2.46	0.80	1.00	0.00	0.91	0.41	0.00	682.2	0.0	24.02	3.16	27.17
													<b>42,217.3</b>	<b>0.0</b>	<b>11,368.87</b>			

## Section Forces

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



Page: 21

<b>Load Case:</b> 1.0D + 1.0W 90° Wind	1.0D + 1.0W 60 mph Wind at 90° From Face
<b>Wind Load Factor:</b> 1.00	<b>Wind Importance Factor:</b> 1.00
<b>Dead Load Factor:</b> 1.00	
<b>Ice Dead Load Factor:</b> 0.00	<b>Ice Importance Factor:</b> 1.00

Sect Seq	Wind Height (ft)	Total Flat Area (psf sqft)	Total Round Area (sqft)	Ice Round Area (sqft)	Sol Ratio	Cf	Df	Dr	Ice Thick (in)	Eff Area (sqft)	Ice		Total Weight (lb)	Weight Ice (lb)	Struct Force (lb)	Linear Force (lb)	Total Force (lb)	
											Linear Area (sqft)	Linear Area (sqft)						
1	2.5	6.66	0.578	4.75	0.00	0.39	2.09	0.85	1.00	0.00	3.55	39.76	0.00	1,365.3	0.0	42.00	174.45	216.45
2	6.3	6.66	0.290	2.25	0.00	0.19	2.62	0.85	1.00	0.00	1.56	19.88	0.00	656.2	0.0	23.07	87.23	110.30
3	8.8	6.66	0.290	2.11	0.00	0.18	2.66	0.85	1.00	0.00	1.47	19.88	0.00	645.9	0.0	22.12	87.23	109.34
4	14.0	6.66	0.000	7.75	0.00	0.18	2.65	0.85	1.00	0.00	4.53	63.61	0.00	1,377.2	0.0	67.97	279.13	347.09
5	23.0	7.28	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	79.13	0.00	1,619.1	0.0	86.55	379.57	466.12
6	33.0	7.85	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	78.97	0.00	1,578.6	0.0	89.84	408.76	498.61
7	43.0	8.30	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	78.97	0.00	1,618.7	0.0	98.74	432.19	530.93
8	53.0	8.67	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	78.60	0.00	1,577.8	0.0	99.27	449.69	548.96
9	63.0	9.00	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	78.60	0.00	1,617.9	0.0	107.00	466.36	573.36
10	73.0	9.28	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	78.60	0.00	1,577.8	0.0	106.19	481.05	587.24
11	83.0	9.53	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	78.60	0.00	1,617.9	0.0	113.40	494.23	607.62
12	93.0	9.76	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	78.60	0.00	1,577.8	0.0	111.74	506.21	617.95
13	103.0	9.98	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	78.60	0.00	1,617.9	0.0	118.67	517.21	635.88
14	113.0	10.17	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	67.53	0.00	1,487.8	0.0	116.42	445.34	561.76
15	123.0	10.36	0.000	8.91	0.00	0.17	2.70	0.85	1.00	0.00	5.18	52.73	0.00	1,421.1	0.0	123.19	350.62	473.80
16	133.0	10.53	0.000	8.51	0.00	0.16	2.73	0.85	1.00	0.00	4.94	38.33	0.00	1,289.9	0.0	120.48	263.66	384.14
17	143.0	10.69	0.000	9.55	0.00	0.18	2.66	0.85	1.00	0.00	5.58	32.48	0.00	1,423.3	0.0	134.82	229.47	364.29
18	153.0	10.84	0.000	9.05	0.00	0.17	2.69	0.85	1.00	0.00	5.27	29.86	0.00	1,345.4	0.0	130.76	215.36	346.12
19	163.0	10.99	0.000	8.70	0.00	0.17	2.71	0.85	1.00	0.00	5.06	21.90	0.00	1,150.1	0.0	128.21	152.45	280.66
20	173.0	11.13	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	18.57	0.00	1,085.0	0.0	124.77	128.62	253.39
21	183.0	11.26	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	17.25	0.00	1,116.8	0.0	131.36	121.05	252.42
22	193.0	11.39	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	16.74	0.00	1,074.0	0.0	127.68	118.83	246.51
23	203.0	11.51	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	15.72	0.00	1,111.0	0.0	134.26	112.98	247.24
24	213.0	11.63	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	15.45	0.00	1,070.1	0.0	130.36	112.20	242.56
25	223.0	11.74	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	13.95	0.00	1,101.5	0.0	136.95	102.49	239.44
26	233.0	11.85	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	12.14	0.00	1,054.6	0.0	132.85	90.34	223.18
27	243.0	11.95	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	10.60	0.00	1,087.2	0.0	139.45	79.85	219.30
28	253.0	12.05	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	8.24	0.00	1,033.9	0.0	135.17	63.12	198.29
29	263.0	12.15	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	7.03	0.00	1,067.7	0.0	141.79	54.67	196.45
30	273.0	12.25	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	6.65	0.00	1,026.5	0.0	137.35	52.25	189.61
31	283.0	12.34	0.000	8.71	0.00	0.17	2.71	0.85	1.00	0.00	5.06	6.65	0.00	1,066.6	0.0	143.99	52.65	196.64
32	293.0	12.43	0.000	8.31	0.00	0.16	2.74	0.85	1.00	0.00	4.81	6.27	0.00	1,026.0	0.0	139.41	48.22	187.63
33	303.0	12.52	0.000	8.41	0.00	0.16	2.73	0.85	1.00	0.00	4.88	6.18	0.00	1,048.5	0.0	141.83	47.35	189.17
34	308.5	12.57	0.793	0.48	0.00	0.24	2.46	0.85	1.00	0.00	0.95	0.41	0.00	682.2	0.0	25.06	3.16	28.22
												<b>42,217.3</b>	<b>0.0</b>			<b>11,370.69</b>		

## Force/Stress Compression Summary

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	<b>12/10/2018</b>
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



