

November 16, 2016

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

Re: **Notice of Exempt Modification – Facility Modification
1294 Pleasant Valley Road, Groton, Connecticut**

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains twelve (12) antennas at the top of the existing 149-foot tower at 1294 Pleasant Valley Road in Groton, Connecticut (the “Property”). The tower is owned by SBA Communications Corporation (“SBA”). The Council approved Cellco’s use of this tower in 2007. Cellco now intends to modify its facility by replacing six (6) of its existing antennas with three (3) model SBNHH-1D65B, 700/1900 MHz antennas and three (3) model SBNHH-1D65B, 2100 MHz antennas, all at the same level on the tower. Cellco also intends to install nine (9) remote radio heads (“RRHs”). Included in Attachment 1 are specifications for Cellco’s replacement antennas and RRHs.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Mark R. Oefinger, Town Manager for the Town of Groton. A copy of this letter is also being sent to JFM Enterprises LLC, the owner of the Property and SBA, the tower owner.

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

Melanie A. Bachman
November 16, 2016
Page 2

1. The proposed modifications will not result in an increase in the height of the existing structure. Cellco's new antennas and RRHs will be installed on its existing platform at the top of the 149-foot tower.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table for Cellco's modified facility is included in Attachment 2.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The tower and its foundation can support Cellco's proposed modifications. (*See Tower Structural Analysis Report included in Attachment 3*).

A copy of the Town Assessor's Parcel Map and property owner information is included in Attachment 4.

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

Sincerely,



Kenneth C. Baldwin

Enclosures

Copy to:

Mark R. Oefinger, Groton Town Manager
JFM Enterprises LLC
SBA
Tim Parks

ATTACHMENT 1



SBNHH-1D65B

Multiband Antenna, 698–896 and 2x 1695–2360 MHz, 65° horizontal beamwidth, internal RET. Both high bands share the same electrical tilt.

- Interleaved dipole technology providing for attractive, low wind load mechanical package

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.9	14.7	17.7	18.2	18.6	18.6
Beamwidth, Horizontal, degrees	68	66	69	66	63	58
Beamwidth, Vertical, degrees	12.1	10.7	5.6	5.2	5.0	4.5
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	14	13	15	15	15	13
Front-to-Back Ratio at 180°, dB	27	29	28	28	28	27
Isolation, dB	25	25	25	25	25	25
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR Return Loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350	350	350	300
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm

Electrical Specifications, BASTA*

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.5	14.3	17.4	17.9	18.2	18.3
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.8	±0.4	±0.3	±0.5	±0.3
Gain by Beam Tilt, average, dBi	0° 14.6	0° 14.5	0° 17.4	0° 17.8	0° 18.1	0° 18.2
	7° 14.6	7° 14.4	3° 17.5	3° 17.9	3° 18.3	3° 18.4
	14° 14.2	14° 13.6	7° 17.4	7° 17.9	7° 18.2	7° 18.4
Beamwidth, Horizontal Tolerance, degrees	±2.2	±3.4	±2	±4.6	±5.7	±4.3
Beamwidth, Vertical Tolerance, degrees	±0.8	±1	±0.3	±0.2	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	16	14	16	16	16	15
Front-to-Back Total Power at 180° ± 30°, dB	25	26	27	26	26	26
CPR at Boresight, dB	22	23	21	20	20	22
CPR at Sector, dB	13	11	16	12	11	4

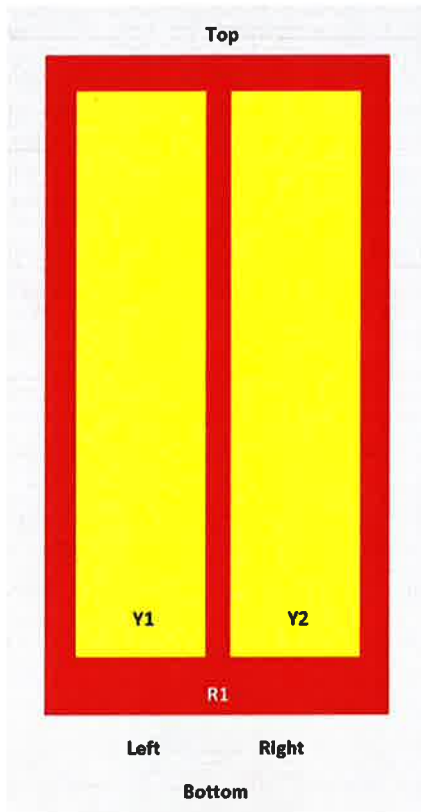
* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, [download the whitepaper Time to Raise the Bar on BSAs.](#)

Array Layout

Product Specifications

SBNHH-1D65B

SBNHH 65



Array	Freq (MHz)	Conns	RET (MRET)	AISG RET UID
R1	698-896	1-2	1	ARXXXXXXXXXXXXXXXXX 1
Y1	1695-2360	3-4	2	ARXXXXXXXXXXXXXXXXX 2
Y2	1695-2360	5-6		

View from the front of the antenna
 (Sizes of colored boxes are not true depictions of array sizes)

General Specifications

Operating Frequency Band	1695 – 2360 MHz 698 – 896 MHz
Antenna Type	Sector
Band	Multiband
Performance Note	Outdoor usage

Mechanical Specifications

RF Connector Quantity, total	6
RF Connector Quantity, low band	2
RF Connector Quantity, high band	4
RF Connector Interface	7-16 DIN Female
Color	Light gray

SBNHH-1D65B

Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Radiator Material	Aluminum Low loss circuit board
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Location	Bottom
Wind Loading, frontal	618.0 N @ 150 km/h 138.9 lbf @ 150 km/h
Wind Loading, lateral	197.0 N @ 150 km/h 44.3 lbf @ 150 km/h
Wind Loading, rear	728.0 N @ 150 km/h 163.7 lbf @ 150 km/h
Wind Speed, maximum	241 km/h 150 mph

Dimensions

Length	1851.0 mm 72.9 in
Width	301.0 mm 11.9 in
Depth	180.0 mm 7.1 in
Net Weight, without mounting kit	18.4 kg 40.6 lb

Remote Electrical Tilt (RET) Information

Input Voltage	10–30 Vdc
Internal RET	High band (1) Low band (1)
Power Consumption, idle state, maximum	2.0 W
Power Consumption, normal conditions, maximum	13.0 W
Protocol	3GPP/AISG 2.0 (Multi-RET)
RET Interface	8-pin DIN Female 8-pin DIN Male
RET Interface, quantity	1 female 1 male

Packed Dimensions

Length	2025.0 mm 79.7 in
Width	390.0 mm 15.4 in
Depth	296.0 mm 11.7 in
Shipping Weight	31.0 kg 68.3 lb

Regulatory Compliance/Certifications

Agency

RoHS 2011/65/EU
China RoHS SJ/T 11364-2006
ISO 9001:2008

Classification

Compliant by Exemption
Above Maximum Concentration Value (MCV)
Designed, manufactured and/or distributed under this quality management system



Included Products

SBNHH-1D65B

BSAMNT-1 — Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* **Footnotes**

Performance Note Severe environmental conditions may degrade optimum performance

ALCATEL-LUCENT B13 RRH4X30-4R

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

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

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

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

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

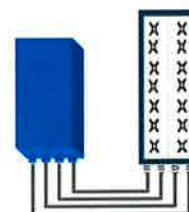


FEATURES

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

BENEFITS

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



4x30W with 4T4R
or
2x60W with 2T4R

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

TECHNICAL SPECIFICATIONS

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

www.alcatel-lucent.com Alcatel, Lucent, Alcatel-Lucent and the Alcatel-Lucent logo are trademarks of Alcatel-Lucent. All other trademarks are the property of their respective owners. The information presented is subject to change without notice. Alcatel-Lucent assumes no responsibility for inaccuracies contained herein.
Copyright © 2014 Alcatel-Lucent. All Rights Reserved

ALCATEL-LUCENT B25 RRH4X30

Alcatel-Lucent Band 25 Remote Radio Head 4x30W is the new addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering.

Supporting 2Tx/4Tx MIMO and 4-way Rx diversity, Alcatel-Lucent B25 RRH4x30 allows operators to have a compact radio solution to deploy LTE in the PCS band (1.9 GHz, 3GPP band 25), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.

The Alcatel-Lucent B25 RRH4x30 product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x60 W or 4x30 W RF output power. It supports also 4-way Rx diversity, LTE carriers from 3 MHz up to 20 MHz and up to 65 MHz instantaneous bandwidth.

The Alcatel-Lucent B25 RRH4x30 is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

Its compactness and slim design makes the Alcatel-Lucent B25 RRH4x30 easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

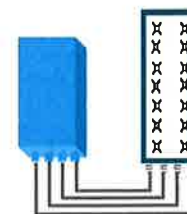


FEATURES

- Supporting LTE in 1.9 GHz band (PCS, 3GPP band 2 & 25)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- Ready for 3, 5, 10, 15 or 20MHz LTE carrier operation with 4Rx Diversity
- Ready to support up to 4 carriers anywhere in 65MHz instantaneous bandwidth
- Convection-cooled (fan-less)
- Supports AISG 2.0 devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in PCS band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Full flexibility for multiple carriers operation over entire PCS spectrum
- Improves downlink spectral efficiency and cell edge throughput through MIMO4
- Increases LTE coverage thanks to 4-way Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options (Pole or Wall)



4x30W with 4T4R
or
2x60W with 2T4R

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

TECHNICAL SPECIFICATIONS

Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	3GPP bands 2 & 25 (PCS-G) DL: 1930 - 1995 MHz UL: 1850 - 1915 MHz
Instantaneous bandwidth - #carriers	65MHz – Up to 4 LTE carriers (in 40MHz occupied bandwidth)
LTE carrier bandwidth	3, 5, 10, 15 or 20 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure (3GPP band 2)	2.0 dB typ. (<2.5 dB max)
RX Diversity scheme	2 or 4 way Rx diversity
Sizes (HxWxD)(w/ solar shield) in mm (in.)	538 x 304 x 182 (21.2" x 12.0" x 7.2")
Volume (w/ solar shield) in L	30
Weight (w/ solar shield) in kg (lb)	24 (53)
DC voltage range	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption
DC power consumption	580W typical @100% RF load
Environmental conditions	-40°C (-40°F) / +55°C (+131°F) IP65
Wind load (@150km/h or 93mph)	Frontal: <200N / Lateral : <150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5 (> 14dB)
CPRI ports	2 CPRI ports (HW ready for Rate7 / 9.8 Gbps)
AISG interfaces	1 AISG2.0 output (RS485), +24V/2A DC power Integrated Smart Bias Tees (x2)
Misc. Interfaces	1 external alarms connector (4 alarms) 4 RF Tx & 4 RF Rx monitor ports 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27

www.alcatel-lucent.com Alcatel-Lucent, Alcatel-Lucent and the Alcatel-Lucent logo are trademarks of Alcatel-Lucent. All other trademarks are the property of their respective owners. The information presented is subject to change without notice. Alcatel-Lucent assumes no responsibility for inaccuracies contained herein.
Copyright © 2014 Alcatel-Lucent. All Rights Reserved

ALCATEL-LUCENT B66A RRH4X45

The Alcatel-Lucent B66a Remote Radio Head 4x45 is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering. Its operational range covers beyond that of B4 (AWS) and B10 (AWS+).

Supporting 2Tx/4Tx MIMO and 2-way/4-way Rx diversity, the Alcatel-Lucent B66a RRH4x45 allows operators to have a compact radio solution to deploy LTE in the 2100 band (3GPP band 4, 10, and 66), providing them with the means to achieve high capacity, high quality, high reliability, large instantaneous bandwidth, and high coverage with minimum site requirements.



The Alcatel-Lucent B66a RRH4x45 product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x90W or 4x45W RF output power. It also supports 4-way Rx diversity at the 70 MHz instantaneous bandwidth.

The Alcatel-Lucent B66a RRH4x45 is a compact (near zero-footprint) solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

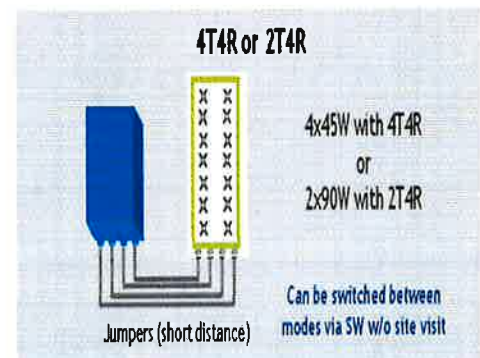
Its compactness and slim design makes the Alcatel-Lucent B66a RRH4x45 easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

FEATURES

- Supporting LTE in 2110 - 2180 MHz band/DL, 1710-1780MHz/UL (3GPP band 4, 10, and 66a)
- LTE 2Tx or 4Tx MIMO (SW selectable)
- Configuration: 2T2R/2T4R/4T4R
- Output power: Up to 2x90W or 4x45W (SW configurable)
- 70MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports

BENEFITS

- Compact to reduce additional footprint when adding LTE in AWS 1-3 band
- Selection of MIMO configuration (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through 4Tx MIMO
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall



TECHNICAL SPECIFICATIONS

Features & Performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R selectable by SW)
Frequency band	AWS 1-3, B4/B66a DL: 2110-2180 MHz / UL: 1710-1780 MHz
Instantaneous bandwidth - #carriers	70 MHz – 4 LTE MIMO carriers (in 70 MHz occupied bandwidth)
LTE carrier bandwidth	5, 10, 15, 20 MHz
RF output power	2x90W or 4x45W (selectable by SW)
Noise figure – RX Diversity scheme Receiver Sensitivity (FRC A1-3)	2 dB typical (<2.5 dB max) – 2 or 4 way Rx diversity -104.5 dBm maximum
Size (HxWxD) in mm (in.)	655x299x182 (25.8x11.8x7.2) (with solar shield) 640x290x160 (25.2x11.4x6.3) (without solar shield)
Volume in Liters	35.5 (with solar shield) 29.7 (without solar shield)
Weight in kg (lb) (w/o mounting HW)	25.8kg (56.8lb) (with solar shield)
DC voltage range	Nominal: -48V, -40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption
DC power consumption	750W typical @100% RF load (in 2Tx or 4Tx mode); Add 58W for 2A*29V for AISG
Environmental conditions	-40°C (-40°F) / +55°C (+131°F) UL50E Type 4 Enclosure
Wind load (@150km/h or 93mph)	250N (56lb) Frontal/150N (34lb) Lateral
Antenna ports	4 ports 4.3-10 female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate 7, 9.8 Gbps) SFP: SMDF (HW supports also SMSF and MMDF)
AISG interfaces	1 AISG 2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-487 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27 / FCC Part 15 / GR-3178-CORE

www.alcatel-lucent.com Alcatel, Lucent, Alcatel-Lucent and the Alcatel-Lucent logo are trademarks of Alcatel-Lucent. All other trademarks are the property of their respective owners. The information presented is subject to change without notice. Alcatel-Lucent assumes no responsibility for inaccuracies contained herein.
Copyright © 2016 Alcatel-Lucent. All Rights Reserved

ATTACHMENT 2

General		Power	Density	CARRIER			Total			
Site Name:	Groton 2			# OF CHAN.	WATTS ERP	HEIGHT	CALC. POWER DENS	FREQ.	PERMISS. EXP.	FRACTION MPE
Tower Height:	149Ft.									
*T-Mobile GSM/UMTS	2	12	140	1950	0.0005	1.0000	0.00%			
*T-Mobile UMTS	2	16	140	2100	0.0006	1.0000	0.01%			
*T-Mobile LTE	2	24	140	2100	0.0010	1.0000	0.01%			
*AT&T UMTS	2	500	127	880	0.0246	0.5867	0.42%			
*AT&T UMTS	1	500	127	1900	0.0123	1.0000	0.12%			
*AT&T LTE	1	500	127	700	0.0123	0.4667	0.26%			
*AT&T LTE	1	500	127	1900	0.0123	1.0000	0.12%			
*AT&T LTE	1	500	127	2300	0.0123	1.0000	0.12%			
Verizon PCS	1	3177	149	0.0515	1970	1.0000	5.15%			
Verizon Cellular	9	291	149	0.0424	869	0.5793	7.32%			
Verizon AWS	1	6907	149	0.1119	2145	1.0000	11.19%			
Verizon 700	1	1656	149	0.0268	746	0.4973	5.39%			
										30.12%
* Source: Siting Council										

ATTACHMENT 3



Tower Engineering Solutions

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

Structural Analysis Report

Existing 149 ft. SABRE Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT13075-A

Customer Site Name: New London

Carrier Name: Verizon

Carrier Site ID / Name: 17855

Site Location: 1294 Pleasant Valley Road North

Groton, Connecticut

New London County

Latitude: 41.399972

Longitude: -72.079222

Analysis Result:

Max Structural Usage: 72.2% [Pass]

Max Foundation Usage: 81.0% [Pass]

Report Prepared By : Haoxuan Lei



10/3/16

Introduction

The purpose of this report is to summarize the analysis results on the 149 ft. SABRE Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Tower Design prepared by Sabre, job # 08-07173, dated 08/09/2007
Foundation Drawing	Foundation Design prepared by Sabre, job # 08-07173-E, dated 08/09/2007
Geotechnical Report	Geotechnical Report prepared by Gemini Geotechnical Associates, job # 07079CT, dated 07/20/2007
Modification Drawings	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 **TESPoles**, a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 135.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 105.0$ mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 3/4" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA/EIA 222-G / 2012 IBC / 2016 Connecticut State Building Code
Exposure Category:	C
Structure Class:	II
Topographic Category:	1
Crest Height:	0 ft
Seismic Parameters:	$S_S = 0.163$, $S_1 = 0.059$

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
-	149.0	3	Commscope - LNX-6514DS-VTM - Panel	Low Profile Platform	(12) 1 5/8" (2) 1 5/8" Hybriflex Fiber	Verizon
-		3	Antel - BXA-80063/4CF - Panel			
-		3	Commscope - HBXX-6517DS-A2M - Panel			
-		3	Commscope - HBXX-6516DS-A2M - Panel			
-		3	Alcatel-Lucent - RRH2x40 (700) - RRH			
-		3	Alcatel-Lucent - RRH2X60 AWS - RRH			
-		1	RFS - DB-TI-6Z-8AB-OZ - Distribution Box			
10	140.0	3	Ericsson - AIR B2A B4P - Panel	Low Profile Platform	(12) 1 5/8" (1) 1 5/8" Fiber	T-Mobile
11		3	Ericsson - AIR B4A B2P - Panel			
12		3	Ericsson - KRY 112 144 T - TMA			
13	127.0	12	CCI - HPA-65R-BUU-8H - Panel	MTC3607 Platform + HR & Kicker	(2) 1/2" Fiber (8) 3/4" DC (3) 3/8" RET	New Cingular
14		9	Ericsson - RRUS 11 - RRU			
15		6	Ericsson - RRUS 12 - RRU			
16		3	Ericsson - RRUS 32 - RRU			
17		3	Ericsson - RRUS E2 - RRU			
18		6	Ericsson - RRUS A2 - RRU			
19		4	Raycap - DC6-48-60-18-8F			

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

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	150.5	3	Commscope - SBNHH-1D65B - Panel	Low Profile Platform	(12) 1 5/8" (2) 1 5/8" Hybriflex Fiber	Verizon
2	149.0	3	Commscope - LNX-6514DS-VTM - Panel			
3		3	Antel - BXA-80063/4CF - Panel			
4		3	Commscope - SBNHH-1D65B - Panel			
5		3	Alcatel Lucent - RRH 2x60 700 - RRH			
6		3	Alcatel Lucent - RRH 4X45 AWS - RRH			
7		3	Alcatel Lucent - RRH 2x60W-1900MHz - RRH			
8		1	RFS - DB-TI-6Z-8AB-OZ - Distribution Box			
9		1	RFS - DB-T1-6Z-8AB-OZ - Distribution Box			

All transmission lines are considered running inside of the pole shafts.

