



Filed by:

Kri Pelletier, Property Specialist - SBA Communications
134 Flanders Rd., Suite 125, Westborough, MA 01581
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February 15, 2017

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

Notice of Exempt Modification
8 Ferris Road, Newtown, CT 06470
41 23 23.09 N
-73 20 18.4 W
T-Mobile Site #: CT11805A_L700

Dear Ms. Bachman:

T-Mobile currently maintains six (3) antennas at the 81-foot level of the existing 118-foot Monopole Tower at 8 Ferris Road in Newtown, CT. The tower is owned by SBA 2012 TC Assets, LLC. The property is owned by Erich and Patricia Gertsch. T-Mobile intends to add (3) new L700 antennas to be installed at the 81-foot level of the tower. T-Mobile's full scope of work is as follows:

Remove:

- None

Remove and Replace:

- None

Install:

- (3) Commscope LNX-6515DS-A1M Panel Antennas
- (3) Kathrein 782 11054 Bias Ts
- (1) Platform w/Handrail kit and V-brace kit
- *Ground: (1) BBU Cabinet DUBBM-2ALM on existing pad within existing lease area of compound*

Existing Equipment to Remain (including entitlements):

- (3) RFS APXV18-209014 Panel Antennas
- (3) RFS ATMAA1412D-1A2-TMAs
- (1) Low Profile Platform
- (24) 7/8" Coax



This facility was originally approved prior to CT Siting Council's jurisdiction. The Town does not have access to the original Decision. Records show that approval was given for the tower to be built under Building Permit #99-9-29-2235 and the Certificate of Occupancy was received December 13, 1999. The above modification complies with all known conditions.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §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 E. Patricia Llodra, First Selectman for the Town of Newtown, Robert Mulholland, Chair, Planning & Zoning Commission for the Town of Newtown, and the property owners, Erich and Patricia Gertsch. (Separate notice is not being sent to tower owner, as it belongs to SBA.)

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. §16.50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modification 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 emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modification will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading with certain modifications.

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

Sincerely,

Kri Pelletier
Property Specialist
SBA COMMUNICATIONS CORPORATION
134 Flanders Rd., Suite 125
Westborough, MA 01581

508.251.0720 x3804 + T
508.366.2610 + F
203.446.7700 + C
kpelletier@sbsite.com

Attachments



SBA

cc: E. Patricia Llodra, First Selectman – as elected official

Town of Newtown, 3 Primrose Street, Newtown, CT 06470

Robert Mulholland, Chair, Planning & Zoning Commission – as representative for respective P&Z department

Town of Newtown, 3 Primrose Street, Newtown, CT 06470

Erich and Patricia Gertsch – as property owners

8 Ferris Rd. Newtown CT 06470



POWER DENSITY

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APXV18-209014-C	Make / Model:	RFS APXV18-209014-C	Make / Model:	RFS APXV18-209014-C
Gain:	14.4 dBd	Gain:	14.4 dBd	Gain:	14.4 dBd
Height (AGL):	81	Height (AGL):	81	Height (AGL):	81
Frequency Bands	1900 MHz (PCS)	Frequency Bands	1900 MHz (PCS)	Frequency Bands	1900 MHz (PCS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	180	Total TX Power(W):	180	Total TX Power(W):	180
ERP (W):	3,437.74	ERP (W):	3,437.74	ERP (W):	3,437.74
Antenna A1 MPE%	2.20	Antenna B1 MPE%	2.20	Antenna C1 MPE%	2.20
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Commscope LNX-6515DS-A1M	Make / Model:	Commscope LNX-6515DS-A1M	Make / Model:	Commscope LNX-6515DS-A1M
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	81	Height (AGL):	81	Height (AGL):	81
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power(W):	30	Total TX Power(W):	30	Total TX Power(W):	30
ERP (W):	701.65	ERP (W):	701.65	ERP (W):	701.65
Antenna A2 MPE%	0.96	Antenna B2 MPE%	0.96	Antenna C2 MPE%	0.96

Site Composite MPE%	
Carrier	MPE%
T-Mobile (Per Sector Max)	3.16 %
Nextel	0.45 %
Sprint	0.13 %
Verizon Wireless	4.98 %
AT&T	3.84 %
Site Total MPE %:	12.56 %

T-Mobile Sector A Total:	3.16 %
T-Mobile Sector B Total:	3.16 %
T-Mobile Sector C Total:	3.16 %
Site Total:	12.56 %