Page: 22

### LEG MEMBERS

Sect	Top Elev	Member	Force (kips)		Load Case	Len (ft)	Bracing %			Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls	
							X	Y	Z					
1	5	SOL - 3" SOLID	-148.93	1.2D + 1.0Di + 1.0Wi	90° Wind	1.92	50	50	50	15.40	50.00	312.64	47.6	Member X
2	7.5	SOL - 3" SOLID	-127.96	1.2D + 1.0Di + 1.0Wi	90° Wind	2.50	50	50	50	20.00	50.00	308.94	41.4	Member X
3	10	SOL - 3" SOLID	-131.60	1.2D + 1.0Di + 1.0Wi	60° Wind	2.50	50	50	50	20.00	50.00	308.94	42.6	Member X
4	18	SOL - 3" SOLID	-134.44	1.2D + 1.0Di + 1.0Wi	60° Wind	2.67	100	100	100	42.67	50.00	278.46	48.3	Member X
5	28	SOL - 3" SOLID	-140.49	1.2D + 1.0Di + 1.0Wi	60° Wind	2.50	100	100	100	40.00	50.00	282.98	49.6	Member X
6	38	SOL - 3" SOLID	-143.09	1.2D + 1.0Di + 1.0Wi	60° Wind	2.50	100	100	100	40.00	50.00	282.98	50.6	Member X
7	48	SOL - 3" SOLID	-143.81	1.2D + 1.0Di + 1.0Wi	60° Wind	2.50	100	100	100	40.00	50.00	282.98	50.8	Member X
8	58	SOL - 3" SOLID	-142.64	1.2D + 1.0Di + 1.0Wi	60° Wind	2.50	100	100	100	40.00	50.00	282.98	50.4	Member X
9	68	SOL - 3" SOLID	-139.27	1.2D + 1.0Di + 1.0Wi	60° Wind	2.50	100	100	100	40.00	50.00	282.98	49.2	Member X
10	78	SOL - 3" SOLID	-133.29	1.2D + 1.0Di + 1.0Wi	60° Wind	2.50	100	100	100	40.00	50.00	282.98	47.1	Member X
11	88	SOL - 3" SOLID	-124.48	1.2D + 1.0Di + 1.0Wi	60° Wind	2.50	100	100	100	40.00	50.00	282.98	44.0	Member X
12	98	SOL - 3" SOLID	-106.95	1.2D + 1.0Di + 1.0Wi	90° Wind	2.50	100	100	100	40.00	50.00	282.98	37.8	Member X
13	108	SOL - 3" SOLID	-107.77	1.2D + 1.0Di + 1.0Wi	60° Wind	2.50	100	100	100	40.00	50.00	282.98	38.1	Member X
14	118	SOL - 3" SOLID	-107.12	1.2D + 1.0Di + 1.0Wi	60° Wind	2.50	100	100	100	40.00	50.00	282.98	37.9	Member X
15	128	SOL - 3" SOLID	-99.33	1.2D + 1.0Di + 1.0Wi	90° Wind	2.50	100	100	100	40.00	50.00	282.98	35.1	Member X
16	138	SOL - 3" SOLID	-92.00	1.2D + 1.0Di + 1.0Wi	90° Wind	2.50	100	100	100	40.00	50.00	282.98	32.5	Member X
17	148	SOL - 3" SOLID	-81.29	1.2D + 1.0Di + 1.0Wi	Normal	2.50	100	100	100	40.00	50.00	282.98	28.7	Member X
18	158	SOL - 3" SOLID	-66.45	1.2D + 1.0Di + 1.0Wi	90° Wind	2.50	100	100	100	40.00	50.00	282.98	23.5	Member X
19	168	SOL - 2 7/8" SOLID	-63.59	1.2D + 1.0Di + 1.0Wi	90° Wind	2.50	100	100	100	41.78	50.00	257.05	24.7	Member X
20	178	SOL - 2 7/8" SOLID	-61.74	1.2D + 1.0Di + 1.0Wi	90° Wind	2.50	100	100	100	41.78	50.00	257.05	24.0	Member X
21	188	SOL - 2 7/8" SOLID	-61.78	1.2D + 1.0Di + 1.0Wi	90° Wind	2.50	100	100	100	41.78	50.00	257.05	24.0	Member X
22	198	SOL - 2 7/8" SOLID	-60.61	1.2D + 1.0Di + 1.0Wi	90° Wind	2.50	100	100	100	41.78	50.00	257.05	23.6	Member X
23	208	SOL - 2 7/8" SOLID	-57.90	1.2D + 1.0Di + 1.0Wi	90° Wind	2.50	100	100	100	41.78	50.00	257.05	22.5	Member X
24	218	SOL - 2 7/8" SOLID	-53.45	1.2D + 1.0Di + 1.0Wi	Normal	2.50	100	100	100	41.78	50.00	257.05	20.8	Member X
25	228	SOL - 2 7/8" SOLID	-49.99	1.2D + 1.0Di + 1.0Wi	60° Wind	2.50	100	100	100	41.78	50.00	257.05	19.4	Member X
26	238	SOL - 2 7/8" SOLID	-39.19	1.2D + 1.0Di + 1.0Wi	Normal	2.50	100	100	100	41.78	50.00	257.05	15.2	Member X
27	248	SOL - 2 7/8" SOLID	-30.51	1.2D + 1.0Di + 1.0Wi	60° Wind	2.50	100	100	100	41.78	50.00	257.05	11.9	Member X
28	258	SOL - 2 7/8" SOLID	-27.39	1.2D + 1.0Di + 1.0Wi	90° Wind	2.50	100	100	100	41.78	50.00	257.05	10.7	Member X
29	268	SOL - 2 7/8" SOLID	-26.72	1.2D + 1.0Di + 1.0Wi	Normal	2.50	100	100	100	41.78	50.00	257.05	10.4	Member X
30	278	SOL - 2 7/8" SOLID	-25.17	1.2D + 1.0Di + 1.0Wi	Normal	2.50	100	100	100	41.78	50.00	257.05	9.8	Member X
31	288	SOL - 2 7/8" SOLID	-22.95	1.2D + 1.0Di + 1.0Wi	Normal	2.50	100	100	100	41.78	50.00	257.05	8.9	Member X
32	298	SOL - 2 7/8" SOLID	-25.49	1.2D + 1.6W	Normal Wind	2.50	100	100	100	41.78	50.00	257.05	9.9	Member X
33	308	SOL - 2 7/8" SOLID	-22.85	1.2D + 1.6W	Normal Wind	2.50	100	100	100	41.78	50.00	257.05	8.9	Member X
34	309	SOL - 2 7/8" SOLID	-0.92	1.2D + 1.0Di + 1.0Wi	Normal	1.00	100	100	100	16.71	50.00	286.15	0.3	Member X

### HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)		Load Case	Len (ft)	Bracing %			Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Bear		Use %	Controls
							X	Y	Z					Cap (kips)	Cap (kips)		
1	5									0.00	0	0					
2	7.5									0.00	0	0					
3	10	PLT - 6" x 3/4"	-2.94	0.9D + 1.6W	90° Wind	2.50	100	100	100	96.77	50.00	102.10	0	0			3 Member Y
4	18									0.00	0	0					
5	28									0.00	0	0					
6	38	SOL - 1" SOLID	-0.02	0.9D + 1.6W	60° Wind	5.00	100	100	100	168.00	50.00	6.29	0	0			0 Member X
7	48	SOL - 1" SOLID	-0.06	0.9D + 1.6W	60° Wind	5.00	100	100	100	168.00	50.00	6.29	0	0			1 Member X
8	58	SOL - 1" SOLID	-0.05	0.9D + 1.6W	60° Wind	5.00	100	100	100	168.00	50.00	6.29	0	0			1 Member X
9	68	SOL - 1" SOLID	-0.05	0.9D + 1.6W	60° Wind	5.00	100	100	100	168.00	50.00	6.29	0	0			1 Member X
10	78									0.00	0	0					
11	88									0.00	0	0					
12	98									0.00	0	0					
13	108	SOL - 1" SOLID	-0.04	0.9D + 1.6W	60° Wind	5.00	100	100	100	168.00	50.00	6.29	0	0			1 Member X

## Force/Stress Compression Summary

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



Page: 23

### HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %			Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Bear		Use %	Controls
						X	Y	Z					Cap (kips)	Cap (kips)		
14	118	SOL - 1" SOLID	-0.03	0.9D + 1.6W 60° Wind	5.00	100	100	100	168.00	50.00	6.29	0	0	0	0	Member X
15	128	SOL - 1" SOLID	-0.03	0.9D + 1.6W 60° Wind	5.00	100	100	100	168.00	50.00	6.29	0	0	0	0	Member X
16	138										0.00	0	0			
17	148										0.00	0	0			
18	158										0.00	0	0			
19	168										0.00	0	0			
20	178										0.00	0	0			
21	188										0.00	0	0			
22	198										0.00	0	0			
23	208										0.00	0	0			
24	218										0.00	0	0			
25	228										0.00	0	0			
26	238										0.00	0	0			
27	248										0.00	0	0			
28	258										0.00	0	0			
29	268										0.00	0	0			
30	278										0.00	0	0			
31	288										0.00	0	0			
32	298										0.00	0	0			
33	308	SOL - 1 1/4" SOLID	-0.12	1.2D + 1.0Di + 1.0Wi 60° Wind	5.00	100	100	100	134.40	50.00	15.35	0	0	1	1	Member X
34	309	PLT - 6"X1"	-2.90	1.2D + 1.6W Normal Wind	5.00	100	100	100	145.48	50.00	64.05	0	0	5	5	Member Y

### DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %			Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Bear		Use %	Controls
						X	Y	Z					Cap (kips)	Cap (kips)		
1	5	SOL - 1 1/4" SOLID	-8.21	1.2D + 1.0Di + 1.0Wi 90° Wind	3.04	50	50	50	40.90	50.00	48.87	0	0	17	17	Member X
2	7.5	SOL - 1 1/4" SOLID	-5.02	1.2D + 1.6W 90° Wind	3.54	50	50	50	47.52	50.00	46.82	0	0	11	11	Member X
3	10	SOL - 1 1/4" SOLID	-5.19	1.2D + 1.6W 90° Wind	3.54	50	50	50	47.52	50.00	46.82	0	0	11	11	Member X
4	18	SOL - 1" SOLID	-4.90	1.2D + 1.6W Normal Wind	5.67	50	50	50	95.20	50.00	18.22	0	0	27	27	Member X
5	28	SOL - 7/8" SOLID	-3.35	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	29	29	Member X
6	38	SOL - 7/8" SOLID	-2.57	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	22	22	Member X
7	48	SOL - 7/8" SOLID	-1.72	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	15	15	Member X
8	58	SOL - 7/8" SOLID	-0.76	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	7	7	Member X
9	68	SOL - 7/8" SOLID	-1.42	1.2D + 1.6W 60° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	12	12	Member X
10	78	SOL - 7/8" SOLID	-2.29	1.2D + 1.6W 60° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	20	20	Member X
11	88	SOL - 7/8" SOLID	-3.20	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	27	27	Member X
12	98	SOL - 7/8" SOLID	-3.32	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	29	29	Member X
13	108	SOL - 7/8" SOLID	-2.32	1.2D + 1.6W 60° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	20	20	Member X
14	118	SOL - 7/8" SOLID	-1.65	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	14	14	Member X
15	128	SOL - 7/8" SOLID	-2.62	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	22	22	Member X
16	138	SOL - 7/8" SOLID	-4.16	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	36	36	Member X
17	148	SOL - 1" SOLID	-4.94	1.2D + 1.6W 90° Wind	5.59	50	50	50	93.91	50.00	18.55	0	0	27	27	Member X
18	158	SOL - 1" SOLID	-2.63	0.9D + 1.6W 60° Wind	5.59	50	50	50	93.91	50.00	18.55	0	0	14	14	Member X
19	168	SOL - 7/8" SOLID	-1.89	1.2D + 1.6W 60° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	16	16	Member X
20	178	SOL - 7/8" SOLID	-1.09	1.2D + 1.6W 60° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	9	9	Member X
21	188	SOL - 7/8" SOLID	-0.73	1.2D + 1.6W 60° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	6	6	Member X
22	198	SOL - 7/8" SOLID	-1.10	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	9	9	Member X
23	208	SOL - 7/8" SOLID	-1.61	1.2D + 1.6W Normal Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	14	14	Member X
24	218	SOL - 7/8" SOLID	-1.91	1.2D + 1.6W Normal Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	16	16	Member X
25	228	SOL - 7/8" SOLID	-2.53	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	22	22	Member X
26	238	SOL - 7/8" SOLID	-2.68	0.9D + 1.6W 60° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	23	23	Member X