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate	Flange Plate
Max. Usage:	72.2%	67.2%	61.9%	54.3%
Pass/Fail	Pass	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Original Design Reactions	5442.5	49.9	53.6
Analysis Reactions	4514.4	40.6	72.9
Factored Reactions*	7347.4	67.4	72.3
% of Design Reactions	61.4%	60.2%	100.8%

* Per section 15.5.1 of the TIA-222-G standard, factored reactions were obtained by multiplying a 1.35 factor to the original design reactions.

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

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by ANSI/TIA/EIA 222-G for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.1661 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

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

Standard Conditions

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

Usage Diagram - Max Ratio 72.16% at 100.8ft

Structure: CT13075-A-SBA
Site Name: New London
Height: 149.00 (ft)
Base Elev: 0.000 (ft)

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

10/3/2016

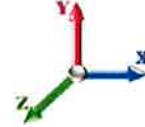


Page: 1

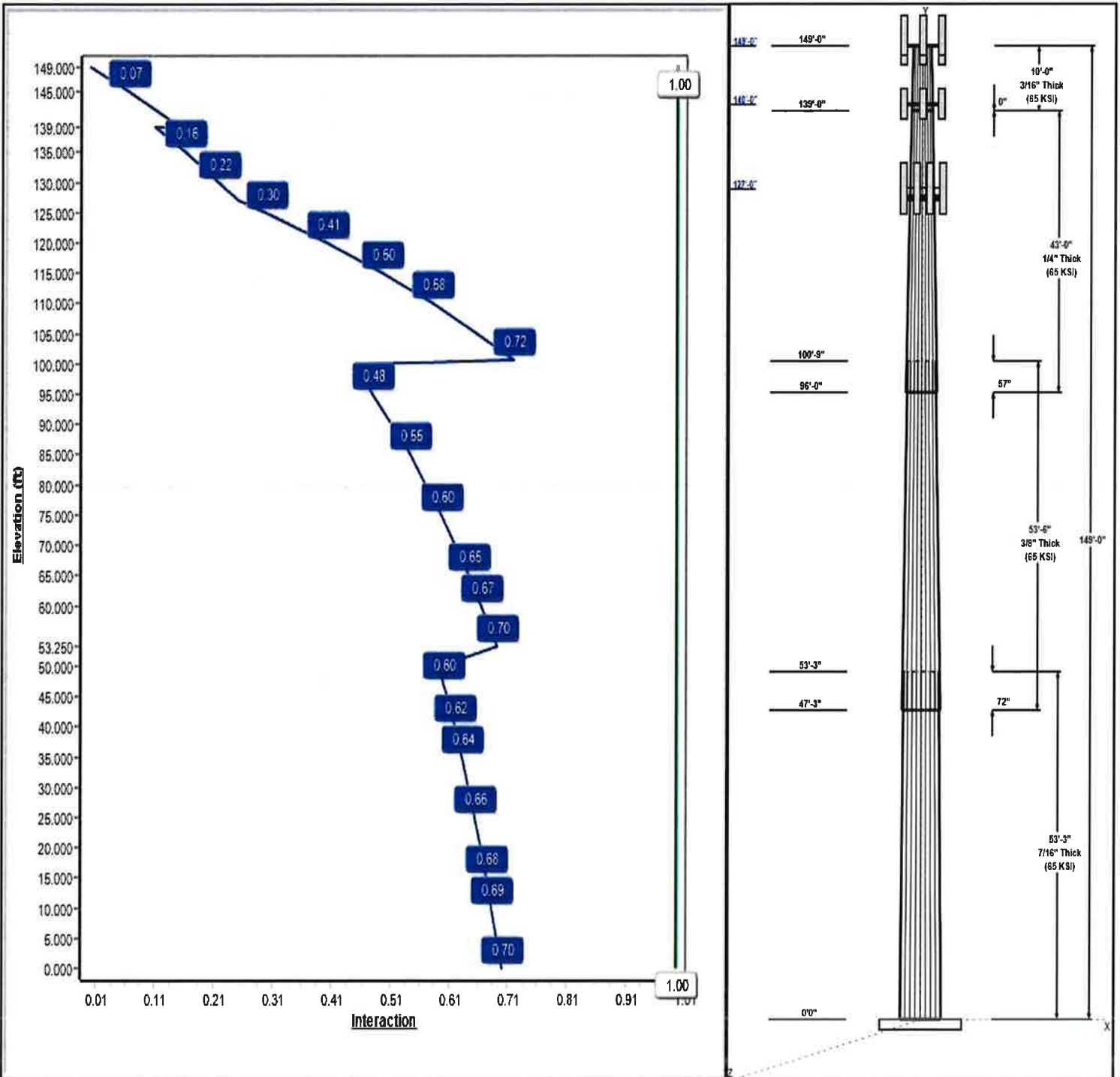
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Iterations: 22

Load Case : 1.2D + 1.6W 105 mph Wind



Copyright © 2016 by Tower Engineering Solutions, LLC. All rights reserved.



Structure: CT13075-A-SBA

Type: Tapered
Site Name: New London
Height: 149.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23597

10/3/2016

Page: 2



Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	53.25	45.69	58.26	0.438		0.23597	65
2	53.50	35.24	47.86	0.375	Slip	0.23597	65
3	43.00	26.71	36.86	0.250	Slip	0.23597	65
4	10.00	24.35	26.71	0.188	Butt	0.23597	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
149.00	149.00	3	LNX-6514DS-VTM	Verizon
149.00	149.00	3	BXA-80063/4CF	Verizon
149.00	149.00	3	SBNHH-1D65B	Verizon
149.00	150.50	3	SBNHH-1D65B	Verizon
149.00	149.00	3	RRH2x60 700	Verizon
149.00	149.00	3	RRH 4X45 AWS	Verizon
149.00	149.00	3	RRH 2X60W-1900MHz	Verizon
149.00	149.00	1	DB-T1-6Z-8AB-0Z	Verizon
149.00	149.00	1	DB-T1-6Z-8AB-0Z	Verizon
149.00	149.00	1	Low Profile	Verizon
140.00	140.00	3	AIR B2A B4P	T-Mobile
140.00	140.00	3	AIR B4A B2P	T-Mobile
140.00	140.00	3	KRY 112 144 T	T-Mobile
140.00	140.00	1	Low Profile	T-Mobile
127.00	127.00	12	HPA-65R-BUU-8H	New Cingular
127.00	127.00	9	RRUS 11	New Cingular
127.00	127.00	6	RRUS 12	New Cingular
127.00	127.00	3	RRUS 32	New Cingular
127.00	127.00	3	RRUS E2	New Cingular
127.00	127.00	6	RRUS A2	New Cingular
127.00	127.00	4	DC6-48-60-18-8F	New Cingular
127.00	127.00	1	MTC3607 Platform + HR &	New Cingular

Linear Appurtenances

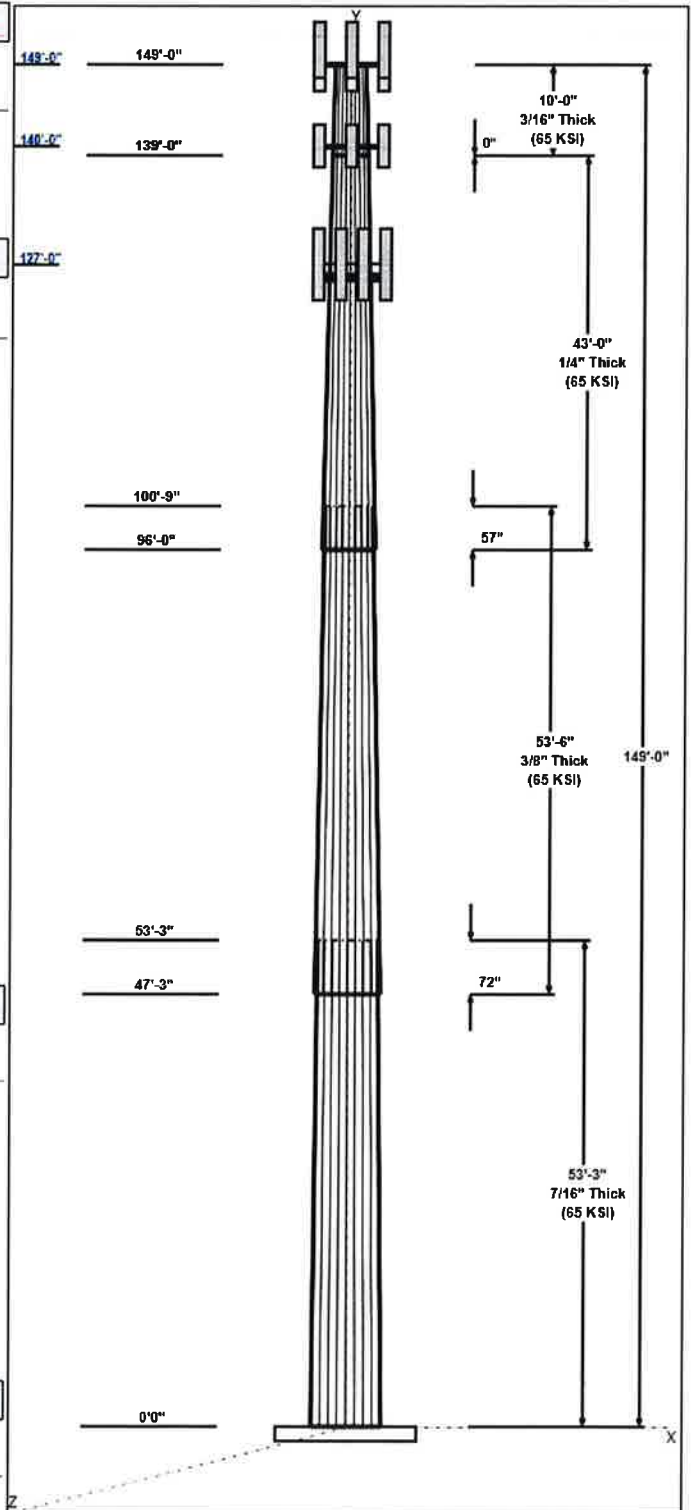
Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	149.00	Inside	1 5/8" Coax	Verizon
0.00	149.00	Inside	1 5/8" Coax	Verizon
0.00	149.00	Inside	1 5/8" Coax	Verizon
0.00	149.00	Inside	1 5/8" Coax	Verizon
0.00	149.00	Inside	1 5/8" Hybriflex Fiber	Verizon
0.00	140.00	Inside	1 5/8" Coax	T-Mobile
0.00	140.00	Inside	1 5/8" Fiber	T-Mobile
0.00	127.00	Inside	1/2" Fiber	New Cingular
0.00	127.00	Inside	3/4" DC	New Cingular
0.00	127.00	Inside	3/8" RET	New Cingular

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
20	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry



Type: Tapered
Site Name: New London
Height: 149.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23597

10/3/2016

Page: 3



2.7500 65.4 60.0 Clipped

Reactions

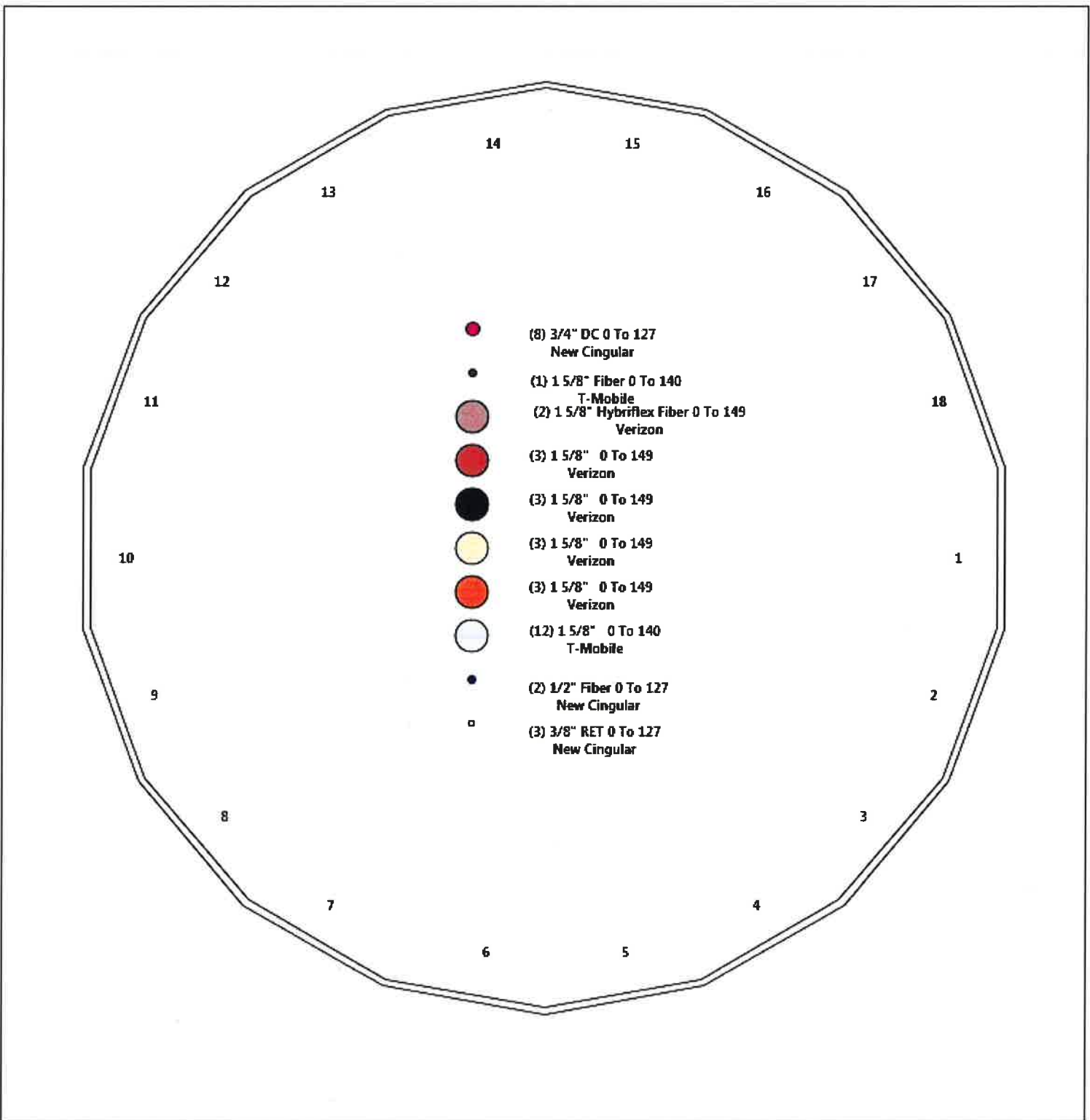
Load Case	Moment	Shear	Axial
1.2D + 1.6W 105 mph Wind	4514.4	40.6	47.3
0.9D + 1.6W 105 mph Wind	4478.3	40.6	35.5
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1023.2	9.4	72.9
1.2D + 1.0E	205.2	1.7	47.4
0.9D + 1.0E	203.5	1.7	35.5
1.0D + 1.0W 60 mph Wind	917.6	8.3	39.5

Structure: CT13075-A-SBA - Coax Line Placement

Type: Monopole
Site Name: New London
Height: 149.00 (ft)

10/3/2016

Page: 4



Shaft Properties

Structure: CT13075-A-SBA

Site Name: New London

Height: 149.00 (ft)

Base Elev: 0.000 (ft)