T-Mobile _per sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
T-Mobile PCS - 1950 MHz LTE	2	1,145.91	81	14.65	PCS - 1950 MHz	1000	1.46%
T-Mobile PCS - 1950 MHz GSM	2	572.96	81	7.32	PCS - 1950 MHz	1000	0.73%
T-Mobile 700 MHz LTE	1	701.65	81	4.48	700 MHz	467	0.96%
						Total*:	3.16%



Property Information

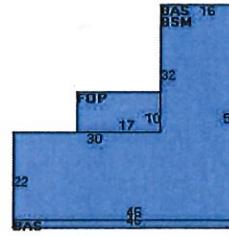
Owner	GERTSCH ERICH A & PATRICIA A
Co-Owner	
Address	8 FERRIS ROAD
Mailing Address	8 FERRIS ROAD NEWTOWN CT 06470
Land Use	1010 Single Family
Land Class	R
Vision ID	11101
School Zone	
Town Clerk Map	

Fire District	
Census Tract	12
Neighborhood	105
Zoning Code	R-1
Acreage	1.31
Utilities	Well,Septic
Lot Setting/Desc	
Voting District	
Borough	
Historic	

Photo



Sketch



Construction Details

Year Built	1964
Stories	1.00
Building Style	Raised Ranch
Building Use	Residential
Building Condition	C+
Floors	Hardwood
Total Rooms	

Bedrooms	4
Full Bathrooms	2
Half Bathrooms	1
Bath Style	Typical
Kitchen Style	Typical
Roof Style	Gable
Roof Cover	Asphalt/F Glas

Exterior Walls	Wood Shingle
Interior Walls	Drywall
Heating Type	Baseboard
Heating Fuel	Oil
AC Type	Unit/AC
Gross Bldg Area	3310
Total Living Area	1616



Property Information

Owner	GERTSCH ERICH & PATRICIA A
Co-Owner	
Address	8 FERRIS ROAD
Mailing Address	8 FERRIS RD NEWTOWN CT 06384
Land Use	1060 Vacant W/ OB
Land Class	R
Vision ID	15218
School Zone	
Town Clerk Map	

Fire District	
Census Tract	12
Neighborhood	
Zoning Code	R-1
Acreage	0
Utilities	Well,Septic
Lot Setting/Desc	
Voting District	
Borough	
Historic	

Photo

No Photo Available

Sketch

Construction Details

Year Built	
Stories	
Building Style	
Building Use	
Building Condition	
Floors	
Total Rooms	

Bedrooms	0
Full Bathrooms	
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	

Exterior Walls	
Interior Walls	
Heating Type	
Heating Fuel	
AC Type	
Gross Bldg Area	
Total Living Area	0

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL
TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CT11805A

CT805/Nextell Newtown_MP
8 Ferris Road
Newtown, CT 06470

February 11, 2017

EBI Project Number: 6217000480

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	12.56 %

February 11, 2017

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Emissions Analysis for Site: **CT11805A – CT805/Nextell Newtown_MP**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **8 Ferris Road, Newtown, CT**, for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limit for the 700 MHz Band is approximately 467 $\mu\text{W}/\text{cm}^2$, and the general population exposure limit for the 1900 MHz (PCS) and 2100 MHz (AWS) bands is 1000 $\mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at **8 Ferris Road, Newtown, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 2 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 3) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 30 Watts.
- 4) Since all radios are ground mounted there are additional cabling losses accounted for. For each ground mounted RF path the following losses were calculated. 0.91 dB of additional cable loss for all ground mounted 700 MHz Channels and 1.59 dB of additional cable loss for all ground mounted 1900 MHz channels were factored into the calculations used for this analysis. This is based on manufacturers Specifications for 130 feet of 1-1/4" coax cable on each path.

- 5) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 6) For the following calculations the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 7) The antennas used in this modeling are the **RFS APXV18-209014-C** for 1900 MHz (PCS) channels and the **Commscope LNX-6515DS-A1M** for 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **RFS APXV18-209014-C** has a maximum gain of **14.4 dBd** at its main lobe at 1900 MHz. The **Commscope LNX-6515DS-A1M** has a maximum gain of **14.6 dBd** at its main lobe at 700 MHz. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antenna mounting height centerline of the proposed antennas is **81 feet** above ground level (AGL).
- 9) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 10) All calculations were done with respect to uncontrolled / general public threshold limits.