## Force/Stress Compression Summary

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



Page: 24

### DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Len (ft)	Bracing %			Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Bear		Controls
						X	Y	Z					KL/R	Cap (kips)	
27	248	SOL - 7/8" SOLID	-1.46	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	12	Member X
28	258	SOL - 7/8" SOLID	-1.16	0.9D + 1.6W Normal Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	10	Member X
29	268	SOL - 7/8" SOLID	-0.34	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	3	Member X
30	278	SOL - 7/8" SOLID	-0.57	1.2D + 1.6W Normal Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	5	Member X
31	288	SOL - 7/8" SOLID	-0.82	1.2D + 1.6W Normal Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	7	Member X
32	298	SOL - 7/8" SOLID	-1.20	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	10	Member X
33	308	SOL - 7/8" SOLID	-6.69	1.2D + 1.6W 90° Wind	5.59	50	50	50	107.31	50.00	11.66	0	0	57	Member X
34	309				0.00						0.00	0	0		

## Force/Stress Tension Summary

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	<b>12/10/2018</b>
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



Page: 25

### LEG MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Leg Use %	Controls
1	5				0	0.00		
2	7.5				0	0.00		
3	10				0	0.00		
4	18				0	0.00		
5	28	SOL - 3" SOLID	13.37	0.9D + 1.6W Normal Wind	50	318.11	4.2	Member
6	38	SOL - 3" SOLID	27.93	0.9D + 1.6W Normal Wind	50	318.11	8.8	Member
7	48	SOL - 3" SOLID	37.10	0.9D + 1.6W Normal Wind	50	318.11	11.7	Member
8	58	SOL - 3" SOLID	40.52	0.9D + 1.6W Normal Wind	50	318.11	12.7	Member
9	68	SOL - 3" SOLID	40.45	0.9D + 1.6W Normal Wind	50	318.11	12.7	Member
10	78	SOL - 3" SOLID	36.44	0.9D + 1.6W Normal Wind	50	318.11	11.5	Member
11	88	SOL - 3" SOLID	26.39	0.9D + 1.6W Normal Wind	50	318.11	8.3	Member
12	98	SOL - 3" SOLID	28.47	0.9D + 1.6W Normal Wind	50	318.11	8.9	Member
13	108	SOL - 3" SOLID	40.28	0.9D + 1.6W Normal Wind	50	318.11	12.7	Member
14	118	SOL - 3" SOLID	44.68	0.9D + 1.6W Normal Wind	50	318.11	14.0	Member
15	128	SOL - 3" SOLID	39.96	0.9D + 1.6W Normal Wind	50	318.11	12.6	Member
16	138	SOL - 3" SOLID	25.67	0.9D + 1.6W Normal Wind	50	318.11	8.1	Member
17	148	SOL - 3" SOLID	2.83	0.9D + 1.6W 90° Wind	50	318.11	0.9	Member
18	158				0	0.00		
19	168				0	0.00		
20	178	SOL - 2 7/8" SOLID	2.60	0.9D + 1.6W 90° Wind	50	292.05	0.9	Member
21	188	SOL - 2 7/8" SOLID	3.12	0.9D + 1.6W 90° Wind	50	292.05	1.1	Member
22	198	SOL - 2 7/8" SOLID	2.38	0.9D + 1.6W 90° Wind	50	292.05	0.8	Member
23	208				0	0.00		
24	218				0	0.00		
25	228				0	0.00		
26	238	SOL - 2 7/8" SOLID	11.38	0.9D + 1.6W 60° Wind	50	292.05	3.9	Member
27	248	SOL - 2 7/8" SOLID	0.44	0.9D + 1.6W 60° Wind	50	292.05	0.1	Member
28	258				0	0.00		
29	268				0	0.00		
30	278				0	0.00		
31	288				0	0.00		
32	298	SOL - 2 7/8" SOLID	1.44	0.9D + 1.6W 60° Wind	50	292.05	0.5	Member
33	308	SOL - 2 7/8" SOLID	18.94	0.9D + 1.6W 60° Wind	50	292.05	6.5	Member
34	309				0	0.00		

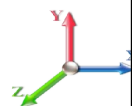
### HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	5	PLT - 6" x 3/4"	21.43	1.2D + 1.0Di + 1.0Wi 9C	50	202.50	0	0				10.6	Member
2	7.5	PLT - 6" x 3/4"	22.55	1.2D + 1.0Di + 1.0Wi 9C	50	202.50	0	0				11.1	Member
3	10	PLT - 6" x 3/4"	4.52	1.2D + 1.6W Normal Wi	50	202.50	0	0				2.2	Member
4	18	SOL - 7/8" SOLID	2.43	1.2D + 1.0Di + 1.0Wi Nc	50	27.06	0	0				9.0	Member
5	28	SOL - 1" SOLID	1.09	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				3.1	Member
6	38	SOL - 1" SOLID	0.61	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				1.7	Member
7	48	SOL - 1" SOLID	1.03	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				2.9	Member
8	58	SOL - 1" SOLID	0.60	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				1.7	Member
9	68	SOL - 1" SOLID	0.98	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				2.8	Member
10	78	SOL - 1" SOLID	0.55	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				1.6	Member
11	88	SOL - 1" SOLID	8.27	1.2D + 1.6W Normal Wi	50	35.34	0	0				23.4	Member
12	98	SOL - 1" SOLID	0.49	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				1.4	Member
13	108	SOL - 1" SOLID	0.81	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				2.3	Member

## Force/Stress Tension Summary

**Structure:** CT15879-A-SBA  
**Site Name:** West Hartford  
**Height:** 309.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 0.85

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

12/10/2018  
  
 Page: 26



### HORIZONTAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
14	118	SOL - 1" SOLID	0.45	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				1.3	Member
15	128	SOL - 1" SOLID	0.71	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				2.0	Member
16	138	SOL - 1" SOLID	0.34	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				1.0	Member
17	148	SOL - 1 1/4" SOLID	9.31	1.2D + 1.6W Normal Wi	50	55.22	0	0				16.9	Member
18	158	SOL - 1 1/4" SOLID	0.41	1.2D + 1.0Di + 1.0Wi Nc	50	55.22	0	0				0.7	Member
19	168	SOL - 1" SOLID	0.51	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				1.4	Member
20	178	SOL - 1" SOLID	0.29	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				0.8	Member
21	188	SOL - 1" SOLID	0.49	1.2D + 1.0Di + 1.0Wi 9C	50	35.34	0	0				1.4	Member
22	198	SOL - 1" SOLID	0.28	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				0.8	Member
23	208	SOL - 1" SOLID	0.45	1.2D + 1.0Di + 1.0Wi 9C	50	35.34	0	0				1.3	Member
24	218	SOL - 1" SOLID	0.24	1.2D + 1.0Di + 1.0Wi 9C	50	35.34	0	0				0.7	Member
25	228	SOL - 1" SOLID	7.16	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				20.2	Member
26	238	SOL - 1" SOLID	0.18	1.2D + 1.0Di + 1.0Wi 9C	50	35.34	0	0				0.5	Member
27	248	SOL - 1" SOLID	0.24	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				0.7	Member
28	258	SOL - 1" SOLID	0.16	1.2D + 1.0Di + 1.0Wi 9C	50	35.34	0	0				0.5	Member
29	268	SOL - 1" SOLID	0.20	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				0.6	Member
30	278	SOL - 1" SOLID	0.11	1.2D + 1.0Di + 1.0Wi 9C	50	35.34	0	0				0.3	Member
31	288	SOL - 1" SOLID	0.19	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				0.5	Member
32	298	SOL - 1" SOLID	5.74	1.2D + 1.0Di + 1.0Wi Nc	50	35.34	0	0				16.2	Member
33	308	SOL - 1 1/4" SOLID			50	0.00	0	0					
34	309	PLT - 6"X1"	1.31	0.9D + 1.6W 60° Wind	50	270.00	0	0				0.5	Member