Gh: 1.1

Topography: 1

Code: EIA/TIA-222-G

Exposure: C

Crest Height: 0.00

Site Class: D - Stiff Soil

Struct Class: II

10/3/2016

Page: 5



Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	53.250	0.4375	65		0.00	12,968
2	18	53.500	0.3750	65	Slip	72.00	8,921
3	18	43.000	0.2500	65	Slip	57.00	3,661
4	18	10.000	0.1875	65	Flange	0.00	513
Total Shaft Weight:							26,063

Bottom

Top

Sec. No.	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (sqin)	Ix (in^4)	W/t Ratio	D/t Ratio	Taper
1	58.26	0.00	80.29	33916.66	22.07	133.17	45.69	53.25	62.84	16262.1	17.01	104.4	0.235973
2	47.86	47.25	56.52	16100.98	21.09	127.63	35.24	100.75	41.49	6370.66	15.16	93.96	0.235973
3	36.86	96.00	29.05	4917.70	24.58	147.43	26.71	139.00	21.00	1857.12	17.43	106.8	0.235973
4	26.71	139.0	15.78	1402.74	23.71	142.45	24.35	149.00	14.38	1060.65	21.49	129.8	0.235973

Load Summary

Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 6

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	149.00	LNX-6514DS-VTM	3	38.80	8.17	0.83	214.98	10.991	0.83	0.00	0.00
2	149.00	BXA-80063/4CF	3	9.90	4.72	0.72	110.33	6.567	0.72	0.00	0.00
3	149.00	SBNHH-1D65B	3	40.60	8.08	0.83	242.97	9.459	0.83	0.00	0.00
4	149.00	SBNHH-1D65B	3	40.00	8.16	0.83	242.97	9.459	0.83	0.00	1.50
5	149.00	RRH2x60 700	3	51.00	1.51	1.50	151.17	1.934	1.47	0.00	0.00
6	149.00	RRH 4X45 AWS	3	64.00	2.60	0.80	147.52	3.304	0.80	0.00	0.00
7	149.00	RRH 2X60W-1900MHz	3	46.00	1.88	0.84	115.05	2.466	0.84	0.00	0.00
8	149.00	DB-T1-6Z-8AB-0Z	1	18.90	4.80	0.67	162.51	5.673	0.67	0.00	0.00
9	149.00	DB-T1-6Z-8AB-0Z	1	18.90	4.80	0.67	162.51	5.673	0.67	0.00	0.00
10	149.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2808.04	39.650	1.00	0.00	0.00
11	140.00	AIR B2A B4P	3	91.50	6.09	0.86	259.00	7.179	0.86	0.00	0.00
12	140.00	AIR B4A B2P	3	90.40	6.09	0.86	257.90	7.179	0.86	0.00	0.00
13	140.00	KRY 112 144 T	3	11.00	0.41	0.70	21.71	0.882	0.70	0.00	0.00
14	140.00	Low Profile Platform-Round	1	1500.00	22.00	1.00	2799.91	39.540	1.00	0.00	0.00
15	127.00	HPA-65R-BUU-8H	12	68.00	12.98	0.79	353.46	14.567	0.79	0.00	0.00
16	127.00	RRUS 11	9	50.70	2.52	0.71	138.10	3.160	0.71	0.00	0.00
17	127.00	RRUS 12	6	60.00	2.70	0.75	125.91	3.349	0.75	0.00	0.00
18	127.00	RRUS 32	3	77.00	1.65	0.70	124.43	2.219	0.70	0.00	0.00
19	127.00	RRUS E2	3	60.00	2.70	0.75	133.08	3.759	0.75	0.00	0.00
20	127.00	RRUS A2	6	21.20	1.86	0.62	56.71	2.818	0.62	0.00	0.00
21	127.00	DC6-48-60-18-8F	4	31.80	0.92	1.00	92.60	1.351	1.00	0.00	0.00
22	127.00	MTC3607 Platform + HR & Kicker	1	2246.00	51.70	1.00	5330.04	89.325	1.00	0.00	0.00
Totals:			78	9,031.10			24,276.92				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	149.00	(3) 1 5/8" Coax	0.00	Inside
0.00	149.00	(3) 1 5/8" Coax	0.00	Inside
0.00	149.00	(3) 1 5/8" Coax	0.00	Inside
0.00	149.00	(3) 1 5/8" Coax	0.00	Inside
0.00	149.00	(2) 1 5/8" Hybriflex Fiber	0.00	Inside
0.00	140.00	(12) 1 5/8" Coax	0.00	Inside
0.00	140.00	(1) 1 5/8" Fiber	0.00	Inside
0.00	127.00	(2) 1/2" Fiber	0.00	Inside
0.00	127.00	(8) 3/4" DC	0.00	Inside
0.00	127.00	(3) 3/8" RET	0.00	Inside

Shaft Section Properties

Structure: CT13075-A-SBA
Site Name: New London
Height: 149.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

10/3/2016

Page: 7



Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.4375	58.260	80.291	33916.7	22.07	133.17	75.4	1146.	0.0
5.00		0.4375	57.080	78.653	31882.5	21.59	130.47	76.0	1100.	1352.1
10.00		0.4375	55.900	77.014	29931.4	21.12	127.77	76.6	1054.	1324.2
15.00		0.4375	54.720	75.376	28061.5	20.64	125.08	77.1	1010.	1296.4
20.00		0.4375	53.541	73.738	26271.2	20.17	122.38	77.7	966.4	1268.5
25.00		0.4375	52.361	72.099	24558.7	19.69	119.68	78.2	923.8	1240.6
30.00		0.4375	51.181	70.461	22922.3	19.22	116.98	78.8	882.1	1212.8
35.00		0.4375	50.001	68.823	21360.3	18.74	114.29	79.4	841.4	1184.9
40.00		0.4375	48.821	67.184	19870.8	18.27	111.59	79.9	801.7	1157.0
45.00		0.4375	47.641	65.546	18452.3	17.79	108.89	80.5	762.9	1129.1
47.25	Bot - Section 2	0.4375	47.110	64.809	17836.6	17.58	107.68	80.7	745.7	499.0
50.00		0.4375	46.461	63.908	17103.0	17.31	106.20	81.0	725.0	1127.5
53.25	Top - Section 1	0.3750	46.444	54.832	14703.3	20.43	123.85	0.0	0.0	1312.3
55.00		0.3750	46.031	54.341	14311.4	20.23	122.75	77.6	612.4	325.1
60.00		0.3750	44.852	52.936	13230.3	19.68	119.60	78.3	581.0	912.6
65.00		0.3750	43.672	51.532	12205.1	19.12	116.46	78.9	550.5	888.7
70.00		0.3750	42.492	50.128	11234.3	18.57	113.31	79.6	520.7	864.8
75.00		0.3750	41.312	48.724	10316.3	18.01	110.17	80.2	491.8	840.9
80.00		0.3750	40.132	47.319	9449.8	17.46	107.02	80.9	463.8	817.0
85.00		0.3750	38.952	45.915	8633.2	16.90	103.87	81.5	436.5	793.1
90.00		0.3750	37.772	44.511	7865.0	16.35	100.73	82.2	410.1	769.2
95.00		0.3750	36.593	43.106	7143.9	15.80	97.58	82.5	384.5	745.4
96.00	Bot - Section 3	0.3750	36.357	42.826	7005.1	15.68	96.95	82.5	379.5	146.2
100.00		0.3750	35.413	41.702	6468.2	15.24	94.43	82.5	359.8	965.5
100.75	Top - Section 2	0.2500	35.736	28.157	4479.7	23.79	142.94	0.0	0.0	178.2
105.00		0.2500	34.733	27.361	4110.5	23.09	138.93	74.2	233.1	401.4
110.00		0.2500	33.553	26.425	3702.8	22.25	134.21	75.2	217.4	457.6
115.00		0.2500	32.373	25.489	3323.0	21.42	129.49	76.2	202.2	441.6
120.00		0.2500	31.193	24.553	2970.2	20.59	124.77	77.2	187.5	425.7
125.00		0.2500	30.013	23.616	2643.2	19.76	120.05	78.2	173.5	409.8
127.00		0.2500	29.541	23.242	2519.4	19.43	118.17	78.6	168.0	159.4
130.00		0.2500	28.833	22.680	2341.2	18.93	115.33	79.1	159.9	234.4
135.00		0.2500	27.654	21.744	2063.0	18.09	110.61	80.1	146.9	377.9
139.00	Top - Section 3	0.2500	26.710	20.995	1857.1	17.43	106.84	80.9	136.9	290.9
139.00	Bot - Section 4	0.1875	26.710	15.783	1402.7	23.24	142.45	73.5	103.4	
140.00		0.1875	26.474	15.643	1365.6	23.49	141.19	73.8	101.6	53.5
145.00		0.1875	25.294	14.941	1189.9	22.38	134.90	75.1	92.7	260.2
149.00		0.1875	24.350	14.379	1060.6	21.49	129.87	76.1	85.8	199.5

26063.1

Wind Loading - Shaft

Structure: CT13075-A-SBA
Site Name: New London
Height: 149.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

10/3/2016



Page: 8

Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 22

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	22.791	25.07	477.24	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	22.791	25.07	467.57	0.650	0.000	5.00	24.400	15.86	636.2	0.0	1622.5
10.00		1.00	0.85	22.791	25.07	457.91	0.650	0.000	5.00	23.901	15.54	623.2	0.0	1589.1
15.00		1.00	0.85	22.791	25.07	448.24	0.650	0.000	5.00	23.401	15.21	610.1	0.0	1555.6
20.00		1.00	0.90	24.182	26.60	451.77	0.650	0.000	5.00	22.902	14.89	633.6	0.0	1522.2
25.00		1.00	0.95	25.345	27.88	452.31	0.650	0.000	5.00	22.403	14.56	649.6	0.0	1488.8
30.00		1.00	0.98	26.337	28.97	450.69	0.650	0.000	5.00	21.904	14.24	660.0	0.0	1455.3
35.00		1.00	1.01	27.206	29.93	447.50	0.650	0.000	5.00	21.405	13.91	666.2	0.0	1421.9
40.00		1.00	1.04	27.981	30.78	443.13	0.650	0.000	5.00	20.906	13.59	669.2	0.0	1388.4
45.00		1.00	1.07	28.684	31.55	437.81	0.650	0.000	5.00	20.406	13.26	669.6	0.0	1355.0
47.25 Bot - Section 2		1.00	1.08	28.980	31.88	435.16	0.650	0.000	2.25	9.020	5.86	299.0	0.0	598.8
50.00		1.00	1.09	29.327	32.26	431.73	0.650	0.000	2.75	11.062	7.19	371.1	0.0	1353.0
53.25 Top - Section 1		1.00	1.11	29.719	32.69	427.43	0.650	0.000	3.25	12.878	8.37	437.8	0.0	1574.8
55.00		1.00	1.12	29.922	32.91	432.05	0.650	0.000	1.75	6.847	4.45	234.4	0.0	390.1
60.00		1.00	1.14	30.475	33.52	424.85	0.650	0.000	5.00	19.226	12.50	670.3	0.0	1095.1
65.00		1.00	1.16	30.993	34.09	417.17	0.650	0.000	5.00	18.727	12.17	664.0	0.0	1066.4
70.00		1.00	1.17	31.480	34.63	409.08	0.650	0.000	5.00	18.228	11.85	656.4	0.0	1037.8
75.00		1.00	1.19	31.941	35.13	400.62	0.650	0.000	5.00	17.728	11.52	647.8	0.0	1009.1
80.00		1.00	1.21	32.377	35.62	391.83	0.650	0.000	5.00	17.229	11.20	638.2	0.0	980.4
85.00		1.00	1.22	32.793	36.07	382.75	0.650	0.000	5.00	16.730	10.87	627.6	0.0	951.8
90.00		1.00	1.24	33.190	36.51	373.39	0.650	0.000	5.00	16.231	10.55	616.3	0.0	923.1
95.00		1.00	1.25	33.570	36.93	363.79	0.650	0.000	5.00	15.732	10.23	604.2	0.0	894.4
96.00 Bot - Section 3		1.00	1.25	33.644	37.01	361.85	0.650	0.000	1.00	3.086	2.01	118.8	0.0	175.4
100.00		1.00	1.27	33.935	37.33	353.97	0.650	0.000	4.00	12.315	8.00	478.1	0.0	1158.6
100.75 Top - Section 2		1.00	1.27	33.988	37.39	352.48	0.650	0.000	0.75	2.274	1.48	88.4	0.0	213.8
105.00		1.00	1.28	34.285	37.71	348.96	0.650	0.000	4.25	12.671	8.24	497.0	0.0	481.7
110.00		1.00	1.29	34.623	38.08	338.76	0.650	0.000	5.00	14.446	9.39	572.2	0.0	549.1
115.00		1.00	1.30	34.948	38.44	328.38	0.650	0.000	5.00	13.946	9.07	557.6	0.0	530.0
120.00		1.00	1.32	35.263	38.79	317.84	0.650	0.000	5.00	13.447	8.74	542.5	0.0	510.8
125.00		1.00	1.33	35.567	39.12	307.13	0.650	0.000	5.00	12.948	8.42	526.8	0.0	491.7
127.00 Appurtenance(s)		1.00	1.33	35.686	39.25	302.81	0.650	0.000	2.00	5.039	3.28	205.7	0.0	191.3
130.00		1.00	1.34	35.862	39.45	296.28	0.650	0.000	3.00	7.409	4.82	304.0	0.0	281.3
135.00		1.00	1.35	36.148	39.76	285.29	0.650	0.000	5.00	11.950	7.77	494.2	0.0	453.5
139.00 Top - Section 3		1.00	1.36	36.371	40.01	276.40	0.650	0.000	4.00	9.200	5.98	382.8	0.0	349.0
140.00 Appurtenance(s)		1.00	1.36	36.426	40.07	274.16	0.650	0.000	1.00	2.250	1.46	93.8	0.0	64.2
145.00		1.00	1.37	36.696	40.37	262.91	0.650	0.000	5.00	10.951	7.12	459.7	0.0	312.2
149.00 Appurtenance(s)		1.00	1.38	36.907	40.60	253.83	0.650	0.000	4.00	8.402	5.46	354.7	0.0	239.4
Totals:									149.00			17,961.0		31,275.7

Discrete Appurtenance Forces

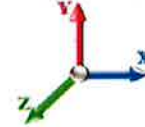
Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 9

Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 22

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	RRH2x60 700	3	36.907	40.597	1.50	1.00	6.79	183.60	0.000	0.000	441.37	0.00	0.00
2	149.00	LNx-6514DS-VTM	3	36.907	40.597	0.83	1.00	20.34	139.68	0.000	0.000	1321.42	0.00	0.00
3	149.00	BXA-80063/4CF	3	36.907	40.597	0.72	1.00	10.20	35.64	0.000	0.000	662.24	0.00	0.00
4	149.00	SBNHH-1D65B	3	36.907	40.597	0.83	1.00	20.12	146.16	0.000	0.000	1306.86	0.00	0.00
5	149.00	SBNHH-1D65B	3	36.985	40.683	0.83	1.00	20.32	144.00	0.000	1.500	1322.58	0.00	1983.88
6	149.00	Low Profile	1	36.907	40.597	1.00	1.00	22.00	1800.00	0.000	0.000	1429.03	0.00	0.00
7	149.00	RRH 4X45 AWS	3	36.907	40.597	0.80	1.00	6.24	230.40	0.000	0.000	405.32	0.00	0.00
8	149.00	RRH 2X60W-1900MHz	3	36.907	40.597	0.84	1.00	4.74	165.60	0.000	0.000	307.73	0.00	0.00
9	149.00	DB-T1-6Z-8AB-0Z	1	36.907	40.597	0.67	1.00	3.22	22.68	0.000	0.000	208.90	0.00	0.00
10	149.00	DB-T1-6Z-8AB-0Z	1	36.907	40.597	0.67	1.00	3.22	22.68	0.000	0.000	208.90	0.00	0.00
11	140.00	Low Profile	1	36.426	40.068	1.00	1.00	22.00	1800.00	0.000	0.000	1410.41	0.00	0.00
12	140.00	KRY 112 144 T	3	36.426	40.068	0.56	0.80	0.69	39.60	0.000	0.000	44.16	0.00	0.00
13	140.00	AIR B4A B2P	3	36.426	40.068	0.69	0.80	12.57	325.44	0.000	0.000	805.84	0.00	0.00
14	140.00	AIR B2A B4P	3	36.426	40.068	0.69	0.80	12.57	329.40	0.000	0.000	805.84	0.00	0.00
15	127.00	MTC3607 Platform + HR	1	35.686	39.255	1.00	1.00	51.70	2695.20	0.000	0.000	3247.15	0.00	0.00
16	127.00	DC6-48-60-18-8F	4	35.686	39.255	0.80	0.80	2.94	152.64	0.000	0.000	184.91	0.00	0.00
17	127.00	RRUS A2	6	35.686	39.255	0.50	0.80	5.54	152.64	0.000	0.000	347.66	0.00	0.00
18	127.00	RRUS E2	3	35.686	39.255	0.60	0.80	4.86	216.00	0.000	0.000	305.24	0.00	0.00
19	127.00	RRUS 32	3	35.686	39.255	0.56	0.80	2.77	277.20	0.000	0.000	174.10	0.00	0.00
20	127.00	RRUS 12	6	35.686	39.255	0.60	0.80	9.72	432.00	0.000	0.000	610.49	0.00	0.00
21	127.00	RRUS 11	9	35.686	39.255	0.57	0.80	12.88	547.56	0.000	0.000	809.10	0.00	0.00
22	127.00	HPA-65R-BUU-8H	12	35.686	39.255	0.63	0.80	98.44	979.20	0.000	0.000	6182.79	0.00	0.00
Totals:									10,837.32			22,542.03		

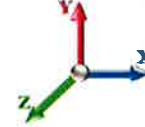
Total Applied Force Summary

Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 10



Load Case: 1.2D + 1.6W 105 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 22