### DIAGONAL MEMBERS

Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
1	5	SOL - 1 1/4" SOLID	0.00		50	0.00	0	0					
2	7.5	SOL - 1 1/4" SOLID	5.20	1.2D + 1.6W 90° Wind	50	55.22	0	0				9.4	Member
3	10	SOL - 1 1/4" SOLID	5.01	1.2D + 1.6W 90° Wind	50	55.22	0	0				9.1	Member
4	18	SOL - 1" SOLID	3.31	1.2D + 1.6W 90° Wind	50	35.34	0	0				9.4	Member
5	28	SOL - 7/8" SOLID	3.09	1.2D + 1.6W 90° Wind	50	27.06	0	0				11.4	Member
6	38	SOL - 7/8" SOLID	2.26	1.2D + 1.6W 90° Wind	50	27.06	0	0				8.4	Member
7	48	SOL - 7/8" SOLID	1.40	1.2D + 1.6W 90° Wind	50	27.06	0	0				5.2	Member
8	58	SOL - 7/8" SOLID	0.52	0.9D + 1.6W Normal Wi	50	27.06	0	0				1.9	Member
9	68	SOL - 7/8" SOLID	1.14	1.2D + 1.6W 60° Wind	50	27.06	0	0				4.2	Member
10	78	SOL - 7/8" SOLID	2.01	1.2D + 1.6W 60° Wind	50	27.06	0	0				7.4	Member
11	88	SOL - 7/8" SOLID	3.56	1.2D + 1.6W 90° Wind	50	27.06	0	0				13.2	Member
12	98	SOL - 7/8" SOLID	3.71	0.9D + 1.6W 90° Wind	50	27.06	0	0				13.7	Member
13	108	SOL - 7/8" SOLID	2.04	1.2D + 1.6W 60° Wind	50	27.06	0	0				7.5	Member
14	118	SOL - 7/8" SOLID	1.42	1.2D + 1.6W Normal Wi	50	27.06	0	0				5.2	Member
15	128	SOL - 7/8" SOLID	2.42	1.2D + 1.6W 90° Wind	50	27.06	0	0				8.9	Member
16	138	SOL - 7/8" SOLID	4.01	1.2D + 1.6W 90° Wind	50	27.06	0	0				14.8	Member
17	148	SOL - 1" SOLID	5.20	1.2D + 1.6W 90° Wind	50	35.34	0	0				14.7	Member
18	158	SOL - 1" SOLID	2.96	0.9D + 1.6W 60° Wind	50	35.34	0	0				8.4	Member
19	168	SOL - 7/8" SOLID	1.79	0.9D + 1.6W 60° Wind	50	27.06	0	0				6.6	Member
20	178	SOL - 7/8" SOLID	0.97	1.2D + 1.6W 60° Wind	50	27.06	0	0				3.6	Member
21	188	SOL - 7/8" SOLID	0.56	0.9D + 1.6W 60° Wind	50	27.06	0	0				2.1	Member
22	198	SOL - 7/8" SOLID	1.11	1.2D + 1.6W Normal Wi	50	27.06	0	0				4.1	Member
23	208	SOL - 7/8" SOLID	1.53	1.2D + 1.6W 90° Wind	50	27.06	0	0				5.6	Member
24	218	SOL - 7/8" SOLID	1.77	1.2D + 1.6W 90° Wind	50	27.06	0	0				6.5	Member
25	228	SOL - 7/8" SOLID	2.91	1.2D + 1.6W 90° Wind	50	27.06	0	0				10.8	Member
26	238	SOL - 7/8" SOLID	3.02	0.9D + 1.6W 60° Wind	50	27.06	0	0				11.2	Member

## Force/Stress Tension Summary

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



Page: 27

### DIAGONAL MEMBERS

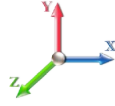
Sect	Top Elev	Member	Force (kips)	Load Case	Fy (ksi)	Mem Cap (kips)	Num Bolts	Num Holes	Shear Cap (kips)	Bear Cap (kips)	B.S. Cap (kips)	Use %	Controls
27	248	SOL - 7/8" SOLID	1.39	0.9D + 1.6W 90° Wind	50	27.06	0	0				5.1	Member
28	258	SOL - 7/8" SOLID	1.19	1.2D + 1.6W Normal Wi	50	27.06	0	0				4.4	Member
29	268	SOL - 7/8" SOLID	0.23	1.2D + 1.0Di + 1.0Wi 6C	50	27.06	0	0				0.8	Member
30	278	SOL - 7/8" SOLID	0.46	0.9D + 1.6W Normal Wi	50	27.06	0	0				1.7	Member
31	288	SOL - 7/8" SOLID	0.74	0.9D + 1.6W Normal Wi	50	27.06	0	0				2.7	Member
32	298	SOL - 7/8" SOLID	1.50	1.2D + 1.6W 60° Wind	50	27.06	0	0				5.6	Member
33	308	SOL - 7/8" SOLID	6.31	0.9D + 1.6W 90° Wind	50	27.06	0	0				23.3	Member
34	309	-	0.00		50	0.00	0	0					

## Support Forces Summary

**Structure:** CT15879-A-SBA  
**Site Name:** West Hartford  
**Height:** 309.00 (ft)  
**Base Elev:** 0.000 (ft)  
**Gh:** 0.85

**Topography:** 1

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

12/10/2018  
  
 Page: 28



Load Case	Node	FX (kips)	FY (kips)	FZ (kips)	(-) = Uplift (+) = Down
1.2D + 1.6W Normal Wind	1	-0.05	163.90	-9.52	
	A1	0.00	-2.95	2.52	
	A1b	54.82	-37.51	-33.80	
	A1a	-54.96	-54.06	-33.93	
1.2D + 1.6W 60° Wind	1	-7.72	156.95	-4.36	
	A1	-1.68	-12.72	14.62	
	A1b	12.06	-10.48	-8.84	
	A1a	-67.44	-65.15	-38.95	
1.2D + 1.6W 90° Wind	1	-9.23	167.38	0.41	
	A1	-2.24	-30.37	40.13	
	A1b	3.91	-3.95	-3.07	
	A1a	-67.12	-63.89	-37.57	
0.9D + 1.6W Normal Wind	1	-0.06	148.23	-9.68	
	A1	0.00	-2.97	2.53	
	A1b	54.71	-37.47	-33.73	
	A1a	-54.83	-53.97	-33.86	
0.9D + 1.6W 60° Wind	1	-7.83	141.45	-4.42	
	A1	-1.68	-12.76	14.67	
	A1b	12.10	-10.52	-8.87	
	A1a	-67.38	-65.13	-38.91	
0.9D + 1.6W 90° Wind	1	-9.38	151.72	0.44	
	A1	-2.24	-30.33	40.04	
	A1b	3.93	-3.97	-3.08	
	A1a	-66.99	-63.81	-37.50	
1.2D + 1.0Di + 1.0Wi Normal Wind	1	0.16	370.02	-2.35	
	A1	-0.02	-17.84	29.28	
	A1b	52.75	-32.96	-32.53	
	A1a	-53.10	-48.40	-32.78	
1.2D + 1.0Di + 1.0Wi 60° Wind	1	-1.81	370.87	-1.11	
	A1	-1.79	-24.99	38.41	
	A1b	32.51	-19.38	-20.77	
	A1a	-62.21	-56.52	-35.90	
1.2D + 1.0Di + 1.0Wi 90° Wind	1	-2.12	373.34	0.05	
	A1	-2.27	-33.44	50.16	
	A1b	26.75	-14.88	-16.34	
	A1a	-60.69	-54.42	-33.97	
1.0D + 1.0W Normal Wind	1	-0.04	106.30	-2.37	
	A1	0.00	-9.22	11.79	
	A1b	22.87	-15.85	-13.66	
	A1a	-22.80	-22.57	-13.63	
1.0D + 1.0W 60° Wind	1	-1.97	107.06	-1.12	
	A1	-0.40	-12.34	15.95	
	A1b	13.67	-9.92	-8.34	
	A1a	-26.92	-26.33	-15.54	

1.0D + 1.0W 90° Wind	1	-2.34	107.40	0.06
	A1	-0.50	-15.87	20.97
	A1b	10.67	-7.78	-6.36
	A1a	-25.84	-25.15	-14.69

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Max Reactions (kips)	Base	Anchor 1
Vertical	373.34	65.15
Horizontal	9.68	77.88



## Cable Forces Summary

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II



Page: 30

Load Case	Elevation (ft)	Cable	Node 1	Node 2	Allow Tension (kips)	Applied Tension (kips)	Use %	
1.2D + 1.6W Normal	88.00	3/4 EHS	A1	37	34.98	0.79	2	
			A1b	37a	34.98	18.70	53	
			A1a	37b	34.98	20.67	59	
	148.00	13/16	A1	61	43.20	0.17	0	
			A1b	61a	43.20	22.18	51	
			A1a	61b	43.20	24.72	57	
	228.00	7/8 EHS	A1	93	47.82	0.99	2	
			A1b	93a	47.82	19.95	42	
			A1a	93b	47.82	22.87	48	
	298.00	13/16	A1	121	43.20	3.07	7	
			A1b	121a	43.20	16.03	37	
			A1a	121b	43.20	18.15	42	
	1.2D + 1.6W 60° Wind	88.00	3/4 EHS	A1	37	34.98	3.21	9
				A1b	37a	34.98	3.15	9
				A1a	37b	34.98	24.96	71
148.00		13/16	A1	61	43.20	4.22	10	
			A1b	61a	43.20	3.86	9	
			A1a	61b	43.20	29.28	68	
228.00		7/8 EHS	A1	93	47.82	6.14	13	
			A1b	93a	47.82	5.66	12	
			A1a	93b	47.82	27.59	58	
298.00		13/16	A1	121	43.20	7.23	17	
			A1b	121a	43.20	6.84	16	
			A1a	121b	43.20	22.07	51	
1.2D + 1.6W 90° Wind		88.00	3/4 EHS	A1	37	34.98	11.69	33
				A1b	37a	34.98	1.04	3
				A1a	37b	34.98	25.06	72
	148.00	13/16	A1	61	43.20	14.39	33	
			A1b	61a	43.20	1.03	2	
			A1a	61b	43.20	29.45	68	
	228.00	7/8 EHS	A1	93	47.82	13.98	29	
			A1b	93a	47.82	1.93	4	
			A1a	93b	47.82	26.94	56	
	298.00	13/16	A1	121	43.20	12.14	28	
			A1b	121a	43.20	3.38	8	
			A1a	121b	43.20	20.89	48	
	0.9D + 1.6W Normal	88.00	3/4 EHS	A1	37	34.98	0.79	2
				A1b	37a	34.98	18.62	53
				A1a	37b	34.98	20.57	59
148.00		13/16	A1	61	43.20	0.17	0	
			A1b	61a	43.20	22.12	51	
			A1a	61b	43.20	24.64	57	
228.00		7/8 EHS	A1	93	47.82	1.00	2	
			A1b	93a	47.82	19.95	42	
			A1a	93b	47.82	22.85	48	
298.00		13/16	A1	121	43.20	3.09	7	
			A1b	121a	43.20	16.04	37	
			A1a	121b	43.20	18.17	42	
0.9D + 1.6W 60° Wind		88.00	3/4 EHS	A1	37	34.98	3.22	9
				A1b	37a	34.98	3.16	9
				A1a	37b	34.98	24.89	71
	148.00	13/16	A1	61	43.20	4.23	10	
			A1b	61a	43.20	3.87	9	

0.9D + 1.6W 60° Wind	148.00	13/16	A1a	61b	43.20	29.25	68
	228.00	7/8 EHS	A1	93	47.82	6.16	13
			A1b	93a	47.82	5.68	12
298.00	13/16	A1a	93b	47.82	27.60	58	
		A1	121	43.20	7.26	17	
		A1b	121a	43.20	6.86	16	
0.9D + 1.6W 90° Wind	88.00	3/4 EHS	A1	37	34.98	11.62	33
	148.00	13/16	A1b	37a	34.98	1.05	3
			A1a	37b	34.98	24.95	71
228.00	7/8 EHS	A1	61	43.20	14.34	33	
		A1b	61a	43.20	1.04	2	
		A1a	61b	43.20	29.38	68	
298.00	13/16	A1	93	47.82	13.98	29	
		A1b	93a	47.82	1.94	4	
		A1a	93b	47.82	26.93	56	
1.2D + 1.0Di + 1.0Wi	88.00	3/4 EHS	A1	121	43.20	12.16	28
	148.00	13/16	A1b	121a	43.20	3.39	8
			A1a	121b	43.20	20.91	48
228.00	7/8 EHS	A1	37	34.98	9.75	28	
		A1b	37a	34.98	16.85	48	
		A1a	37b	34.98	18.82	54	
298.00	13/16	A1	61	43.20	10.38	24	
		A1b	61a	43.20	19.59	45	
		A1a	61b	43.20	22.43	52	
1.2D + 1.0Di + 1.0Wi	88.00	3/4 EHS	A1	93	47.82	11.84	25
	148.00	13/16	A1b	93a	47.82	21.42	45
			A1a	93b	47.82	24.71	52
228.00	7/8 EHS	A1	121	43.20	11.06	26	
		A1b	121a	43.20	20.39	47	
		A1a	121b	43.20	23.13	54	
298.00	13/16	A1	37	34.98	11.90	34	
		A1b	37a	34.98	11.17	32	
		A1a	37b	34.98	21.17	61	
1.2D + 1.0Di + 1.0Wi	88.00	3/4 EHS	A1	61	43.20	13.20	31
	148.00	13/16	A1b	61a	43.20	12.10	28
			A1a	61b	43.20	25.60	59
228.00	7/8 EHS	A1	93	47.82	15.02	31	
		A1b	93a	47.82	13.82	29	
		A1a	93b	47.82	28.42	59	
298.00	13/16	A1	121	43.20	14.65	34	
		A1b	121a	43.20	13.67	32	
		A1a	121b	43.20	26.45	61	
1.2D + 1.0Di + 1.0Wi	88.00	3/4 EHS	A1	37	34.98	14.91	43
	148.00	13/16	A1b	37a	34.98	9.48	27
			A1a	37b	34.98	20.65	59
228.00	7/8 EHS	A1	61	43.20	17.14	40	
		A1b	61a	43.20	9.99	23	
		A1a	61b	43.20	24.88	58	
298.00	13/16	A1	93	47.82	19.05	40	
		A1b	93a	47.82	11.50	24	
		A1a	93b	47.82	27.46	57	
1.0D + 1.0W Normal	88.00	3/4 EHS	A1	121	43.20	18.32	42
	148.00	13/16	A1b	121a	43.20	11.16	26
			A1a	121b	43.20	25.53	59
228.00	7/8 EHS	A1	37	34.98	3.17	9	
		A1b	37a	34.98	7.30	21	
		A1a	37b	34.98	8.02	23	
298.00	13/16	A1	61	43.20	3.44	8	
		A1b	61a	43.20	8.56	20	
		A1a	61b	43.20	9.65	22	
1.0D + 1.0W Normal	88.00	3/4 EHS	A1	93	47.82	4.91	10
	148.00	13/16	A1b	93a	47.82	8.80	18
			A1a	93b	47.82	10.00	21
228.00	7/8 EHS	A1	121	43.20	4.73	11	
		A1b	121a	43.20	7.81	18	
		A1a	121b	43.20	8.78	20	

1.0D + 1.0W 60° Wind	88.00	3/4 EHS	A1	37	34.98	4.30	12
			A1b	37a	34.98	4.10	12
			A1a	37b	34.98	9.50	27
	148.00	13/16	A1	61	43.20	5.09	12
			A1b	61a	43.20	4.67	11
			A1a	61b	43.20	11.37	26
	228.00	7/8 EHS	A1	93	47.82	6.23	13
			A1b	93a	47.82	5.80	12
			A1a	93b	47.82	11.51	24
298.00	13/16	A1	121	43.20	5.90	14	
		A1b	121a	43.20	5.52	13	
		A1a	121b	43.20	10.00	23	
1.0D + 1.0W 90° Wind	88.00	3/4 EHS	A1	37	34.98	5.90	17
			A1b	37a	34.98	3.16	9
			A1a	37b	34.98	9.09	26
	148.00	13/16	A1	61	43.20	7.03	16
			A1b	61a	43.20	3.33	8
			A1a	61b	43.20	10.86	25
	228.00	7/8 EHS	A1	93	47.82	7.76	16
			A1b	93a	47.82	4.75	10
			A1a	93b	47.82	11.03	23
	298.00	13/16	A1	121	43.20	7.05	16
			A1b	121a	43.20	4.58	11
			A1a	121b	43.20	9.59	22

## Analysis Summary

<b>Structure:</b> CT15879-A-SBA	<b>Code:</b> EIA/TIA-222-G	12/10/2018
<b>Site Name:</b> West Hartford	<b>Exposure:</b> C	
<b>Height:</b> 309.00 (ft)	<b>Crest Height:</b> 0.00	
<b>Base Elev:</b> 0.000 (ft)	<b>Site Class:</b> D - Stiff Soil	
<b>Gh:</b> 0.85	<b>Topography:</b> 1	<b>Struct Class:</b> II
		<b>Page:</b> 33



### Max Reactions

Base:	373.34 (Vertical)	9.68 (Horizontal)
Anchor 1:	65.16 (Vertical)	77.88 (Horizontal)