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		636.17	1806.33	0.00	0.00
10.00		623.16	1772.88	0.00	0.00
15.00		610.14	1739.43	0.00	0.00
20.00		633.58	1705.98	0.00	0.00
25.00		649.58	1672.53	0.00	0.00
30.00		659.95	1639.08	0.00	0.00
35.00		666.19	1605.63	0.00	0.00
40.00		669.20	1572.18	0.00	0.00
45.00		669.62	1538.73	0.00	0.00
47.25		299.04	681.52	0.00	0.00
50.00		371.12	1454.07	0.00	0.00
53.25		437.83	1694.22	0.00	0.00
55.00		234.38	454.39	0.00	0.00
60.00		670.28	1278.90	0.00	0.00
65.00		663.97	1250.23	0.00	0.00
70.00		656.43	1221.56	0.00	0.00
75.00		647.80	1192.89	0.00	0.00
80.00		638.17	1164.22	0.00	0.00
85.00		627.64	1135.55	0.00	0.00
90.00		616.28	1106.87	0.00	0.00
95.00		604.17	1078.20	0.00	0.00
96.00		118.79	212.20	0.00	0.00
100.00		478.10	1305.64	0.00	0.00
100.75		88.40	241.40	0.00	0.00
105.00		497.00	637.95	0.00	0.00
110.00		572.17	732.85	0.00	0.00
115.00		557.59	713.73	0.00	0.00
120.00		542.47	694.62	0.00	0.00
125.00		526.84	675.50	0.00	0.00
127.00	(44) attachments	12067.17	5717.29	0.00	0.00
130.00		303.98	379.26	0.00	0.00
135.00		494.16	616.82	0.00	0.00
139.00		382.81	479.69	0.00	0.00
140.00	(10) attachments	3160.01	2591.27	0.00	0.00
145.00		459.74	400.29	0.00	0.00
149.00	(24) attachments	7969.08	3200.35	0.00	1983.88
	Totals:	40,502.99	47,364.25	0.00	1,983.88

Calculated Forces

Structure: CT13075-A-SBA
Site Name: New London
Height: 149.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

10/3/2016

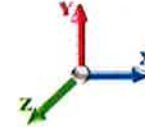
Page: 11



Load Case: 1.2D + 1.6W 105 mph Wind

Iterations 22

Dead Load Factor 1.20
Wind Load Factor 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-47.30	-40.58	0.00	-4514.3	0.00	4514.35	5451.60	2725.80	12956.4	6487.84	0.00	0.000	0.000	0.705
5.00	-45.36	-40.09	0.00	-4311.4	0.00	4311.45	5379.95	2689.97	12523.2	6270.95	0.10	-0.185	0.000	0.696
10.00	-43.46	-39.60	0.00	-4111.0	0.00	4111.01	5306.65	2653.32	12093.3	6055.68	0.39	-0.373	0.000	0.687
15.00	-41.60	-39.12	0.00	-3913.0	0.00	3913.00	5231.70	2615.85	11666.9	5842.16	0.89	-0.564	0.000	0.678
20.00	-39.77	-38.60	0.00	-3717.4	0.00	3717.42	5155.10	2577.55	11244.2	5630.50	1.58	-0.757	0.000	0.668
25.00	-37.97	-38.06	0.00	-3524.4	0.00	3524.43	5076.86	2538.43	10825.5	5420.83	2.48	-0.953	0.000	0.658
30.00	-36.22	-37.49	0.00	-3334.1	0.00	3334.15	4996.96	2498.48	10411.0	5213.26	3.59	-1.152	0.000	0.647
35.00	-34.49	-36.91	0.00	-3146.7	0.00	3146.70	4915.42	2457.71	10001.0	5007.93	4.90	-1.353	0.000	0.636
40.00	-32.81	-36.32	0.00	-2962.1	0.00	2962.13	4832.22	2416.11	9595.63	4804.95	6.43	-1.556	0.000	0.623
45.00	-31.20	-35.69	0.00	-2780.5	0.00	2780.53	4747.38	2373.69	9195.21	4604.44	8.17	-1.762	0.000	0.611
47.25	-30.46	-35.42	0.00	-2700.2	0.00	2700.23	4708.66	2354.33	9016.69	4515.05	9.02	-1.857	0.000	0.605
50.00	-28.94	-35.07	0.00	-2602.8	0.00	2602.81	4660.89	2330.44	8799.96	4406.52	10.13	-1.973	0.000	0.597
53.25	-27.20	-34.62	0.00	-2488.8	0.00	2488.84	4618.32	2309.16	8582.08	4300.41	11.52	-2.111	0.000	0.595
55.00	-26.66	-34.44	0.00	-2428.2	0.00	2428.25	4582.26	2290.63	8374.54	4200.06	12.30	-2.186	0.000	0.689
60.00	-25.27	-33.83	0.00	-2256.0	0.00	2256.04	4552.27	2274.14	8176.75	4109.94	14.72	-2.419	0.000	0.669
65.00	-23.92	-33.20	0.00	-2086.9	0.00	2086.91	4528.63	2260.82	7988.57	4027.62	17.38	-2.652	0.000	0.647
70.00	-22.60	-32.58	0.00	-1920.8	0.00	1920.89	4510.89	2250.70	7809.25	3953.24	20.28	-2.886	0.000	0.625
75.00	-21.31	-31.96	0.00	-1757.9	0.00	1757.99	4498.40	2242.67	7639.93	3887.91	23.43	-3.119	0.000	0.601
80.00	-20.06	-31.34	0.00	-1598.1	0.00	1598.19	4491.81	2235.91	7480.15	3830.75	26.82	-3.350	0.000	0.574
85.00	-18.84	-30.72	0.00	-1441.5	0.00	1441.51	4490.58	2230.29	7329.85	3779.89	30.45	-3.579	0.000	0.546
90.00	-17.66	-30.10	0.00	-1287.9	0.00	1287.93	4494.69	2225.84	7188.37	3735.44	34.32	-3.804	0.000	0.515
95.00	-16.56	-29.46	0.00	-1137.4	0.00	1137.43	4494.59	2222.59	7054.28	3697.67	38.42	-4.023	0.000	0.483
96.00	-16.30	-29.36	0.00	-1107.9	0.00	1107.97	4494.72	2220.86	6927.22	3665.60	39.26	-4.068	0.000	0.477
100.00	-14.98	-28.81	0.00	-990.54	0.00	990.54	4498.26	2219.13	6808.03	3638.32	42.74	-4.238	0.000	0.450
100.75	-14.70	-28.73	0.00	-968.93	0.00	968.93	4496.42	2218.21	6694.89	3615.46	43.41	-4.271	0.000	0.722
105.00	-13.99	-28.24	0.00	-846.82	0.00	846.82	4498.32	2217.16	6587.13	3597.99	47.29	-4.443	0.000	0.661
110.00	-13.18	-27.67	0.00	-705.60	0.00	705.60	4498.04	2216.06	6484.03	3584.33	52.09	-4.712	0.000	0.584
115.00	-12.41	-27.11	0.00	-567.23	0.00	567.23	4498.11	2215.02	6385.59	3574.51	57.15	-4.956	0.000	0.499
120.00	-11.67	-26.55	0.00	-431.68	0.00	431.68	4498.53	2214.07	6292.77	3568.64	62.46	-5.170	0.000	0.405
125.00	-11.00	-25.98	0.00	-298.95	0.00	298.95	4498.30	2213.26	6206.66	3565.84	67.96	-5.345	0.000	0.302
127.00	-6.42	-13.44	0.00	-246.99	0.00	246.99	4498.15	2212.58	6127.36	3565.65	70.21	-5.404	0.000	0.254
130.00	-6.05	-13.11	0.00	-206.67	0.00	206.67	4498.43	2211.71	6054.65	3567.24	73.63	-5.481	0.000	0.222
135.00	-5.47	-12.57	0.00	-141.11	0.00	141.11	4498.90	2210.95	5987.28	3570.95	79.42	-5.586	0.000	0.164
139.00	-5.02	-12.14	0.00	-90.85	0.00	90.85	4498.69	2210.34	5925.43	3576.95	84.13	-5.650	0.000	0.113
139.00	-5.02	-12.14	0.00	-90.85	0.00	90.85	4498.31	2210.16	5869.99	3570.34	84.13	-5.650	0.000	0.165
140.00	-2.75	-8.74	0.00	-78.70	0.00	78.70	4498.69	2209.35	5817.71	3572.19	85.31	-5.663	0.000	0.143
145.00	-2.39	-8.25	0.00	-34.98	0.00	34.98	4498.62	2208.81	5770.96	3571.75	91.27	-5.722	0.000	0.070
149.00	0.00	-7.97	0.00	-1.98	0.00	1.98	4498.17	2208.59	5728.22	3572.84	96.06	-5.740	0.000	0.004

Wind Loading - Shaft

Structure: CT13075-A-SBA
Site Name: New London
Height: 149.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

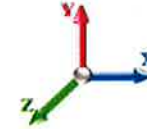
10/3/2016

Page: 12



Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 22

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	22.791	25.07	477.24	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	22.791	25.07	467.57	0.650	0.000	5.00	24.400	15.86	636.2	0.0	1216.9
10.00		1.00	0.85	22.791	25.07	457.91	0.650	0.000	5.00	23.901	15.54	623.2	0.0	1191.8
15.00		1.00	0.85	22.791	25.07	448.24	0.650	0.000	5.00	23.401	15.21	610.1	0.0	1166.7
20.00		1.00	0.90	24.182	26.60	451.77	0.650	0.000	5.00	22.902	14.89	633.6	0.0	1141.6
25.00		1.00	0.95	25.345	27.88	452.31	0.650	0.000	5.00	22.403	14.56	649.6	0.0	1116.6
30.00		1.00	0.98	26.337	28.97	450.69	0.650	0.000	5.00	21.904	14.24	660.0	0.0	1091.5
35.00		1.00	1.01	27.206	29.93	447.50	0.650	0.000	5.00	21.405	13.91	666.2	0.0	1066.4
40.00		1.00	1.04	27.981	30.78	443.13	0.650	0.000	5.00	20.906	13.59	669.2	0.0	1041.3
45.00		1.00	1.07	28.684	31.55	437.81	0.650	0.000	5.00	20.406	13.26	669.6	0.0	1016.2
47.25	Bot - Section 2	1.00	1.08	28.980	31.88	435.16	0.650	0.000	2.25	9.020	5.86	299.0	0.0	449.1
50.00		1.00	1.09	29.327	32.26	431.73	0.650	0.000	2.75	11.062	7.19	371.1	0.0	1014.7
53.25	Top - Section 1	1.00	1.11	29.719	32.69	427.43	0.650	0.000	3.25	12.878	8.37	437.8	0.0	1181.1
55.00		1.00	1.12	29.922	32.91	432.05	0.650	0.000	1.75	6.847	4.45	234.4	0.0	292.5
60.00		1.00	1.14	30.475	33.52	424.85	0.650	0.000	5.00	19.226	12.50	670.3	0.0	821.3
65.00		1.00	1.16	30.993	34.09	417.17	0.650	0.000	5.00	18.727	12.17	664.0	0.0	799.8
70.00		1.00	1.17	31.480	34.63	409.08	0.650	0.000	5.00	18.228	11.85	656.4	0.0	778.3
75.00		1.00	1.19	31.941	35.13	400.62	0.650	0.000	5.00	17.728	11.52	647.8	0.0	756.8
80.00		1.00	1.21	32.377	35.62	391.83	0.650	0.000	5.00	17.229	11.20	638.2	0.0	735.3
85.00		1.00	1.22	32.793	36.07	382.75	0.650	0.000	5.00	16.730	10.87	627.6	0.0	713.8
90.00		1.00	1.24	33.190	36.51	373.39	0.650	0.000	5.00	16.231	10.55	616.3	0.0	692.3
95.00		1.00	1.25	33.570	36.93	363.79	0.650	0.000	5.00	15.732	10.23	604.2	0.0	670.8
96.00	Bot - Section 3	1.00	1.25	33.644	37.01	361.85	0.650	0.000	1.00	3.086	2.01	118.8	0.0	131.6
100.00		1.00	1.27	33.935	37.33	353.97	0.650	0.000	4.00	12.315	8.00	478.1	0.0	869.0
100.75	Top - Section 2	1.00	1.27	33.988	37.39	352.48	0.650	0.000	0.75	2.274	1.48	88.4	0.0	160.4
105.00		1.00	1.28	34.285	37.71	348.96	0.650	0.000	4.25	12.671	8.24	497.0	0.0	361.3
110.00		1.00	1.29	34.623	38.08	338.76	0.650	0.000	5.00	14.446	9.39	572.2	0.0	411.8
115.00		1.00	1.30	34.948	38.44	328.38	0.650	0.000	5.00	13.946	9.07	557.6	0.0	397.5
120.00		1.00	1.32	35.263	38.79	317.84	0.650	0.000	5.00	13.447	8.74	542.5	0.0	383.1
125.00		1.00	1.33	35.567	39.12	307.13	0.650	0.000	5.00	12.948	8.42	526.8	0.0	368.8
127.00	Appurtenance(s)	1.00	1.33	35.686	39.25	302.81	0.650	0.000	2.00	5.039	3.28	205.7	0.0	143.5
130.00		1.00	1.34	35.862	39.45	296.28	0.650	0.000	3.00	7.409	4.82	304.0	0.0	211.0
135.00		1.00	1.35	36.148	39.76	285.29	0.650	0.000	5.00	11.950	7.77	494.2	0.0	340.1
139.00	Top - Section 3	1.00	1.36	36.371	40.01	276.40	0.650	0.000	4.00	9.200	5.98	382.8	0.0	261.8
140.00	Appurtenance(s)	1.00	1.36	36.426	40.07	274.16	0.650	0.000	1.00	2.250	1.46	93.8	0.0	48.1
145.00		1.00	1.37	36.696	40.37	262.91	0.650	0.000	5.00	10.951	7.12	459.7	0.0	234.2
149.00	Appurtenance(s)	1.00	1.38	36.907	40.60	253.83	0.650	0.000	4.00	8.402	5.46	354.7	0.0	179.6
Totals:									149.00			17,961.0		23,456.8

Discrete Appurtenance Forces

Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

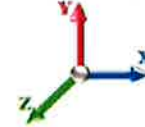


Page: 13

Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 22

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	RRH2x60 700	3	36.907	40.597	1.50	1.00	6.79	137.70	0.000	0.000	441.37	0.00	0.00
2	149.00	LNx-6514DS-VTM	3	36.907	40.597	0.83	1.00	20.34	104.76	0.000	0.000	1321.42	0.00	0.00
3	149.00	BXA-80063/4CF	3	36.907	40.597	0.72	1.00	10.20	26.73	0.000	0.000	662.24	0.00	0.00
4	149.00	SBNHH-1D65B	3	36.907	40.597	0.83	1.00	20.12	109.62	0.000	0.000	1306.86	0.00	0.00
5	149.00	SBNHH-1D65B	3	36.985	40.683	0.83	1.00	20.32	108.00	0.000	1.500	1322.58	0.00	1983.88
6	149.00	Low Profile	1	36.907	40.597	1.00	1.00	22.00	1350.00	0.000	0.000	1429.03	0.00	0.00
7	149.00	RRH 4X45 AWS	3	36.907	40.597	0.80	1.00	6.24	172.80	0.000	0.000	405.32	0.00	0.00
8	149.00	RRH 2X60W-1900MHz	3	36.907	40.597	0.84	1.00	4.74	124.20	0.000	0.000	307.73	0.00	0.00
9	149.00	DB-T1-6Z-8AB-0Z	1	36.907	40.597	0.67	1.00	3.22	17.01	0.000	0.000	208.90	0.00	0.00
10	149.00	DB-T1-6Z-8AB-0Z	1	36.907	40.597	0.67	1.00	3.22	17.01	0.000	0.000	208.90	0.00	0.00
11	140.00	Low Profile	1	36.426	40.068	1.00	1.00	22.00	1350.00	0.000	0.000	1410.41	0.00	0.00
12	140.00	KRY 112 144 T	3	36.426	40.068	0.56	0.80	0.69	29.70	0.000	0.000	44.16	0.00	0.00
13	140.00	AIR B4A B2P	3	36.426	40.068	0.69	0.80	12.57	244.08	0.000	0.000	805.84	0.00	0.00
14	140.00	AIR B2A B4P	3	36.426	40.068	0.69	0.80	12.57	247.05	0.000	0.000	805.84	0.00	0.00
15	127.00	MTC3607 Platform + HR	1	35.686	39.255	1.00	1.00	51.70	2021.40	0.000	0.000	3247.15	0.00	0.00
16	127.00	DC6-48-60-18-8F	4	35.686	39.255	0.80	0.80	2.94	114.48	0.000	0.000	184.91	0.00	0.00
17	127.00	RRUS A2	6	35.686	39.255	0.50	0.80	5.54	114.48	0.000	0.000	347.66	0.00	0.00
18	127.00	RRUS E2	3	35.686	39.255	0.60	0.80	4.86	162.00	0.000	0.000	305.24	0.00	0.00
19	127.00	RRUS 32	3	35.686	39.255	0.56	0.80	2.77	207.90	0.000	0.000	174.10	0.00	0.00
20	127.00	RRUS 12	6	35.686	39.255	0.60	0.80	9.72	324.00	0.000	0.000	610.49	0.00	0.00
21	127.00	RRUS 11	9	35.686	39.255	0.57	0.80	12.88	410.67	0.000	0.000	809.10	0.00	0.00
22	127.00	HPA-65R-BUU-8H	12	35.686	39.255	0.63	0.80	98.44	734.40	0.000	0.000	6182.79	0.00	0.00
Totals:									8,127.99			22,542.03		