### Max Usages

Max Leg: 50.8% (1.2D + 1.0Di + 1.0Wi 60° Wind - Sect 7)  
 Max Diag: 57.4% (1.2D + 1.6W 90° Wind - Sect 33)  
 Max Horiz: 23.4% (1.2D + 1.6W Normal Wind - Sect 11)  
 Max Cable: 71.6% (1.2D + 1.6W 90° Wind) - Elev: 88 ft

### Max Deflection, Twist and Sway

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)
0.9D + 1.6W 97 mph Wind at 60° From Face	20.50	0.2946	0.7469	0.7197
	48.00	0.5986	0.9102	0.5387
	113.00	0.9949	1.2984	0.1957
	120.50	1.0161	1.3435	0.1416
	130.50	1.0355	1.4037	0.0853
	135.50	1.0415	1.4339	0.0605
	145.50	1.0505	1.4943	0.0512
	160.50	1.0735	1.5730	0.0989
	165.50	1.0815	1.6033	0.0890
	180.50	1.1022	1.6939	0.0701
	195.50	1.1158	1.7849	0.0385
	203.00	1.1186	1.7484	0.0383
	220.50	1.1217	1.6630	0.0234
	225.50	1.1223	1.6387	0.0279
	233.00	1.1284	1.6023	0.0761
	235.50	1.1314	1.5901	0.0645
	243.00	1.1402	1.4951	0.0759
250.50	1.1499	1.4001	0.0783	
253.00	1.1529	1.3681	0.0854	
265.50	1.1687	1.2056	0.0766	
308.00	1.2358	0.7050	0.2661	
309.00	1.2412	0.7058	0.3264	
326.50	1.4631	0.7006	1.1455	
344.00	1.8480	0.7006	1.3183	

0.9D + 1.6W 97 mph Wind at 90° From Face

20.50	0.3857	0.9895	0.9283
48.00	0.7853	1.1566	0.7257
113.00	1.3342	1.5530	0.2666
120.50	1.3637	1.5990	0.1977
130.50	1.3913	1.6604	0.1216
135.50	1.4000	1.6912	0.0870
145.50	1.4123	1.7527	0.0565
160.50	1.4336	1.8332	0.0871
165.50	1.4394	1.8642	0.0674
180.50	1.4490	1.9573	0.0567
195.50	1.4455	2.0506	0.0715
203.00	1.4377	2.0152	0.1019
220.50	1.4118	1.9317	0.1141
225.50	1.4034	1.9079	0.1190
233.00	1.3952	1.8724	0.0904
235.50	1.3934	1.8605	0.0792
243.00	1.3873	1.7662	0.0925
250.50	1.3815	1.6720	0.0986
253.00	1.3791	1.6402	0.1314
265.50	1.3680	1.4778	0.1026
308.00	1.3425	0.9749	0.1784
309.00	1.3457	0.9756	0.2310
326.50	1.5113	0.9716	1.0301
344.00	1.8595	0.9718	1.2019

0.9D + 1.6W 97 mph Wind at Normal To Face

20.50	0.3488	0.1882	0.9400
48.00	0.7530	0.3452	0.7316
113.00	1.2941	0.7187	0.2454
120.50	1.3206	0.7621	0.1754
130.50	1.3439	0.8201	0.1007
135.50	1.3506	0.8492	0.0698
145.50	1.3588	0.9073	0.0495
160.50	1.3740	0.9825	0.0563
165.50	1.3779	1.0115	0.0494
180.50	1.3818	1.0986	0.0243
195.50	1.3732	1.1859	0.0616
203.00	1.3645	1.1476	0.0644
220.50	1.3370	1.0583	0.1022
225.50	1.3286	1.0328	0.1038
233.00	1.3203	0.9947	0.0520
235.50	1.3153	0.9820	0.0536
243.00	1.3127	0.8852	0.0496
250.50	1.3075	0.7885	0.0409
253.00	1.3061	0.7563	0.0245
265.50	1.2967	0.5950	0.0529
308.00	1.2744	0.1049	0.1443
309.00	1.2777	0.1053	0.2065
326.50	1.4865	0.1009	1.0234
344.00	1.8321	0.1009	1.1959

1.0D + 1.0W 60 mph Wind at 60° From Face

20.50	0.0694	0.2560	0.1569
48.00	0.1348	0.2729	0.1138
113.00	0.2126	0.3284	0.0319
120.50	0.2158	0.3367	0.0196
130.50	0.2179	0.3483	0.0065
135.50	0.2182	0.3545	0.0022
145.50	0.2180	0.3674	0.0072
160.50	0.2204	0.3853	0.0121
165.50	0.2213	0.3927	0.0095
180.50	0.2236	0.4162	0.0067
195.50	0.2245	0.4419	0.0021
203.00	0.2240	0.4359	0.0081
220.50	0.2222	0.4238	0.0093
225.50	0.2215	0.4208	0.0123
233.00	0.2218	0.4166	0.0101
235.50	0.2221	0.4153	0.0057
243.00	0.2230	0.3977	0.0087
250.50	0.2242	0.3805	0.0093
253.00	0.2245	0.3748	0.0137
265.50	0.2263	0.3468	0.0094
308.00	0.2369	0.2641	0.0658
309.00	0.2383	0.2643	0.0864
326.50	0.2959	0.2636	0.3200
344.00	0.4037	0.2636	0.3694

1.0D + 1.0W 60 mph Wind at 90° From Face

20.50	0.0796	0.4106	0.1607
48.00	0.1466	0.4339	0.1160
113.00	0.2227	0.5003	0.0273
120.50	0.2251	0.5092	0.0159
130.50	0.2261	0.5217	0.0102
135.50	0.2256	0.5282	0.0129
145.50	0.2241	0.5415	0.0172
160.50	0.2242	0.5597	0.0115
165.50	0.2244	0.5671	0.0119
180.50	0.2242	0.5901	0.0136
195.50	0.2224	0.6147	0.0185
203.00	0.2204	0.6079	0.0256
220.50	0.2149	0.5933	0.0257
225.50	0.2132	0.5895	0.0266
233.00	0.2119	0.5840	0.0186
235.50	0.2116	0.5823	0.0139
243.00	0.2108	0.5631	0.0160
250.50	0.2102	0.5443	0.0166
253.00	0.2099	0.5380	0.0262
265.50	0.2088	0.5071	0.0167
308.00	0.2095	0.4134	0.0514
309.00	0.2106	0.4135	0.0714
326.50	0.2540	0.4129	0.3035
344.00	0.3557	0.4129	0.3528

1.0D + 1.0W 60 mph Wind at Normal To Face

20.50	0.0566	0.0078	0.1522
48.00	0.1196	0.0073	0.1076
113.00	0.1848	0.0238	0.0170
120.50	0.1855	0.0278	0.0122
130.50	0.1843	0.0342	0.0196
135.50	0.1828	0.0378	0.0246
145.50	0.1792	0.0461	0.0286
160.50	0.1757	0.0581	0.0162
165.50	0.1746	0.0637	0.0161
180.50	0.1705	0.0834	0.0228
195.50	0.1648	0.1081	0.0292
203.00	0.1613	0.1028	0.0272
220.50	0.1521	0.0954	0.0351
225.50	0.1496	0.0946	0.0357
233.00	0.1466	0.0945	0.0231
235.50	0.1457	0.0948	0.0224
243.00	0.1435	0.0822	0.0190
250.50	0.1414	0.0708	0.0162
253.00	0.1408	0.0673	0.0053
265.50	0.1372	0.0510	0.0185
308.00	0.1292	0.0137	0.0393
309.00	0.1301	0.0139	0.0590
326.50	0.1878	0.0134	0.2930
344.00	0.2850	0.0134	0.3423

1.2D + 1.0Di + 1.0Wi 50 mph Wind at 60° From Face

20.50	0.1471	0.1888	0.3809
48.00	0.3106	0.2313	0.2979
113.00	0.5495	0.3358	0.1456
120.50	0.5672	0.3484	0.1274
130.50	0.5873	0.3654	0.1065
135.50	0.5961	0.3740	0.0988
145.50	0.6125	0.3914	0.0958
160.50	0.6423	0.4151	0.1204
165.50	0.6526	0.4244	0.1156
180.50	0.6819	0.4524	0.1070
195.50	0.7076	0.4811	0.0911
203.00	0.7186	0.4802	0.0756
220.50	0.7419	0.4777	0.0776
225.50	0.7481	0.4771	0.0807
233.00	0.7603	0.4764	0.1111
235.50	0.7649	0.4761	0.1007
243.00	0.7784	0.4474	0.1063
250.50	0.7923	0.4188	0.1038
253.00	0.7966	0.4091	0.0926
265.50	0.8184	0.3581	0.0986
308.00	0.8907	0.2032	0.1685
309.00	0.8939	0.2035	0.1965
326.50	1.0026	0.2021	0.5114
344.00	1.1722	0.2021	0.5789