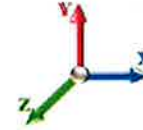
Total Applied Force Summary

Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 14
	Struct Class: II	



Load Case: 0.9D + 1.6W 105 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 22

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		636.17	1354.75	0.00	0.00
10.00		623.16	1329.66	0.00	0.00
15.00		610.14	1304.57	0.00	0.00
20.00		633.58	1279.48	0.00	0.00
25.00		649.58	1254.40	0.00	0.00
30.00		659.95	1229.31	0.00	0.00
35.00		666.19	1204.22	0.00	0.00
40.00		669.20	1179.14	0.00	0.00
45.00		669.62	1154.05	0.00	0.00
47.25		299.04	511.14	0.00	0.00
50.00		371.12	1090.55	0.00	0.00
53.25		437.83	1270.67	0.00	0.00
55.00		234.38	340.79	0.00	0.00
60.00		670.28	959.17	0.00	0.00
65.00		663.97	937.67	0.00	0.00
70.00		656.43	916.17	0.00	0.00
75.00		647.80	894.67	0.00	0.00
80.00		638.17	873.16	0.00	0.00
85.00		627.64	851.66	0.00	0.00
90.00		616.28	830.16	0.00	0.00
95.00		604.17	808.65	0.00	0.00
96.00		118.79	159.15	0.00	0.00
100.00		478.10	979.23	0.00	0.00
100.75		88.40	181.05	0.00	0.00
105.00		497.00	478.46	0.00	0.00
110.00		572.17	549.63	0.00	0.00
115.00		557.59	535.30	0.00	0.00
120.00		542.47	520.96	0.00	0.00
125.00		526.84	506.63	0.00	0.00
127.00	(44) attachments	12067.17	4287.97	0.00	0.00
130.00		303.98	284.45	0.00	0.00
135.00		494.16	462.61	0.00	0.00
139.00		382.81	359.77	0.00	0.00
140.00	(10) attachments	3160.01	1943.45	0.00	0.00
145.00		459.74	300.22	0.00	0.00
149.00	(24) attachments	7969.08	2400.26	0.00	1983.88
	Totals:	40,502.99	35,523.19	0.00	1,983.88

Calculated Forces

Structure: CT13075-A-SBA
Site Name: New London
Height: 149.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

10/3/2016

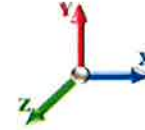
Page: 15



Load Case: 0.9D + 1.6W 105 mph Wind

Iterations 22

Dead Load Factor 0.90
Wind Load Factor 1.60



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-35.46	-40.56	0.00	-4478.3	0.00	4478.30	5451.60	2725.80	12956.4	6487.84	0.00	0.000	0.000	0.697
5.00	-33.97	-40.03	0.00	-4275.5	0.00	4275.50	5379.95	2689.97	12523.2	6270.95	0.10	-0.184	0.000	0.688
10.00	-32.52	-39.51	0.00	-4075.3	0.00	4075.34	5306.65	2653.32	12093.3	6055.68	0.39	-0.370	0.000	0.679
15.00	-31.09	-38.99	0.00	-3877.7	0.00	3877.79	5231.70	2615.85	11666.9	5842.16	0.88	-0.559	0.000	0.670
20.00	-29.69	-38.44	0.00	-3682.8	0.00	3682.83	5155.10	2577.55	11244.2	5630.50	1.57	-0.750	0.000	0.660
25.00	-28.31	-37.87	0.00	-3490.6	0.00	3490.61	5076.86	2538.43	10825.5	5420.83	2.46	-0.945	0.000	0.650
30.00	-26.97	-37.28	0.00	-3301.2	0.00	3301.25	4996.96	2498.48	10411.0	5213.26	3.56	-1.141	0.000	0.639
35.00	-25.65	-36.68	0.00	-3114.8	0.00	3114.83	4915.42	2457.71	10001.0	5007.93	4.86	-1.340	0.000	0.627
40.00	-24.36	-36.07	0.00	-2931.4	0.00	2931.43	4832.22	2416.11	9595.63	4804.95	6.37	-1.542	0.000	0.615
45.00	-23.14	-35.43	0.00	-2751.0	0.00	2751.08	4747.38	2373.69	9195.21	4604.44	8.09	-1.745	0.000	0.603
47.25	-22.57	-35.15	0.00	-2671.3	0.00	2671.37	4708.66	2354.33	9016.69	4515.05	8.94	-1.839	0.000	0.597
50.00	-21.42	-34.79	0.00	-2574.7	0.00	2574.70	4660.89	2330.44	8799.96	4406.52	10.03	-1.954	0.000	0.589
53.25	-20.10	-34.35	0.00	-2461.6	0.00	2461.63	3818.32	1909.16	7226.08	3618.41	11.41	-2.090	0.000	0.686
55.00	-19.68	-34.15	0.00	-2401.5	0.00	2401.52	3795.26	1897.63	7117.54	3564.06	12.19	-2.165	0.000	0.679
60.00	-18.61	-33.52	0.00	-2230.7	0.00	2230.75	3728.27	1864.14	6809.75	3409.94	14.58	-2.395	0.000	0.660
65.00	-17.57	-32.89	0.00	-2063.1	0.00	2063.15	3659.63	1829.82	6505.57	3257.62	17.22	-2.626	0.000	0.638
70.00	-16.56	-32.25	0.00	-1898.7	0.00	1898.71	3589.34	1794.67	6205.25	3107.24	20.09	-2.857	0.000	0.616
75.00	-15.57	-31.62	0.00	-1737.4	0.00	1737.44	3517.40	1758.70	5909.03	2958.91	23.20	-3.087	0.000	0.592
80.00	-14.61	-31.00	0.00	-1579.3	0.00	1579.32	3443.81	1721.91	5617.15	2812.75	26.56	-3.316	0.000	0.566
85.00	-13.68	-30.37	0.00	-1424.3	0.00	1424.34	3368.58	1684.29	5329.85	2668.89	30.15	-3.542	0.000	0.538
90.00	-12.78	-29.75	0.00	-1272.4	0.00	1272.48	3291.69	1645.84	5047.37	2527.44	33.98	-3.764	0.000	0.508
95.00	-11.94	-29.12	0.00	-1123.7	0.00	1123.71	3202.59	1601.29	4754.28	2380.67	38.04	-3.981	0.000	0.476
96.00	-11.74	-29.02	0.00	-1094.5	0.00	1094.59	3181.72	1590.86	4692.22	2349.60	38.88	-4.025	0.000	0.470
100.00	-10.75	-28.49	0.00	-978.53	0.00	978.53	3098.26	1549.13	4448.03	2227.32	42.32	-4.193	0.000	0.443
100.75	-10.52	-28.40	0.00	-957.16	0.00	957.16	1860.42	930.21	2714.89	1359.46	42.98	-4.225	0.000	0.711
105.00	-9.98	-27.91	0.00	-836.44	0.00	836.44	1828.32	914.16	2592.13	1297.99	46.82	-4.395	0.000	0.651
110.00	-9.35	-27.34	0.00	-696.88	0.00	696.88	1789.04	894.52	2449.03	1226.33	51.56	-4.661	0.000	0.574
115.00	-8.76	-26.77	0.00	-560.19	0.00	560.19	1748.11	874.06	2307.59	1155.51	56.57	-4.902	0.000	0.491
120.00	-8.20	-26.22	0.00	-426.31	0.00	426.31	1705.53	852.77	2168.05	1085.64	61.82	-5.113	0.000	0.398
125.00	-7.69	-25.66	0.00	-295.24	0.00	295.24	1661.30	830.65	2030.66	1016.84	67.27	-5.286	0.000	0.296
127.00	-4.53	-13.25	0.00	-243.92	0.00	243.92	1643.15	821.58	1976.36	989.65	69.49	-5.344	0.000	0.249
130.00	-4.25	-12.93	0.00	-204.16	0.00	204.16	1615.43	807.71	1895.65	949.24	72.87	-5.420	0.000	0.218
135.00	-3.82	-12.40	0.00	-139.50	0.00	139.50	1567.90	783.95	1763.28	882.95	78.60	-5.524	0.000	0.161
139.00	-3.49	-11.99	0.00	-89.90	0.00	89.90	1528.69	764.34	1659.43	830.95	83.25	-5.588	0.000	0.111
139.00	-3.49	-11.99	0.00	-89.90	0.00	89.90	1044.31	522.16	1138.99	570.34	83.25	-5.588	0.000	0.162
140.00	-1.86	-8.65	0.00	-77.92	0.00	77.92	1038.69	519.35	1122.71	562.19	84.42	-5.601	0.000	0.141
145.00	-1.60	-8.17	0.00	-34.65	0.00	34.65	1009.62	504.81	1041.96	521.75	90.31	-5.659	0.000	0.068
149.00	0.00	-7.97	0.00	-1.98	0.00	1.98	985.17	492.59	978.22	489.84	95.06	-5.677	0.000	0.004

Wind Loading - Shaft

Structure: CT13075-A-SBA
Site Name: New London
Height: 149.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

10/3/2016

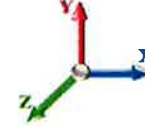
Page: 16



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

Iterations 21

Dead Load Factor 1.20
Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.242	5.00	25.435	30.52	173.5	453.8	2076.3
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	5.00	25.010	30.01	170.6	477.3	2066.4
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.386	5.00	24.557	29.47	167.5	487.2	2042.9
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	5.00	24.091	28.91	174.4	491.3	2013.5
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.459	5.00	23.619	28.34	179.2	491.8	1980.6
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	5.00	23.142	27.77	182.4	490.2	1945.5
35.00		1.00	1.01	6.169	6.79	0.00	1.200	1.509	5.00	22.662	27.19	184.5	486.8	1908.7
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	5.00	22.180	26.62	185.8	482.3	1870.7
45.00		1.00	1.07	6.504	7.15	0.00	1.200	1.547	5.00	21.696	26.03	186.3	476.7	1831.7
47.25 Bot - Section 2		1.00	1.08	6.571	7.23	0.00	1.200	1.555	2.25	9.603	11.52	83.3	213.3	812.1
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	2.75	11.778	14.13	103.4	262.7	1615.7
53.25 Top - Section 1		1.00	1.11	6.739	7.41	0.00	1.200	1.574	3.25	13.731	16.48	122.1	307.6	1882.4
55.00		1.00	1.12	6.785	7.46	0.00	1.200	1.579	1.75	7.307	8.77	65.4	164.8	554.8
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	5.00	20.553	24.66	187.5	463.2	1558.3
65.00		1.00	1.16	7.028	7.73	0.00	1.200	1.605	5.00	20.065	24.08	186.1	455.2	1521.7
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	5.00	19.575	23.49	184.4	446.8	1484.5
75.00		1.00	1.19	7.243	7.97	0.00	1.200	1.628	5.00	19.085	22.90	182.5	437.9	1447.0
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	5.00	18.595	22.31	180.2	428.7	1409.2
85.00		1.00	1.22	7.436	8.18	0.00	1.200	1.649	5.00	18.104	21.72	177.7	419.3	1371.0
90.00		1.00	1.24	7.526	8.28	0.00	1.200	1.658	5.00	17.613	21.14	175.0	409.5	1332.6
95.00		1.00	1.25	7.612	8.37	0.00	1.200	1.667	5.00	17.121	20.55	172.0	399.5	1293.9
96.00 Bot - Section 3		1.00	1.25	7.629	8.39	0.00	1.200	1.669	1.00	3.365	4.04	33.9	79.5	254.9
100.00		1.00	1.27	7.695	8.46	0.00	1.200	1.676	4.00	13.433	16.12	136.4	315.6	1474.2
100.75 Top - Section 2		1.00	1.27	7.707	8.48	0.00	1.200	1.677	0.75	2.483	2.98	25.3	58.9	272.8
105.00		1.00	1.28	7.774	8.55	0.00	1.200	1.684	4.25	13.864	16.64	142.3	326.4	808.2
110.00		1.00	1.29	7.851	8.64	0.00	1.200	1.692	5.00	15.856	19.03	164.3	373.4	922.5
115.00		1.00	1.30	7.925	8.72	0.00	1.200	1.699	5.00	15.363	18.44	160.7	362.6	892.5
120.00		1.00	1.32	7.996	8.80	0.00	1.200	1.707	5.00	14.870	17.84	156.9	351.6	862.4
125.00		1.00	1.33	8.065	8.87	0.00	1.200	1.714	5.00	14.376	17.25	153.0	340.4	832.2
127.00 Appurtenance(s)		1.00	1.33	8.092	8.90	0.00	1.200	1.716	2.00	5.612	6.73	59.9	134.4	325.7
130.00		1.00	1.34	8.132	8.95	0.00	1.200	1.720	3.00	8.270	9.92	88.8	197.5	478.7
135.00		1.00	1.35	8.197	9.02	0.00	1.200	1.727	5.00	13.389	16.07	144.9	317.7	771.2
139.00 Top - Section 3		1.00	1.36	8.247	9.07	0.00	1.200	1.732	4.00	10.355	12.43	112.7	246.7	595.8
140.00 Appurtenance(s)		1.00	1.36	8.260	9.09	0.00	1.200	1.733	1.00	2.539	3.05	27.7	61.2	125.4
145.00		1.00	1.37	8.321	9.15	0.00	1.200	1.739	5.00	12.401	14.88	136.2	294.4	606.6
149.00 Appurtenance(s)		1.00	1.38	8.369	9.21	0.00	1.200	1.744	4.00	9.564	11.48	105.7	227.9	467.4
Totals:									149.00			5,072.7	43,709.9	

Discrete Appurtenance Forces

Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 17

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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 21

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	RRH2x60 700	3	8.369	9.206	1.47	1.00	8.54	484.10	0.000	0.000	78.61	0.00	0.00
2	149.00	LNx-6514DS-VTM	3	8.369	9.206	0.83	1.00	27.37	516.73	0.000	0.000	251.95	0.00	0.00
3	149.00	BXA-80063/4CF	3	8.369	9.206	0.72	1.00	14.19	250.84	0.000	0.000	130.59	0.00	0.00
4	149.00	SBNHH-1D65B	3	8.369	9.206	0.83	1.00	23.33	750.50	0.000	0.000	214.81	0.00	0.00
5	149.00	SBNHH-1D65B	3	8.387	9.225	0.83	1.00	23.55	752.91	0.000	1.500	217.28	0.00	325.92
6	149.00	Low Profile	1	8.369	9.206	1.00	1.00	39.65	2808.04	0.000	0.000	365.01	0.00	0.00
7	149.00	RRH 4X45 AWS	3	8.369	9.206	0.80	1.00	7.93	480.95	0.000	0.000	72.99	0.00	0.00
8	149.00	RRH 2X60W-1900MHz	3	8.369	9.206	0.84	1.00	6.21	372.75	0.000	0.000	57.20	0.00	0.00
9	149.00	DB-T1-6Z-8AB-0Z	1	8.369	9.206	0.67	1.00	3.80	166.29	0.000	0.000	34.99	0.00	0.00
10	149.00	DB-T1-6Z-8AB-0Z	1	8.369	9.206	0.67	1.00	3.80	166.29	0.000	0.000	34.99	0.00	0.00
11	140.00	Low Profile	1	8.260	9.086	1.00	1.00	39.54	2799.91	0.000	0.000	359.25	0.00	0.00
12	140.00	KRY 112 144 T	3	8.260	9.086	0.56	0.80	1.48	62.42	0.000	0.000	13.46	0.00	0.00
13	140.00	AIR B4A B2P	3	8.260	9.086	0.69	0.80	14.82	827.95	0.000	0.000	134.63	0.00	0.00
14	140.00	AIR B2A B4P	3	8.260	9.086	0.69	0.80	14.82	831.91	0.000	0.000	134.63	0.00	0.00
15	127.00	MTC3607 Platform + HR	1	8.092	8.901	1.00	1.00	89.33	4775.24	0.000	0.000	795.11	0.00	0.00
16	127.00	DC6-48-60-18-8F	4	8.092	8.901	0.80	0.80	4.32	325.06	0.000	0.000	38.48	0.00	0.00
17	127.00	RRUS A2	6	8.092	8.901	0.50	0.80	8.39	304.53	0.000	0.000	74.64	0.00	0.00
18	127.00	RRUS E2	3	8.092	8.901	0.60	0.80	6.77	371.63	0.000	0.000	60.22	0.00	0.00
19	127.00	RRUS 32	3	8.092	8.901	0.56	0.80	3.73	419.49	0.000	0.000	33.19	0.00	0.00
20	127.00	RRUS 12	6	8.092	8.901	0.60	0.80	12.06	733.26	0.000	0.000	107.31	0.00	0.00
21	127.00	RRUS 11	9	8.092	8.901	0.57	0.80	16.15	1334.12	0.000	0.000	143.78	0.00	0.00
22	127.00	HPA-65R-BUU-8H	12	8.092	8.901	0.63	0.80	110.48	4404.75	0.000	0.000	983.38	0.00	0.00
Totals:									23,939.67			4,336.48		

Total Applied Force Summary

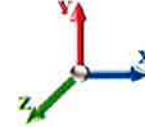
Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 18

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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 21