1.2D + 1.0Di + 1.0Wi 50 mph Wind at 90° From Face	20.50	0.1728	0.4034	0.4198
	48.00	0.3538	0.4464	0.3309
	113.00	0.6168	0.5516	0.1533
	120.50	0.6351	0.5641	0.1311
	130.50	0.6554	0.5810	0.1056
	135.50	0.6639	0.5895	0.0955
	145.50	0.6793	0.6067	0.0881
	160.50	0.7056	0.6302	0.1073
	165.50	0.7144	0.6394	0.0987
	180.50	0.7377	0.6670	0.0880
	195.50	0.7555	0.6952	0.0705
	203.00	0.7620	0.6941	0.0532
	220.50	0.7730	0.6912	0.0629
	225.50	0.7754	0.6905	0.0680
	233.00	0.7816	0.6895	0.0858
	235.50	0.7841	0.6892	0.0706
	243.00	0.7914	0.6603	0.0775
	250.50	0.7986	0.6314	0.0731
	253.00	0.8007	0.6217	0.0593
	265.50	0.8110	0.5715	0.0724
	308.00	0.8445	0.4178	0.1257
	309.00	0.8468	0.4180	0.1512
	326.50	0.9274	0.4172	0.4557
	344.00	1.0801	0.4173	0.5224

1.2D + 1.0Di + 1.0Wi 50 mph Wind at Normal From Face	20.50	0.1455	0.0580	0.3935
	48.00	0.3144	0.0893	0.3050
	113.00	0.5455	0.1725	0.1214
	120.50	0.5593	0.1833	0.0999
	130.50	0.5735	0.1981	0.0740
	135.50	0.5790	0.2057	0.0646
	145.50	0.5882	0.2213	0.0567
	160.50	0.6039	0.2429	0.0648
	165.50	0.6088	0.2516	0.0617
	180.50	0.6201	0.2783	0.0414
	195.50	0.6253	0.3065	0.0315
	203.00	0.6257	0.3057	0.0294
	220.50	0.6217	0.3045	0.0437
	225.50	0.6201	0.3045	0.0492
	233.00	0.6193	0.3047	0.0340
	235.50	0.6177	0.3048	0.0266
	243.00	0.6198	0.2773	0.0263
	250.50	0.6198	0.2499	0.0254
	253.00	0.6200	0.2408	0.0372
	265.50	0.6182	0.1949	0.0324
	308.00	0.6075	0.0578	0.0518
	309.00	0.6087	0.0580	0.0782
	326.50	0.6851	0.0568	0.3907
	344.00	0.8140	0.0567	0.4577

1.2D + 1.6W 97 mph Wind at 60° From Face

20.50	0.2962	0.7469	0.7239
48.00	0.6018	0.9102	0.5413
113.00	0.9991	1.2986	0.1955
120.50	1.0203	1.3436	0.1413
130.50	1.0396	1.4039	0.0847
135.50	1.0455	1.4340	0.0598
145.50	1.0544	1.4945	0.0506
160.50	1.0772	1.5732	0.0984
165.50	1.0852	1.6035	0.0885
180.50	1.1057	1.6942	0.0697
195.50	1.1192	1.7852	0.0384
203.00	1.1220	1.7487	0.0386
220.50	1.1249	1.6633	0.0235
225.50	1.1255	1.6390	0.0281
233.00	1.1315	1.6026	0.0759
235.50	1.1345	1.5905	0.0643
243.00	1.1433	1.4955	0.0758
250.50	1.1530	1.4005	0.0783
253.00	1.1560	1.3686	0.0857
265.50	1.1717	1.2061	0.0766
308.00	1.2388	0.7056	0.2663
309.00	1.2442	0.7064	0.3269
326.50	1.4663	0.7012	1.1467
344.00	1.8516	0.7012	1.3198

1.2D + 1.6W 97 mph Wind at 90° From Face

20.50	0.3886	0.9878	0.9366
48.00	0.7917	1.1551	0.7317
113.00	1.3442	1.5518	0.2674
120.50	1.3737	1.5978	0.1980
130.50	1.4013	1.6593	0.1213
135.50	1.4100	1.6901	0.0864
145.50	1.4221	1.7516	0.0557
160.50	1.4432	1.8323	0.0863
165.50	1.4489	1.8633	0.0666
180.50	1.4582	1.9564	0.0568
195.50	1.4542	2.0498	0.0730
203.00	1.4462	2.0144	0.1038
220.50	1.4197	1.9310	0.1162
225.50	1.4110	1.9073	0.1212
233.00	1.4026	1.8718	0.0921
235.50	1.4007	1.8599	0.0810
243.00	1.3944	1.7656	0.0942
250.50	1.3883	1.6714	0.1004
253.00	1.3858	1.6397	0.1335
265.50	1.3742	1.4772	0.1044
308.00	1.3473	0.9743	0.1780
309.00	1.3506	0.9749	0.2305
326.50	1.5159	0.9710	1.0297
344.00	1.8639	0.9712	1.2017

1.2D + 1.6W 97 mph Wind at Normal To Face

20.50	0.3518	0.1882	0.9481
48.00	0.7594	0.3453	0.7374
113.00	1.3038	0.7187	0.2462
120.50	1.3304	0.7622	0.1756
130.50	1.3538	0.8201	0.1005
135.50	1.3603	0.8492	0.0695
145.50	1.3685	0.9073	0.0490
160.50	1.3835	0.9825	0.0555
165.50	1.3873	1.0115	0.0485
180.50	1.3909	1.0985	0.0247
195.50	1.3820	1.1859	0.0628
203.00	1.3732	1.1476	0.0656
220.50	1.3452	1.0582	0.1035
225.50	1.3367	1.0328	0.1051
233.00	1.3282	0.9947	0.0532
235.50	1.3232	0.9820	0.0548
243.00	1.3204	0.8852	0.0507
250.50	1.3150	0.7885	0.0419
253.00	1.3136	0.7563	0.0236
265.50	1.3038	0.5950	0.0540
308.00	1.2806	0.1049	0.1433
309.00	1.2839	0.1054	0.2057
326.50	1.4925	0.1010	1.0232
344.00	1.8381	0.1010	1.1960



# Guyed Tower Base Design

Date  
11/8/2018

<b>Customer Name:</b>	SBA Communications Corp	<b>EIA/TIA Standard:</b>	EIA-222-G
<b>Site Name:</b>		<b>Structure Height (Ft.):</b>	309
<b>Site Nmber:</b>	CT15879-A-SBA	<b>Engineer Name:</b>	T. Alajaj
<b>Engr. Number:</b>	64137	<b>Engineer Login ID:</b>	

**Foundation Info Obtained from:**

Drawings/Calculations

**Structure Type:**

Guyed Tower

**Analysis or Design?**

Analysis

**Base Reactions (Factored):**

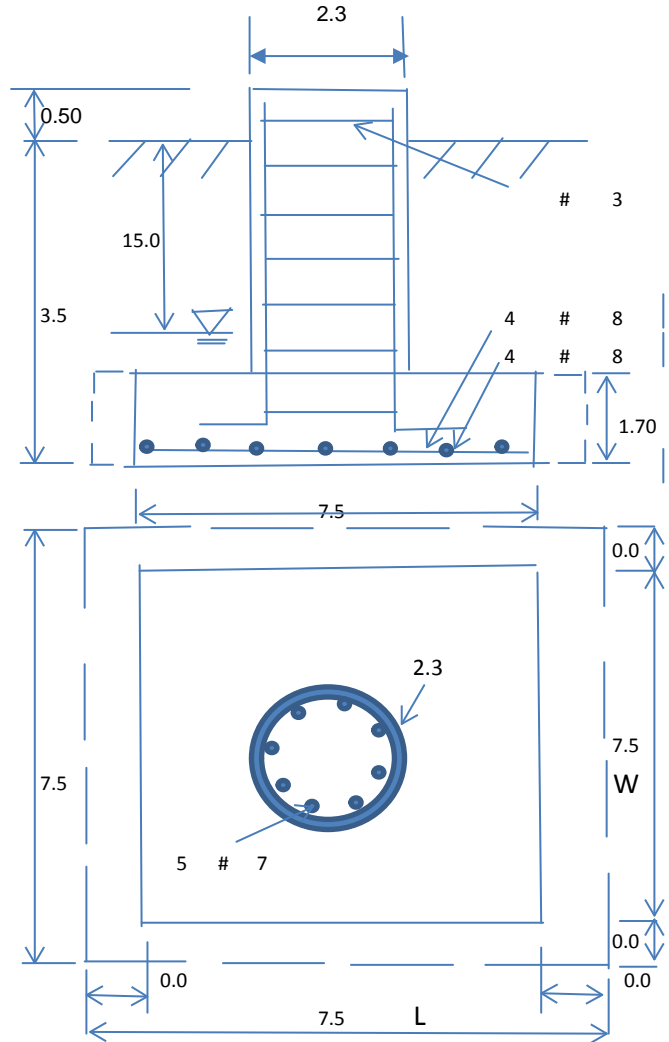
Axial Load (Kips):	373.3	Shear Force (Kips):	9.7
Uplift Force (Kips):	0.0	Moment (Kips-ft):	
Allowable overstress %:	5.0%		