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		173.51	2260.13	0.00	0.00
10.00		170.61	2250.14	0.00	0.00
15.00		167.52	2226.66	0.00	0.00
20.00		174.38	2197.24	0.00	0.00
25.00		179.18	2164.38	0.00	0.00
30.00		182.43	2129.24	0.00	0.00
35.00		184.54	2092.46	0.00	0.00
40.00		185.76	2054.44	0.00	0.00
45.00		186.27	2015.44	0.00	0.00
47.25		83.30	894.79	0.00	0.00
50.00		103.39	1716.81	0.00	0.00
53.25		122.14	2001.84	0.00	0.00
55.00		65.45	619.15	0.00	0.00
60.00		187.48	1742.13	0.00	0.00
65.00		186.13	1705.44	0.00	0.00
70.00		184.45	1668.31	0.00	0.00
75.00		182.46	1630.81	0.00	0.00
80.00		180.21	1592.96	0.00	0.00
85.00		177.70	1554.81	0.00	0.00
90.00		174.98	1516.38	0.00	0.00
95.00		172.04	1477.69	0.00	0.00
96.00		33.88	291.69	0.00	0.00
100.00		136.44	1621.23	0.00	0.00
100.75		25.26	300.34	0.00	0.00
105.00		142.28	964.39	0.00	0.00
110.00		164.32	1106.26	0.00	0.00
115.00		160.70	1076.33	0.00	0.00
120.00		156.94	1046.22	0.00	0.00
125.00		153.05	1015.94	0.00	0.00
127.00	(44) attachments	2296.03	13067.29	0.00	0.00
130.00		88.77	576.74	0.00	0.00
135.00		144.86	934.49	0.00	0.00
139.00		112.73	726.42	0.00	0.00
140.00	(10) attachments	669.66	4680.23	0.00	0.00
145.00		136.21	694.66	0.00	0.00
149.00	(24) attachments	1564.06	7287.24	0.00	325.92
	Totals:	9,409.14	72,900.73	0.00	325.92

Calculated Forces

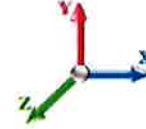
Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 19
	Struct Class: II	



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

Iterations 21

Dead Load Factor 1.20
Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-72.90	-9.44	0.00	-1023.2	0.00	1023.20	5451.60	2725.80	12956.4	6487.84	0.00	0.000	0.000	0.171
5.00	-70.63	-9.31	0.00	-976.02	0.00	976.02	5379.95	2689.97	12523.2	6270.95	0.02	-0.042	0.000	0.169
10.00	-68.37	-9.19	0.00	-929.46	0.00	929.46	5306.65	2653.32	12093.3	6055.68	0.09	-0.084	0.000	0.166
15.00	-66.14	-9.07	0.00	-883.50	0.00	883.50	5231.70	2615.85	11666.9	5842.16	0.20	-0.128	0.000	0.164
20.00	-63.94	-8.94	0.00	-838.15	0.00	838.15	5155.10	2577.55	11244.2	5630.50	0.36	-0.171	0.000	0.161
25.00	-61.77	-8.80	0.00	-793.46	0.00	793.46	5076.86	2538.43	10825.5	5420.83	0.56	-0.215	0.000	0.159
30.00	-59.63	-8.66	0.00	-749.46	0.00	749.46	4996.96	2498.48	10411.0	5213.26	0.81	-0.260	0.000	0.156
35.00	-57.53	-8.51	0.00	-706.18	0.00	706.18	4915.42	2457.71	10001.0	5007.93	1.11	-0.305	0.000	0.153
40.00	-55.47	-8.35	0.00	-663.65	0.00	663.65	4832.22	2416.11	9595.63	4804.95	1.45	-0.351	0.000	0.150
45.00	-53.45	-8.19	0.00	-621.88	0.00	621.88	4747.38	2373.69	9195.21	4604.44	1.84	-0.397	0.000	0.146
47.25	-52.56	-8.12	0.00	-603.47	0.00	603.47	4708.66	2354.33	9016.69	4515.05	2.04	-0.418	0.000	0.145
50.00	-50.84	-8.03	0.00	-581.15	0.00	581.15	4660.89	2330.44	8799.96	4406.52	2.28	-0.444	0.000	0.143
53.25	-48.83	-7.91	0.00	-555.06	0.00	555.06	3818.32	1909.16	7226.08	3618.41	2.60	-0.475	0.000	0.166
55.00	-48.21	-7.87	0.00	-541.23	0.00	541.23	3795.26	1897.63	7117.54	3564.06	2.78	-0.492	0.000	0.165
60.00	-46.46	-7.71	0.00	-501.89	0.00	501.89	3728.27	1864.14	6809.75	3409.94	3.32	-0.543	0.000	0.160
65.00	-44.75	-7.54	0.00	-463.37	0.00	463.37	3659.63	1829.82	6505.57	3257.62	3.92	-0.595	0.000	0.154
70.00	-43.08	-7.38	0.00	-425.66	0.00	425.66	3589.34	1794.67	6205.25	3107.24	4.57	-0.647	0.000	0.149
75.00	-41.44	-7.21	0.00	-388.76	0.00	388.76	3517.40	1758.70	5909.03	2958.91	5.27	-0.699	0.000	0.143
80.00	-39.85	-7.05	0.00	-352.69	0.00	352.69	3443.81	1721.91	5617.15	2812.75	6.03	-0.750	0.000	0.137
85.00	-38.29	-6.88	0.00	-317.44	0.00	317.44	3368.58	1684.29	5329.85	2668.89	6.84	-0.800	0.000	0.130
90.00	-36.77	-6.72	0.00	-283.02	0.00	283.02	3291.69	1645.84	5047.37	2527.44	7.71	-0.850	0.000	0.123
95.00	-35.29	-6.54	0.00	-249.43	0.00	249.43	3202.59	1601.29	4754.28	2380.67	8.63	-0.898	0.000	0.116
96.00	-35.00	-6.52	0.00	-242.89	0.00	242.89	3181.72	1590.86	4692.22	2349.60	8.81	-0.908	0.000	0.114
100.00	-33.38	-6.37	0.00	-216.82	0.00	216.82	3098.26	1549.13	4448.03	2227.32	9.59	-0.945	0.000	0.108
100.75	-33.07	-6.35	0.00	-212.04	0.00	212.04	1860.42	930.21	2714.89	1359.46	9.74	-0.952	0.000	0.174
105.00	-32.11	-6.22	0.00	-185.05	0.00	185.05	1828.32	914.16	2592.13	1297.99	10.61	-0.990	0.000	0.160
110.00	-31.00	-6.07	0.00	-153.95	0.00	153.95	1789.04	894.52	2449.03	1226.33	11.67	-1.048	0.000	0.143
115.00	-29.92	-5.91	0.00	-123.62	0.00	123.62	1748.11	874.06	2307.59	1155.51	12.80	-1.102	0.000	0.124
120.00	-28.87	-5.76	0.00	-94.06	0.00	94.06	1705.53	852.77	2168.05	1085.64	13.98	-1.148	0.000	0.104
125.00	-27.86	-5.59	0.00	-65.29	0.00	65.29	1661.30	830.65	2030.66	1016.84	15.21	-1.186	0.000	0.081
127.00	-14.84	-3.03	0.00	-54.10	0.00	54.10	1643.15	821.58	1976.36	989.65	15.71	-1.199	0.000	0.064
130.00	-14.26	-2.93	0.00	-45.01	0.00	45.01	1615.43	807.71	1895.65	949.24	16.47	-1.216	0.000	0.056
135.00	-13.33	-2.77	0.00	-30.34	0.00	30.34	1567.90	783.95	1763.28	882.95	17.75	-1.239	0.000	0.043
139.00	-12.61	-2.65	0.00	-19.25	0.00	19.25	1528.69	764.34	1659.43	830.95	18.80	-1.253	0.000	0.031
139.00	-12.61	-2.65	0.00	-19.25	0.00	19.25	1044.31	522.16	1138.99	570.34	18.80	-1.253	0.000	0.046
140.00	-7.94	-1.88	0.00	-16.60	0.00	16.60	1038.69	519.35	1122.71	562.19	19.06	-1.255	0.000	0.037
145.00	-7.25	-1.73	0.00	-7.23	0.00	7.23	1009.62	504.81	1041.96	521.75	20.38	-1.268	0.000	0.021
149.00	0.00	-1.56	0.00	-0.33	0.00	0.33	985.17	492.59	978.22	489.84	21.45	-1.271	0.000	0.001

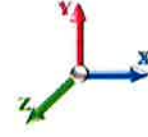
Seismic Segment Forces (Factored)

Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 20
	Struct Class: II	



Load Case: 1.2D + 1.0E

Gust Response Factor	1.10	Sds	0.17	Iterations	20
Dead Load Factor	1.20	Seismic Load Factor	1.00	Ss	0.16
Wind Load Factor	0.00	Structure Frequency	0.41	S1	0.06
		SA	0.04	Seismic Importance Factor	1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1352.1	0.00	0.03	0.02	19.69	
10.00		1324.2	0.01	0.05	0.03	28.64	
15.00		1296.3	0.02	0.06	0.04	32.72	
20.00		1268.5	0.03	0.07	0.04	34.45	
25.00		1240.6	0.05	0.07	0.04	35.10	
30.00		1212.7	0.08	0.07	0.04	35.33	
35.00		1184.8	0.10	0.07	0.04	35.42	
40.00		1157.0	0.14	0.07	0.03	35.41	
45.00		1129.1	0.17	0.07	0.03	35.11	
47.25	Bot - Section 2	499.01	0.19	0.06	0.02	15.55	
50.00		1127.4	0.21	0.06	0.02	35.02	
53.25	Top - Section 1	1312.3	0.24	0.06	0.02	40.08	
55.00		325.05	0.26	0.05	0.02	9.77	
60.00		912.60	0.31	0.04	0.01	25.16	
65.00		888.71	0.36	0.03	0.01	20.54	
70.00		864.82	0.42	0.01	0.01	14.18	
75.00		840.92	0.48	-0.01	0.01	6.37	
80.00		817.03	0.54	-0.03	0.01	-2.03	
85.00		793.14	0.62	-0.06	0.02	-9.79	
90.00		769.25	0.69	-0.08	0.03	-15.63	
95.00		745.35	0.77	-0.11	0.05	-18.65	
96.00	Bot - Section 3	146.20	0.78	-0.11	0.05	-3.73	
100.00		965.51	0.85	-0.12	0.07	-24.70	
100.75	Top - Section 2	178.20	0.86	-0.12	0.07	-4.50	
105.00		401.45	0.94	-0.12	0.10	-8.67	
110.00		457.56	1.03	-0.10	0.15	-5.90	
115.00		441.63	1.13	-0.05	0.20	0.24	
120.00		425.70	1.23	0.03	0.27	7.98	
125.00		409.77	1.33	0.16	0.36	17.09	
127.00	Appurtenance(s)	4703.1	1.37	0.23	0.40	245.63	
130.00		234.39	1.44	0.36	0.47	16.29	
135.00		377.91	1.55	0.64	0.61	38.61	
139.00	Top - Section 3	290.86	1.64	0.92	0.73	38.36	
140.00	Appurtenance(s)	2132.1	1.67	1.01	0.77	298.10	
145.00		260.18	1.79	1.49	0.96	47.49	
149.00	Appurtenance(s)	2608.2	1.89	1.98	1.14	575.00	
Totals:		35,094.2				1,649.7	Total Wind: 40,503.0

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

Calculated Forces

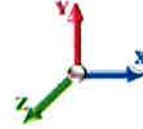
Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 21

Load Case: 1.2D + 1.0E

Gust Response Factor 1.10	Sds 0.17	Iterations 20
Dead Load Factor 1.20	Seismic Load Factor 1.00	Ss 0.16
Wind Load Factor 0.00	Structure Frequency 0.41	S1 0.06
	SA 0.04	Seismic Importance Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-47.36	-1.75	0.00	-205.19	0.00	205.19	5451.60	2725.80	12956.4	6487.84	0.00	0.00	0.00	0.040
5.00	-45.56	-1.73	0.00	-196.46	0.00	196.46	5379.95	2689.97	12523.2	6270.95	0.00	-0.01	0.040	
10.00	-43.78	-1.71	0.00	-187.79	0.00	187.79	5306.65	2653.32	12093.3	6055.68	0.02	-0.02	0.039	
15.00	-42.04	-1.68	0.00	-179.24	0.00	179.24	5231.70	2615.85	11666.9	5842.16	0.04	-0.03	0.039	
20.00	-40.34	-1.65	0.00	-170.82	0.00	170.82	5155.10	2577.55	11244.2	5630.50	0.07	-0.03	0.038	
25.00	-38.67	-1.62	0.00	-162.54	0.00	162.54	5076.86	2538.43	10825.5	5420.83	0.11	-0.04	0.038	
30.00	-37.03	-1.59	0.00	-154.42	0.00	154.42	4996.96	2498.48	10411.0	5213.26	0.16	-0.05	0.037	
35.00	-35.42	-1.56	0.00	-146.45	0.00	146.45	4915.42	2457.71	10001.0	5007.93	0.22	-0.06	0.036	
40.00	-33.85	-1.53	0.00	-138.63	0.00	138.63	4832.22	2416.11	9595.63	4804.95	0.29	-0.07	0.036	
45.00	-32.31	-1.50	0.00	-130.98	0.00	130.98	4747.38	2373.69	9195.21	4604.44	0.37	-0.08	0.035	
47.25	-31.63	-1.48	0.00	-127.61	0.00	127.61	4708.66	2354.33	9016.69	4515.05	0.41	-0.09	0.035	
50.00	-30.17	-1.45	0.00	-123.52	0.00	123.52	4660.89	2330.44	8799.96	4406.52	0.46	-0.09	0.035	
53.25	-28.48	-1.41	0.00	-118.81	0.00	118.81	3818.32	1909.16	7226.08	3618.41	0.53	-0.10	0.040	
55.00	-28.02	-1.40	0.00	-116.34	0.00	116.34	3795.26	1897.63	7117.54	3564.06	0.57	-0.10	0.040	
60.00	-26.75	-1.38	0.00	-109.33	0.00	109.33	3728.27	1864.14	6809.75	3409.94	0.68	-0.11	0.039	
65.00	-25.50	-1.36	0.00	-102.42	0.00	102.42	3659.63	1829.82	6505.57	3257.62	0.80	-0.12	0.038	
70.00	-24.27	-1.35	0.00	-95.61	0.00	95.61	3589.34	1794.67	6205.25	3107.24	0.94	-0.14	0.038	
75.00	-23.08	-1.35	0.00	-88.86	0.00	88.86	3517.40	1758.70	5909.03	2958.91	1.09	-0.15	0.037	
80.00	-21.92	-1.35	0.00	-82.13	0.00	82.13	3443.81	1721.91	5617.15	2812.75	1.25	-0.16	0.036	
85.00	-20.78	-1.35	0.00	-75.39	0.00	75.39	3368.58	1684.29	5329.85	2668.89	1.42	-0.17	0.034	
90.00	-19.67	-1.35	0.00	-68.65	0.00	68.65	3291.69	1645.84	5047.37	2527.44	1.61	-0.18	0.033	
95.00	-18.59	-1.35	0.00	-61.90	0.00	61.90	3202.59	1601.29	4754.28	2380.67	1.80	-0.19	0.032	
96.00	-18.38	-1.35	0.00	-60.55	0.00	60.55	3181.72	1590.86	4692.22	2349.60	1.84	-0.20	0.032	
100.00	-17.08	-1.35	0.00	-55.16	0.00	55.16	3098.26	1549.13	4448.03	2227.32	2.01	-0.21	0.030	
100.75	-16.83	-1.35	0.00	-54.15	0.00	54.15	1860.42	930.21	2714.89	1359.46	2.05	-0.21	0.049	
105.00	-16.20	-1.35	0.00	-48.42	0.00	48.42	1828.32	914.16	2592.13	1297.99	2.24	-0.22	0.046	
110.00	-15.46	-1.35	0.00	-41.68	0.00	41.68	1789.04	894.52	2449.03	1226.33	2.47	-0.23	0.043	
115.00	-14.75	-1.35	0.00	-34.93	0.00	34.93	1748.11	874.06	2307.59	1155.51	2.73	-0.25	0.039	
120.00	-14.05	-1.34	0.00	-28.18	0.00	28.18	1705.53	852.77	2168.05	1085.64	2.99	-0.26	0.034	
125.00	-13.38	-1.32	0.00	-21.47	0.00	21.47	1661.30	830.65	2030.66	1016.84	3.27	-0.27	0.029	
127.00	-7.66	-1.05	0.00	-18.82	0.00	18.82	1643.15	821.58	1976.36	989.65	3.39	-0.28	0.024	
130.00	-7.28	-1.03	0.00	-15.67	0.00	15.67	1615.43	807.71	1895.65	949.24	3.57	-0.28	0.021	
135.00	-6.67	-0.99	0.00	-10.50	0.00	10.50	1567.90	783.95	1763.28	882.95	3.87	-0.29	0.016	
139.00	-6.19	-0.95	0.00	-6.53	0.00	6.53	1528.69	764.34	1659.43	830.95	4.11	-0.30	0.012	
139.00	-6.19	-0.95	0.00	-6.53	0.00	6.53	1044.31	522.16	1138.99	570.34	4.11	-0.30	0.017	
140.00	-3.60	-0.64	0.00	-5.57	0.00	5.57	1038.69	519.35	1122.71	562.19	4.18	-0.30	0.013	
145.00	-3.20	-0.59	0.00	-2.37	0.00	2.37	1009.62	504.81	1041.96	521.75	4.49	-0.30	0.008	
149.00	0.00	-0.57	0.00	0.00	0.00	0.00	985.17	492.59	978.22	489.84	4.74	-0.30	0.000	

Seismic Segment Forces (Factored)

Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 22

Load Case: 0.9D + 1.0E

Gust Response Factor	1.10	Sds	0.17		Iterations	20
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1	Ss	0.16
Wind Load Factor	0.00	Structure Frequency	0.41	SA	S1	0.06
				Seismic Importance Factor		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1352.1	0.00	0.03	0.02	19.69	
10.00		1324.2	0.01	0.05	0.03	28.64	
15.00		1296.3	0.02	0.06	0.04	32.72	
20.00		1268.5	0.03	0.07	0.04	34.45	
25.00		1240.6	0.05	0.07	0.04	35.10	
30.00		1212.7	0.08	0.07	0.04	35.33	
35.00		1184.8	0.10	0.07	0.04	35.42	
40.00		1157.0	0.14	0.07	0.03	35.41	
45.00		1129.1	0.17	0.07	0.03	35.11	
47.25	Bot - Section 2	499.01	0.19	0.06	0.02	15.55	
50.00		1127.4	0.21	0.06	0.02	35.02	
53.25	Top - Section 1	1312.3	0.24	0.06	0.02	40.08	
55.00		325.05	0.26	0.05	0.02	9.77	
60.00		912.60	0.31	0.04	0.01	25.16	
65.00		888.71	0.36	0.03	0.01	20.54	
70.00		864.82	0.42	0.01	0.01	14.18	
75.00		840.92	0.48	-0.01	0.01	6.37	
80.00		817.03	0.54	-0.03	0.01	-2.03	
85.00		793.14	0.62	-0.06	0.02	-9.79	
90.00		769.25	0.69	-0.08	0.03	-15.63	
95.00		745.35	0.77	-0.11	0.05	-18.65	
96.00	Bot - Section 3	146.20	0.78	-0.11	0.05	-3.73	
100.00		965.51	0.85	-0.12	0.07	-24.70	
100.75	Top - Section 2	178.20	0.86	-0.12	0.07	-4.50	
105.00		401.45	0.94	-0.12	0.10	-8.67	
110.00		457.56	1.03	-0.10	0.15	-5.90	
115.00		441.63	1.13	-0.05	0.20	0.24	
120.00		425.70	1.23	0.03	0.27	7.98	
125.00		409.77	1.33	0.16	0.36	17.09	
127.00	Appurtenance(s)	4703.1	1.37	0.23	0.40	245.63	
130.00		234.39	1.44	0.36	0.47	16.29	
135.00		377.91	1.55	0.64	0.61	38.61	
139.00	Top - Section 3	290.86	1.64	0.92	0.73	38.36	
140.00	Appurtenance(s)	2132.1	1.67	1.01	0.77	298.10	
145.00		260.18	1.79	1.49	0.96	47.49	
149.00	Appurtenance(s)	2608.2	1.89	1.98	1.14	575.00	
	Totals:	35,094.2				1,649.7	Total Wind: 40,503.0

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

Calculated Forces

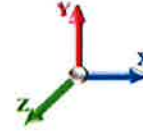
Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 23

Load Case: 0.9D + 1.0E

Gust Response Factor 1.10	Sds 0.17		Iterations 20
Dead Load Factor 0.90	Seismic Load Factor 1.00	Sd1 0.09	Ss 0.16
Wind Load Factor 0.00	Structure Frequency 0.41	SA 0.04	S1 0.06
Seismic Importance Factor 1.00			



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-35.52	-1.75	0.00	-203.45	0.00	203.45	5451.60	2725.80	12956.4	6487.84	0.00	0.00	0.00	0.038
5.00	-34.17	-1.73	0.00	-194.72	0.00	194.72	5379.95	2689.97	12523.2	6270.95	0.00	0.00	-0.01	0.037
10.00	-32.84	-1.71	0.00	-186.07	0.00	186.07	5306.65	2653.32	12093.3	6055.68	0.02	0.02	-0.02	0.037
15.00	-31.53	-1.68	0.00	-177.54	0.00	177.54	5231.70	2615.85	11666.9	5842.16	0.04	0.04	-0.03	0.036
20.00	-30.25	-1.65	0.00	-169.14	0.00	169.14	5155.10	2577.55	11244.2	5630.50	0.07	0.07	-0.03	0.036
25.00	-29.00	-1.62	0.00	-160.90	0.00	160.90	5076.86	2538.43	10825.5	5420.83	0.11	0.11	-0.04	0.035
30.00	-27.77	-1.58	0.00	-152.82	0.00	152.82	4996.96	2498.48	10411.0	5213.26	0.16	0.16	-0.05	0.035
35.00	-26.57	-1.55	0.00	-144.90	0.00	144.90	4915.42	2457.71	10001.0	5007.93	0.22	0.22	-0.06	0.034
40.00	-25.39	-1.52	0.00	-137.14	0.00	137.14	4832.22	2416.11	9595.63	4804.95	0.29	0.29	-0.07	0.034
45.00	-24.23	-1.49	0.00	-129.54	0.00	129.54	4747.38	2373.69	9195.21	4604.44	0.37	0.37	-0.08	0.033
47.25	-23.72	-1.47	0.00	-126.20	0.00	126.20	4708.66	2354.33	9016.69	4515.05	0.41	0.41	-0.08	0.033
50.00	-22.63	-1.44	0.00	-122.15	0.00	122.15	4660.89	2330.44	8799.96	4406.52	0.46	0.46	-0.09	0.033
53.25	-21.36	-1.40	0.00	-117.48	0.00	117.48	3818.32	1909.16	7226.08	3618.41	0.52	0.52	-0.10	0.038
55.00	-21.02	-1.39	0.00	-115.03	0.00	115.03	3795.26	1897.63	7117.54	3564.06	0.56	0.56	-0.10	0.038
60.00	-20.06	-1.37	0.00	-108.08	0.00	108.08	3728.27	1864.14	6809.75	3409.94	0.67	0.67	-0.11	0.037
65.00	-19.12	-1.35	0.00	-101.25	0.00	101.25	3659.63	1829.82	6505.57	3257.62	0.79	0.79	-0.12	0.036
70.00	-18.20	-1.34	0.00	-94.51	0.00	94.51	3589.34	1794.67	6205.25	3107.24	0.93	0.93	-0.13	0.035
75.00	-17.31	-1.33	0.00	-87.84	0.00	87.84	3517.40	1758.70	5909.03	2958.91	1.08	1.08	-0.15	0.035
80.00	-16.44	-1.33	0.00	-81.19	0.00	81.19	3443.81	1721.91	5617.15	2812.75	1.23	1.23	-0.16	0.034
85.00	-15.58	-1.33	0.00	-74.53	0.00	74.53	3368.58	1684.29	5329.85	2668.89	1.41	1.41	-0.17	0.033
90.00	-14.75	-1.33	0.00	-67.87	0.00	67.87	3291.69	1645.84	5047.37	2527.44	1.59	1.59	-0.18	0.031
95.00	-13.94	-1.33	0.00	-61.21	0.00	61.21	3202.59	1601.29	4754.28	2380.67	1.78	1.78	-0.19	0.030
96.00	-13.79	-1.33	0.00	-59.87	0.00	59.87	3181.72	1590.86	4692.22	2349.60	1.83	1.83	-0.19	0.030
100.00	-12.81	-1.33	0.00	-54.54	0.00	54.54	3098.26	1549.13	4448.03	2227.32	1.99	1.99	-0.20	0.029
100.75	-12.62	-1.33	0.00	-53.55	0.00	53.55	1860.42	930.21	2714.89	1359.46	2.02	2.02	-0.21	0.046
105.00	-12.15	-1.33	0.00	-47.89	0.00	47.89	1828.32	914.16	2592.13	1297.99	2.21	2.21	-0.22	0.044
110.00	-11.60	-1.33	0.00	-41.23	0.00	41.23	1789.04	894.52	2449.03	1226.33	2.45	2.45	-0.23	0.040
115.00	-11.06	-1.33	0.00	-34.57	0.00	34.57	1748.11	874.06	2307.59	1155.51	2.70	2.70	-0.25	0.036
120.00	-10.54	-1.33	0.00	-27.90	0.00	27.90	1705.53	852.77	2168.05	1085.64	2.96	2.96	-0.26	0.032
125.00	-10.03	-1.31	0.00	-21.28	0.00	21.28	1661.30	830.65	2030.66	1016.84	3.24	3.24	-0.27	0.027
127.00	-5.75	-1.04	0.00	-18.66	0.00	18.66	1643.15	821.58	1976.36	989.65	3.35	3.35	-0.28	0.022
130.00	-5.46	-1.02	0.00	-15.54	0.00	15.54	1615.43	807.71	1895.65	949.24	3.53	3.53	-0.28	0.020
135.00	-5.00	-0.98	0.00	-10.41	0.00	10.41	1567.90	783.95	1763.28	882.95	3.83	3.83	-0.29	0.015
139.00	-4.64	-0.94	0.00	-6.48	0.00	6.48	1528.69	764.34	1659.43	830.95	4.07	4.07	-0.29	0.011
139.00	-4.64	-0.94	0.00	-6.48	0.00	6.48	1044.31	522.16	1138.99	570.34	4.07	4.07	-0.29	0.016
140.00	-2.70	-0.64	0.00	-5.53	0.00	5.53	1038.89	519.35	1122.71	562.19	4.13	4.13	-0.29	0.012
145.00	-2.40	-0.59	0.00	-2.35	0.00	2.35	1009.62	504.81	1041.96	521.75	4.44	4.44	-0.30	0.007
149.00	0.00	-0.57	0.00	0.00	0.00	0.00	985.17	492.59	978.22	489.84	4.69	4.69	-0.30	0.000

Wind Loading - Shaft

Structure: CT13075-A-SBA
Site Name: New London
Height: 149.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

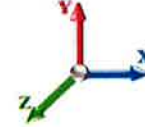
10/3/2016

Page: 24



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 21

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	272.71	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	267.19	0.650	0.000	5.00	24.400	15.86	129.8	0.0	1352.1
10.00		1.00	0.85	7.442	8.19	261.66	0.650	0.000	5.00	23.901	15.54	127.2	0.0	1324.2
15.00		1.00	0.85	7.442	8.19	256.14	0.650	0.000	5.00	23.401	15.21	124.5	0.0	1296.4
20.00		1.00	0.90	7.896	8.69	258.15	0.650	0.000	5.00	22.902	14.89	129.3	0.0	1268.5
25.00		1.00	0.95	8.276	9.10	258.46	0.650	0.000	5.00	22.403	14.56	132.6	0.0	1240.6
30.00		1.00	0.98	8.600	9.46	257.54	0.650	0.000	5.00	21.904	14.24	134.7	0.0	1212.8
35.00		1.00	1.01	8.883	9.77	255.71	0.650	0.000	5.00	21.405	13.91	136.0	0.0	1184.9
40.00		1.00	1.04	9.137	10.05	253.21	0.650	0.000	5.00	20.906	13.59	136.6	0.0	1157.0
45.00		1.00	1.07	9.366	10.30	250.18	0.650	0.000	5.00	20.406	13.26	136.7	0.0	1129.1
47.25	Bot - Section 2	1.00	1.08	9.463	10.41	248.66	0.650	0.000	2.25	9.020	5.86	61.0	0.0	499.0
50.00		1.00	1.09	9.576	10.53	246.70	0.650	0.000	2.75	11.062	7.19	75.7	0.0	1127.5
53.25	Top - Section 1	1.00	1.11	9.704	10.67	244.24	0.650	0.000	3.25	12.878	8.37	89.4	0.0	1312.3
55.00		1.00	1.12	9.770	10.75	246.88	0.650	0.000	1.75	6.847	4.45	47.8	0.0	325.1
60.00		1.00	1.14	9.951	10.95	242.77	0.650	0.000	5.00	19.226	12.50	136.8	0.0	912.6
65.00		1.00	1.16	10.120	11.13	238.38	0.650	0.000	5.00	18.727	12.17	135.5	0.0	888.7
70.00		1.00	1.17	10.279	11.31	233.76	0.650	0.000	5.00	18.228	11.85	134.0	0.0	864.8
75.00		1.00	1.19	10.430	11.47	228.93	0.650	0.000	5.00	17.728	11.52	132.2	0.0	840.9
80.00		1.00	1.21	10.572	11.63	223.90	0.650	0.000	5.00	17.229	11.20	130.2	0.0	817.0
85.00		1.00	1.22	10.708	11.78	218.71	0.650	0.000	5.00	16.730	10.87	128.1	0.0	793.1
90.00		1.00	1.24	10.838	11.92	213.37	0.650	0.000	5.00	16.231	10.55	125.8	0.0	769.2
95.00		1.00	1.25	10.962	12.06	207.88	0.650	0.000	5.00	15.732	10.23	123.3	0.0	745.4
96.00	Bot - Section 3	1.00	1.25	10.986	12.08	206.77	0.650	0.000	1.00	3.086	2.01	24.2	0.0	146.2
100.00		1.00	1.27	11.081	12.19	202.27	0.650	0.000	4.00	12.315	8.00	97.6	0.0	965.5
100.75	Top - Section 2	1.00	1.27	11.098	12.21	201.42	0.650	0.000	0.75	2.274	1.48	18.0	0.0	178.2
105.00		1.00	1.28	11.195	12.31	199.41	0.650	0.000	4.25	12.671	8.24	101.4	0.0	401.4
110.00		1.00	1.29	11.305	12.44	193.58	0.650	0.000	5.00	14.446	9.39	116.8	0.0	457.6
115.00		1.00	1.30	11.412	12.55	187.65	0.650	0.000	5.00	13.946	9.07	113.8	0.0	441.6
120.00		1.00	1.32	11.514	12.67	181.62	0.650	0.000	5.00	13.447	8.74	110.7	0.0	425.7
125.00		1.00	1.33	11.614	12.78	175.50	0.650	0.000	5.00	12.948	8.42	107.5	0.0	409.8
127.00	Appurtenance(s)	1.00	1.33	11.653	12.82	173.03	0.650	0.000	2.00	5.039	3.28	42.0	0.0	159.4
130.00		1.00	1.34	11.710	12.88	169.30	0.650	0.000	3.00	7.409	4.82	62.0	0.0	234.4
135.00		1.00	1.35	11.803	12.98	163.02	0.650	0.000	5.00	11.950	7.77	100.8	0.0	377.9
139.00	Top - Section 3	1.00	1.36	11.876	13.06	157.94	0.650	0.000	4.00	9.200	5.98	78.1	0.0	290.9
140.00	Appurtenance(s)	1.00	1.36	11.894	13.08	156.66	0.650	0.000	1.00	2.250	1.46	19.1	0.0	53.5
145.00		1.00	1.37	11.982	13.18	150.24	0.650	0.000	5.00	10.951	7.12	93.8	0.0	260.2
149.00	Appurtenance(s)	1.00	1.38	12.051	13.26	145.04	0.650	0.000	4.00	8.402	5.46	72.4	0.0	199.5
Totals:									149.00			3,665.5		26,063.1

Discrete Appurtenance Forces

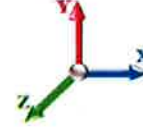
Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 25

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 21

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	149.00	RRH2x60 700	3	12.051	13.256	1.50	1.00	6.79	153.00	0.000	0.000	90.08	0.00	0.00
2	149.00	LNx-6514DS-VTM	3	12.051	13.256	0.83	1.00	20.34	116.40	0.000	0.000	269.68	0.00	0.00
3	149.00	BXA-80063/4CF	3	12.051	13.256	0.72	1.00	10.20	29.70	0.000	0.000	135.15	0.00	0.00
4	149.00	SBNHH-1D65B	3	12.051	13.256	0.83	1.00	20.12	121.80	0.000	0.000	266.71	0.00	0.00
5	149.00	SBNHH-1D65B	3	12.077	13.284	0.83	1.00	20.32	120.00	0.000	1.500	269.92	0.00	404.87
6	149.00	Low Profile	1	12.051	13.256	1.00	1.00	22.00	1500.00	0.000	0.000	291.64	0.00	0.00
7	149.00	RRH 4X45 AWS	3	12.051	13.256	0.80	1.00	6.24	192.00	0.000	0.000	82.72	0.00	0.00
8	149.00	RRH 2X60W-1900MHz	3	12.051	13.256	0.84	1.00	4.74	138.00	0.000	0.000	62.80	0.00	0.00
9	149.00	DB-T1-6Z-8AB-0Z	1	12.051	13.256	0.67	1.00	3.22	18.90	0.000	0.000	42.63	0.00	0.00
10	149.00	DB-T1-6Z-8AB-0Z	1	12.051	13.256	0.67	1.00	3.22	18.90	0.000	0.000	42.63	0.00	0.00
11	140.00	Low Profile	1	11.894	13.084	1.00	1.00	22.00	1500.00	0.000	0.000	287.84	0.00	0.00
12	140.00	KRY 112 144 T	3	11.894	13.084	0.56	0.80	0.69	33.00	0.000	0.000	9.01	0.00	0.00
13	140.00	AIR B4A B2P	3	11.894	13.084	0.69	0.80	12.57	271.20	0.000	0.000	164.46	0.00	0.00
14	140.00	AIR B2A B4P	3	11.894	13.084	0.69	0.80	12.57	274.50	0.000	0.000	164.46	0.00	0.00
15	127.00	MTC3607 Platform + HR	1	11.653	12.818	1.00	1.00	51.70	2246.00	0.000	0.000	662.68	0.00	0.00
16	127.00	DC6-48-60-18-8F	4	11.653	12.818	0.80	0.80	2.94	127.20	0.000	0.000	37.74	0.00	0.00
17	127.00	RRUS A2	6	11.653	12.818	0.50	0.80	5.54	127.20	0.000	0.000	70.95	0.00	0.00
18	127.00	RRUS E2	3	11.653	12.818	0.60	0.80	4.86	180.00	0.000	0.000	62.29	0.00	0.00
19	127.00	RRUS 32	3	11.653	12.818	0.56	0.80	2.77	231.00	0.000	0.000	35.53	0.00	0.00
20	127.00	RRUS 12	6	11.653	12.818	0.60	0.80	9.72	360.00	0.000	0.000	124.59	0.00	0.00
21	127.00	RRUS 11	9	11.653	12.818	0.57	0.80	12.88	456.30	0.000	0.000	165.12	0.00	0.00
22	127.00	HPA-65R-BUU-8H	12	11.653	12.818	0.63	0.80	98.44	816.00	0.000	0.000	1261.79	0.00	0.00
Totals:								9,031.10				4,600.41		

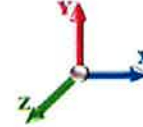
Total Applied Force Summary

Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 26
	Struct Class: II	



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 21

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		129.83	1505.27	0.00	0.00
10.00		127.17	1477.40	0.00	0.00
15.00		124.52	1449.52	0.00	0.00
20.00		129.30	1421.65	0.00	0.00
25.00		132.57	1393.78	0.00	0.00
30.00		134.68	1365.90	0.00	0.00
35.00		135.96	1338.03	0.00	0.00
40.00		136.57	1310.15	0.00	0.00
45.00		136.66	1282.28	0.00	0.00
47.25		61.03	567.93	0.00	0.00
50.00		75.74	1211.73	0.00	0.00
53.25		89.35	1411.85	0.00	0.00
55.00		47.83	378.66	0.00	0.00
60.00		136.79	1065.75	0.00	0.00
65.00		135.50	1041.86	0.00	0.00
70.00		133.97	1017.97	0.00	0.00
75.00		132.20	994.07	0.00	0.00
80.00		130.24	970.18	0.00	0.00
85.00		128.09	946.29	0.00	0.00
90.00		125.77	922.40	0.00	0.00
95.00		123.30	898.50	0.00	0.00
96.00		24.24	176.83	0.00	0.00
100.00		97.57	1088.03	0.00	0.00
100.75		18.04	201.17	0.00	0.00
105.00		101.43	531.62	0.00	0.00
110.00		116.77	610.71	0.00	0.00
115.00		113.79	594.78	0.00	0.00
120.00		110.71	578.85	0.00	0.00
125.00		107.52	562.92	0.00	0.00
127.00	(44) attachments	2462.69	4764.41	0.00	0.00
130.00		62.04	316.05	0.00	0.00
135.00		100.85	514.01	0.00	0.00
139.00		78.12	399.74	0.00	0.00
140.00	(10) attachments	644.90	2159.39	0.00	0.00
145.00		93.82	333.58	0.00	0.00
149.00	(24) attachments	1626.34	2666.96	0.00	404.87
	Totals:	8,265.92	39,470.21	0.00	404.87

Calculated Forces

Structure: CT13075-A-SBA
Site Name: New London
Height: 149.00 (ft)
Base Elev: 0.000 (ft)
Gh: 1.1

Topography: 1

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

10/3/2016

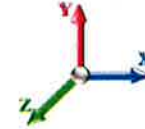
Page: 27



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 21

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-39.47	-8.28	0.00	-917.62	0.00	917.62	5451.60	2725.80	12956.4	6487.84	0.00	0.000	0.000	0.149
5.00	-37.96	-8.17	0.00	-876.23	0.00	876.23	5379.95	2689.97	12523.2	6270.95	0.02	-0.038	0.000	0.147
10.00	-36.47	-8.07	0.00	-835.36	0.00	835.36	5306.65	2653.32	12093.3	6055.68	0.08	-0.076	0.000	0.145
15.00	-35.02	-7.97	0.00	-795.02	0.00	795.02	5231.70	2615.85	11666.9	5842.16	0.18	-0.115	0.000	0.143
20.00	-33.59	-7.86	0.00	-755.19	0.00	755.19	5155.10	2577.55	11244.2	5630.50	0.32	-0.154	0.000	0.141
25.00	-32.19	-7.74	0.00	-715.90	0.00	715.90	5076.86	2538.43	10825.5	5420.83	0.50	-0.194	0.000	0.138
30.00	-30.82	-7.62	0.00	-677.19	0.00	677.19	4996.96	2498.48	10411.0	5213.26	0.73	-0.234	0.000	0.136
35.00	-29.48	-7.50	0.00	-639.07	0.00	639.07	4915.42	2457.71	10001.0	5007.93	1.00	-0.275	0.000	0.134
40.00	-28.17	-7.38	0.00	-601.55	0.00	601.55	4832.22	2416.11	9595.63	4804.95	1.31	-0.316	0.000	0.131
45.00	-26.88	-7.25	0.00	-564.65	0.00	564.65	4747.38	2373.69	9195.21	4604.44	1.66	-0.358	0.000	0.128
47.25	-26.31	-7.20	0.00	-548.33	0.00	548.33	4708.66	2354.33	9016.69	4515.05	1.83	-0.377	0.000	0.127
50.00	-25.10	-7.12	0.00	-528.54	0.00	528.54	4660.89	2330.44	8799.96	4406.52	2.06	-0.401	0.000	0.125
53.25	-23.68	-7.03	0.00	-505.39	0.00	505.39	3818.32	1909.16	7226.08	3618.41	2.34	-0.429	0.000	0.146
55.00	-23.30	-6.99	0.00	-493.08	0.00	493.08	3795.26	1897.63	7117.54	3564.06	2.50	-0.444	0.000	0.145
60.00	-22.23	-6.87	0.00	-458.11	0.00	458.11	3728.27	1864.14	6809.75	3409.94	2.99	-0.491	0.000	0.140
65.00	-21.18	-6.74	0.00	-423.77	0.00	423.77	3659.63	1829.82	6505.57	3257.62	3.53	-0.539	0.000	0.136
70.00	-20.16	-6.61	0.00	-390.07	0.00	390.07	3589.34	1794.67	6205.25	3107.24	4.12	-0.586	0.000	0.131
75.00	-19.16	-6.49	0.00	-357.00	0.00	357.00	3517.40	1758.70	5909.03	2958.91	4.76	-0.633	0.000	0.126
80.00	-18.19	-6.36	0.00	-324.57	0.00	324.57	3443.81	1721.91	5617.15	2812.75	5.45	-0.680	0.000	0.121
85.00	-17.24	-6.23	0.00	-292.77	0.00	292.77	3368.58	1684.29	5329.85	2668.89	6.19	-0.727	0.000	0.115
90.00	-16.31	-6.11	0.00	-261.60	0.00	261.60	3291.69	1645.84	5047.37	2527.44	6.97	-0.773	0.000	0.108
95.00	-15.41	-5.98	0.00	-231.06	0.00	231.06	3202.59	1601.29	4754.28	2380.67	7.81	-0.817	0.000	0.102
96.00	-15.24	-5.96	0.00	-225.08	0.00	225.08	3181.72	1590.86	4692.22	2349.60	7.98	-0.826	0.000	0.101
100.00	-14.15	-5.85	0.00	-201.24	0.00	201.24	3098.26	1549.13	4448.03	2227.32	8.69	-0.861	0.000	0.095
100.75	-13.94	-5.83	0.00	-196.85	0.00	196.85	1860.42	930.21	2714.89	1359.46	8.82	-0.867	0.000	0.152
105.00	-13.41	-5.74	0.00	-172.06	0.00	172.06	1828.32	914.16	2592.13	1297.99	9.61	-0.902	0.000	0.140
110.00	-12.80	-5.62	0.00	-143.38	0.00	143.38	1789.04	894.52	2449.03	1226.33	10.59	-0.957	0.000	0.124
115.00	-12.20	-5.51	0.00	-115.27	0.00	115.27	1748.11	874.06	2307.59	1155.51	11.62	-1.007	0.000	0.107
120.00	-11.62	-5.39	0.00	-87.74	0.00	87.74	1705.53	852.77	2168.05	1085.64	12.69	-1.050	0.000	0.088
125.00	-11.06	-5.28	0.00	-60.77	0.00	60.77	1661.30	830.65	2030.66	1016.84	13.81	-1.086	0.000	0.066
127.00	-6.34	-2.73	0.00	-50.21	0.00	50.21	1643.15	821.58	1976.36	989.65	14.27	-1.098	0.000	0.055
130.00	-6.02	-2.66	0.00	-42.02	0.00	42.02	1615.43	807.71	1895.65	949.24	14.97	-1.113	0.000	0.048
135.00	-5.51	-2.55	0.00	-28.71	0.00	28.71	1567.90	783.95	1763.28	882.95	16.15	-1.135	0.000	0.036
139.00	-5.11	-2.47	0.00	-18.50	0.00	18.50	1528.69	764.34	1659.43	830.95	17.10	-1.148	0.000	0.026
139.00	-5.11	-2.47	0.00	-18.50	0.00	18.50	1044.31	522.16	1138.99	570.34	17.10	-1.148	0.000	0.037
140.00	-2.97	-1.78	0.00	-16.03	0.00	16.03	1038.69	519.35	1122.71	562.19	17.34	-1.150	0.000	0.031
145.00	-2.63	-1.68	0.00	-7.13	0.00	7.13	1009.62	504.81	1041.96	521.75	18.56	-1.162	0.000	0.016
149.00	0.00	-1.63	0.00	-0.40	0.00	0.40	985.17	492.59	978.22	489.84	19.53	-1.166	0.000	0.001

Final Analysis Summary

Structure: CT13075-A-SBA	Code: EIA/TIA-222-G	10/3/2016
Site Name: New London	Exposure: C	
Height: 149.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 28
	Struct Class: II	



Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 105 mph Wind	40.6	0.00	47.30	0.00	0.00	4514.35
0.9D + 1.6W 105 mph Wind	40.6	0.00	35.46	0.00	0.00	4478.30
1.2D + 1.0Di + 1.0Wi 50 mph Wind	9.4	0.00	72.90	0.00	0.00	1023.20
1.2D + 1.0E	1.7	0.00	47.36	0.00	0.00	205.19
0.9D + 1.0E	1.7	0.00	35.52	0.00	0.00	203.45
1.0D + 1.0W 60 mph Wind	8.3	0.00	39.47	0.00	0.00	917.62

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 105 mph Wind	-14.70	-28.73	0.00	-968.93	0.00	-968.93	1860.42	930.21	2714.89	1359.46	100.75	0.722
0.9D + 1.6W 105 mph Wind	-10.52	-28.40	0.00	-957.16	0.00	-957.16	1860.42	930.21	2714.89	1359.46	100.75	0.711
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-33.07	-6.35	0.00	-212.04	0.00	-212.04	1860.42	930.21	2714.89	1359.46	100.75	0.174
1.2D + 1.0E	-16.83	-1.35	0.00	-54.15	0.00	-54.15	1860.42	930.21	2714.89	1359.46	100.75	0.049
0.9D + 1.0E	-12.62	-1.33	0.00	-53.55	0.00	-53.55	1860.42	930.21	2714.89	1359.46	100.75	0.046
1.0D + 1.0W 60 mph Wind	-13.94	-5.83	0.00	-196.85	0.00	-196.85	1860.42	930.21	2714.89	1359.46	100.75	0.152



Monopole Mat Foundation Design

Date

10/3/2016

Customer Name:	Verizon	EIA/TIA Standard:	EIA-222-G
Site Name:		Structure Height (Ft.):	149
Site Number:	CT13075-A-SBA	Engineer Name:	H. Lei
Engr. Number:	26557	Engineer Login ID:	TES

Foundation Info Obtained from:

Drawings/Calculations

Structure Type:

Monopole

Analysis or Design?

Analysis

Base Reactions (Factored):

Axial Load (Kips):	47.3	Shear Force (Kips):	40.6
Uplift Force (Kips):	0.0	Moment (Kips-ft):	4514.4

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	7.0	Depth of Base BG (ft.):	8.0
Pier Height A. G. (ft.):	1.00	Thickness of Pad (ft):	2.00
Length of Pad (ft.):	23.5	Width of Pad (ft.):	23.5
Final Length of pad (ft)	23.5	Final width of pad (ft):	23.5
Control Value for Cell D18:	0	Control Value for Cell F18:	0

Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	36	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):	28	Qty. of Rebar in Pad (W):	28	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	28	Qty. of Rebar in Pad (W):	28	

Soil Design Parameters:

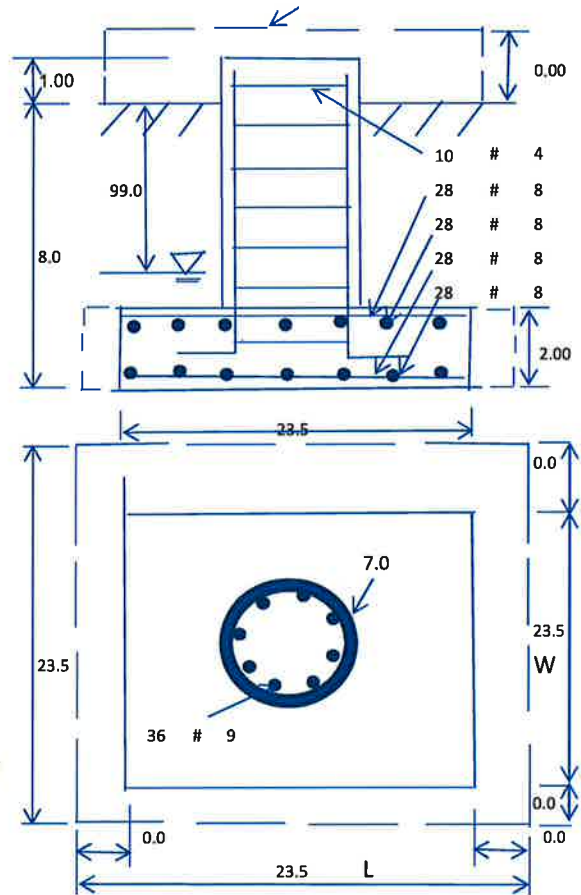
Soil Unit Weight (pcf):	100.0	Soil Buoyant Weight:	50.0	Pcf	
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad: 30
Ultimate Bearing Pressure (psf):	8000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad: 25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No		Angle from Bottm of Pad: 25
Consider soil hor. resist. for OTM.:	No	Reduction factor on the maximum soil bearing pressure:	1.00		

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	3082.59	Total Dry Soil Weight (Kips):	308.26
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	308.26	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1373.89	Total Dry Concrete Weight (Kips):	206.08
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	206.08	Total Vertical Load on Base (Kips):	561.64

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	4486	<	Allowable Factored Soil Bearing (psf):	6000	0.75	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	5995.0	>	Design Factored Momont (kips-ft):	4880	0.81	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.23					OK!



Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.00

Load/
Capacity
Ratio**(1) Concrete Pier:**

Vertical Steel Rebar Area (sq. in./each):	1.00	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	6026.1	> Design Factored Moment (Mu, Kips-Ft)	4798.6	0.80	OK!
Calculated Shear Capacity (Kips):	660.1	> Design Factored Shear (Kips):	40.6	0.06	OK!
Calculated Tension Capacity (Tn, Kips):	1944.0	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9734.2	> Design Factored Axial Load (Pu Kips):	47.3	0.00	OK!
Moment & Axial Strength Combination:	0.80	OK! Check Tie Spacing (Design/Required):		1	OK!
Pier Reinforcement Ratio:	0.006	Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	548.4	> One-Way Factored Shear (L-D. Kips):	322.6	0.59	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	548.4	> One-Way Factored Shear (W-D., Kips):	322.6	0.59	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	612.2	> One-Way Factored Shear (C-C, Kips):	345.3	0.56	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0038	OK! Lower Steel Pad Reinf. Ratio (W-Direc	0.0038		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	1971.7	> Moment at Bottom (L-Direct. K-Ft):	1055.3	0.54	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	1971.7	> Moment at Bottom (W-Direct. K-Ft):	1055.3	0.54	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	2762.4	> Moment at Bottom (C-C Dir. K-Ft):	1492.4	0.54	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0038	OK! Upper Steel Reinf. Ratio (W-Direct.):	0.0038		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	1971.7	> Moment at the top (L-Dir Kips-Ft):	538.1	0.27	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	1971.7	> Moment at the top (W-Dir Kips-Ft):	538.1	0.27	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	2762.4	> Moment at the top (C-C Direc. K-Ft):	551.1	0.20	OK!

ATTACHMENT 4

Tools

GrotonGIS Lite



1294 PLEASANT VALLEY RD NORTH

PIN: 178010470143
TYPE: COMMERCIAL
DISTRICT: POQUONNOCK BRIDGE FIRE DISTRICT
ACREAGE: 3.66 AC.
ZONING: RU-20



[Get More Info](#) | [Zoom To Extent](#) | [Clear Selection](#)

Tools

GrotonGIS Lite

1294 PLEASANT VALLEY RD NORTH



PIN: 178010470143
TYPE: COMMERCIAL
DISTRICT: POQUONNOCK BRIDGE FIRE DISTRICT
ACREAGE: 3.66 AC.
ZONING: RU-20

[Get More Info](#) | [Zoom To Extent](#) | [Clear Selection](#)

1294 PLEASANT VALLEY RD NORTH



Property Information

PIN: 178010470143
PROPERTY TYPE: COMMERCIAL
DISTRICT: POQUONNOCK BRIDGE FIRE DISTRICT
OWNER: JFM ENTERPRISES LLC
ACREAGE: 3.66AC.
ZONING: RU-20
USE CODE: SMALL RETAIL AND SERVICE STORES UNDER 10
CT GRAND LIST CODE: COMMERCIAL
LIVING UNITS: N/A
NEIGHBORHOOD: 3100
DEED BOOK/PAGE: 774/624
LAND VALUE: \$214,900
BUILDING VALUE: \$73,500
TOTAL VALUE: \$288,400
GROSS ASSESSED VALUE: \$201,880

Structure Information

CARD: 1 OF 1
BUILDING #: 1
IMPROVED NAME: PAWS PLACE
YEAR BUILT: 1975
OF UNITS: 1
IDENTICAL UNITS: 1
STRUCTURE TYPE: RETAIL-SINGLEOCCUPANCY
BUILDING AREA: 2388 SQFT
STRUCTURE GRADE: D+

Sales Information

SALE DATE: 6/20/2002
SALE PRICE: \$150,000
DEED BOOK/PAGE: 774/624

SALE DATE: 10/23/2000
SALE PRICE: \$140,000
DEED BOOK/PAGE: 721/770

SALE DATE: 10/11/1997
SALE PRICE: \$123,380
DEED BOOK/PAGE: 651/124