**Foundation Geometries:**

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	2.3	Depth of Base BG (ft.):	3.5
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	1.70
Length of Pad (ft.):	7.5	Width of Pad (ft.):	7.5
Final Length of pad (ft)	7.5	Final width of pad (ft):	7.5

**Material Properties and Reabr Info:**

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	7	Tie / Stirrup Size #:	3	
Qty. of Vertical Rebars:	5	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):	4	Qty. of Rebar in Pad (W):	4	



**Soil Design Parameters:**

Soil Unit Weight (pcf):	115.0	Soil Buoyant Weight:	50.0	Pcf	
Water Table B.G.S. (ft):	15.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad: 30
Ultimate Bearing Pressure (psf):	50000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad: 30
					Angle from Bottm of Pad: 25

**Foundation Analysis and Design:**

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.6
Total Dry Soil Volume (cu. Ft.):	93.77	Total Dry Soil Weight (Kips):	10.78
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	10.78	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	105.18	Total Dry Concrete Weight (Kips):	15.78
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	15.78	Total Vertical Load on Base (Kips):	399.86

**Check Soil Capacities:**

Calculated Maxium Net Soil Pressure under the base (psf):	7224.4	<	Allowable Factored Soil Bearing (psf):	30000	0.24	OK!
Calculated Foundation Allowable Axail Capacity (Kips):	1687.5	>	Design Factored Axial Load (Kips):	378	0.22	OK!

Load/  
Capacity  
Ratio

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):	0.60	Tie / Stirrup Area (sq. in./each):	0.11		
Calculated Moment Capacity (Mn,Kips-Ft):	89.5	> Design Factored Moment (Mu, Kips-Ft)	22.3	0.25	OK!
Calculated Shear Capacity (Kips):	73.4	> Design Factored Shear (Kips):	9.7	0.13	OK!
Calculated Tension Capacity (Tn, Kips):	162.0	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	789.3	> Design Factored Axial Load (Pu Kips):	373.3	0.47	OK!
Moment & Axial Strength Combination(Pu/Pn+Mu/Mn):	0.72	OK!			
Pier Reinforcement Ratio:	0.005				

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Dir. Kips);	125.0	> One-Way Factored Shear (L-Dir Kips):	59.9	0.48	OK!
One-Way Design Shear Capacity (W-Dir. Kips):	125.0	> One-Way Factored Shear (W-Dir Kips)	59.9	0.48	OK!
Two-Way Design Shear Capacity (Kips):	388.2	> Two-Way Factored Shear (Kips):	302.5	0.78	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct. ):	0.0021	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0021		OK!
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	234.4	> Moment at Bottom ( L-Direct. K-Ft):	170.0	0.73	OK!
Lower Steel Pad Moment Capacity (W-Dir. Kips-ft):	234.4	> Moment at Bottom ( W-Dir. Kips-Ft):	170.0	0.73	OK!



# Guy Anchor Analysis and Design

Date

43412

<b>Customer Name:</b>	SBA Communications Corp	<b>EIA/TIA Standard:</b>	EA-222-G
<b>Site Name:</b>	0	<b>Structure Height (Ft.):</b>	309
<b>Site Number:</b>	CT15879-A-SBA	<b>Engineer Name:</b>	T. Alana
<b>Engr. Number:</b>	64137	<b>Engineer Login ID:</b>	

**Foundation Info Obtained from:**

Drawings/Calculations

**Number of Anchors:** 1 Set

**Soil Design Parameters:**

Soil Unit Weight (pcf):	135.0	Soil Unit Weight:	65.0	cf	Cohesion of Soils (psf):	0
Water Table Depth (ft):	15.0	Unit Weight of Water:	62.4	pcf	Internal Angle of Friction (°):	30
Ultimate Lateral Resistance (psf):	0	Ultimate Sin Friction:	0	sf	Coefficient of Shear Friction:	0.30
Conical Failure Angle from Top:	30	Failure Angle from Bottom:	20			

**Material Properties:**

Concrete Strength (psi):	3000	Unit Weight of Concrete:	150.0	pcf	Horizontal Rebar Yield (psi):	60000
Shear Strength Reduction Factor:	0.75				Flexure Strength Reduction Factor:	0.9

**A. Inner Anchors:**

Radius (ft.): 262

**1. Design Reactions (Factored):**

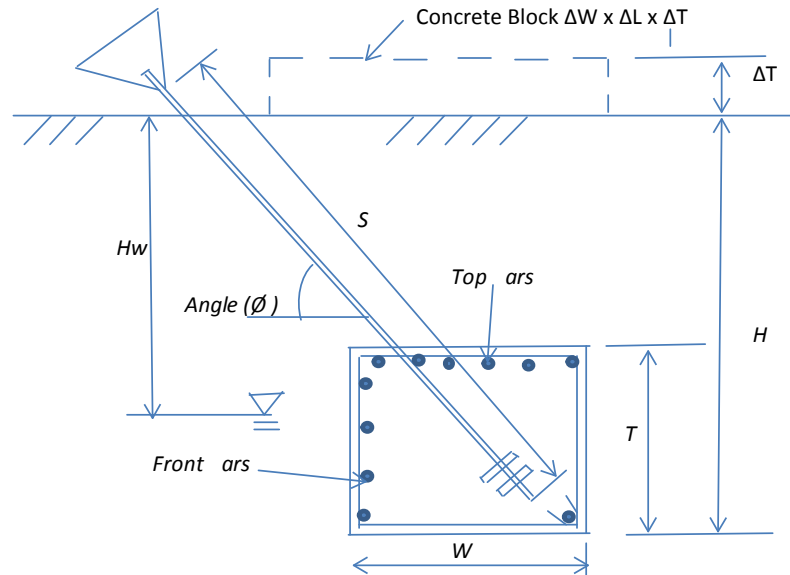
Uplift (kips): 65.2      Shear (kips): 77.9      Angle of force resultant (∅): 39.9

**2. Foundation Geometries:**

Anchor Depth (ft.):	10.0	Anchor with/without toe:	0	Water Table below grade (ft.):	15.00
Length of Anchor (ft.):	20.5	Width of Anchor (ft.):	4.0	Thickness of Anchor (ft.):	3.8
Concrete top of Anchor:	0				

(1). Inner Anchors:

Radius (ft.):	262
H (ft.):	10.0
Hw (ft.):	15.0
L (ft.):	20.5
W (ft.):	4.0
T (ft.):	3.8
Angle (∅):	39.9
S (ft.):	16.36
Top bars:	5 # 7
Front bars:	4 # 7
Concrete Volume (Cu. Ft.)/Each:	11.54



3. Foundation Analysis and Design:

Total Dry Soil Volume (cu. Ft.):	1105.10	Total Dry Soil Weight (Kips):	200.94
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	149.19	Weight of the Concrete Block at Top (Kips):	0.00
Total Dry Concrete Volume (cu. Ft.):	311.60	Total Dry Concrete Weight (Kip):	46.74
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	46.74	Weight Reduction Factor:	0.9
Uplift Strength Reduction Factor on Soil:	0.75	Shear Strength Reduction Factor on Soil:	0.75

4. Check Soil and Foundation Capacities:

Nominal Factored Uplift Resistance:	164.25	Kips > Design Uplift Force (Kips):	65.2	OK!
Ultimate Shear Friction Resistance at base:	23.03	Kips Ultimate Resistance Pressure:	3280.5	Psf
Factored Shear Resistance:	208.94	Kips > Design Shear Force (Kips):	77.9	OK!

5. Design Concrete Block:

Rebar Size (#):	7	Wind Load Factor on Concrete Design:	1.00	
Qty. of the Rebar at top of the block:	5	Qty. of the Rebar in the front of the block:	4	
Area of Single Rebar (sq. in.):	0.60	Factor for concrete compression zone:	0.85	
One Way Shear due to Shear Force (Kips):	39.0	One Way Shear Capacity for shear (kips):	164.8	OK!
One Way Shear due to Uplift (Kips):	32.6	One Way Shear Capacity for uplift (kips):	164.1	OK!
Moment due to Shear Load ( Kips-ft):	199.6	Flexural Capacity for Shear Load (Kips-ft):	475.0	OK!
Moment due to uplift Load ( Kips-ft):	167.1	Flexural Capacity for uplift Load (Kips-ft):	561.4	OK!
Ratio of Design Moment/Moment capacity:	0.42			
Max. Ratio of Shear Force/Shear capacity:	0.24	OK!		