T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APXV18-209014-C	Make / Model:	RFS APXV18-209014-C	Make / Model:	RFS APXV18-209014-C
Gain:	14.4 dBd	Gain:	14.4 dBd	Gain:	14.4 dBd
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Antenna A1 MPE%	2.20	Antenna B1 MPE%	2.20	Antenna C1 MPE%	2.20
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Commscope LNX-6515DS-A1M	Make / Model:	Commscope LNX-6515DS-A1M	Make / Model:	Commscope LNX-6515DS-A1M
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	81	Height (AGL):	81	Height (AGL):	81
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power(W):	30	Total TX Power(W):	30	Total TX Power(W):	30
ERP (W):	701.65	ERP (W):	701.65	ERP (W):	701.65
Antenna A2 MPE%	0.96	Antenna B2 MPE%	0.96	Antenna C2 MPE%	0.96

Site Composite MPE%	
Carrier	MPE%
T-Mobile (Per Sector Max)	3.16 %
Nextel	0.45 %
Sprint	0.13 %
Verizon Wireless	4.98 %
AT&T	3.84 %
Site Total MPE %:	12.56 %

T-Mobile Sector A Total:	3.16 %
T-Mobile Sector B Total:	3.16 %
T-Mobile Sector C Total:	3.16 %
Site Total:	12.56 %

T-Mobile _per sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
T-Mobile PCS - 1950 MHz LTE	2	1,145.91	81	14.65	PCS - 1950 MHz	1000	1.46%
T-Mobile PCS - 1950 MHz GSM	2	572.96	81	7.32	PCS - 1950 MHz	1000	0.73%
T-Mobile 700 MHz LTE	1	701.65	81	4.48	700 MHz	467	0.96%
						Total*:	3.16%

*NOTE: Totals may vary by 0.01% due to summing of remainders

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general public exposure to RF Emissions.

The anticipated maximum composite contributions from the T-Mobile facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector A:	3.16 %
Sector B:	3.16 %
Sector C:	3.16 %
T-Mobile Per Sector Maximum:	3.16 %
Site Total:	12.56 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **12.56%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.



Tower Engineering Solutions

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

Structural Analysis Report

Existing 118 ft. EEI Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT46132-A

Customer Site Name: Newtown-ferris Rd

Carrier Name: T-Mobile

Carrier Site ID / Name: CT11805A / CT805/Nextell Newtown_MP

Site Location: 8 Ferris Road

Newtown, Connecticut

Fairfield County

Latitude: 41.389747

Longitude: -73.338444

Analysis Result:

Max Structural Usage: 80.5% [Pass]

Max Foundation Usage: 88.9% [Pass]

Report Prepared By: Farzam Yazdani



Introduction

The purpose of this report is to summarize the analysis results on the 118 ft. EEI 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	FDH Engineering, Inc., Project No. 1462H91400 dated 4/10/2014.
Foundation Drawing	Engineered Endeavors Incorporated, Project No. 5189 revision dated 8/20/1999.
Geotechnical Report	New England Boring Contractors & Applied Earth Technologies Inc. dated 6/4/1999.
Modification Drawings	Vertical Solutions, Project No. 100188.08 dated 5/7/2010.

Analysis Criteria

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

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed $V_{ult} = 125.0$ mph (3-Sec. Gust)/ Nominal Design Wind Speed $V_{asd} = 97.0$ 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:	$S_S = 0.215$, $S_1 = 0.065$

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	130.0	1	Decibel DB222 – Dipole	(1) Low Profile Platform	(12) 7/8"	Town of Newtown
2	119.42	1	Telewave ANT150D – Dipole			
3	118.8	9	Decibel DB844H90E-XY – Panel			Nextel
4	107.0	3	ALU TD-RRH8x20-25 – RRU	(1) Universal Ring Mount	(3) 1-1/4" Fiber (1) 1-1/4"	Sprint
5		3	ALU 1900 4x45 65 MHz – RRU			
6		3	ALU 800 MHz 2x50W – RRU			
7		3	ALU 800 MHz External Notch Filter			
8		4	RFS ACU-A20-N – RET			
9	105.0	3	RFS APXVSP18-C-A20 – Panel	(1) Low Profile Platform		
10		3	RFS APXVTM14-C-I20 – Panel			
11	98.0	2	RFS APL868013 – Panel	(1) Low Profile Platform	(12) 1-5/8" Coax (2) 1-5/8" Fiber	Verizon
12		6	Andrew SBNHH-1D85C – Panel			
13		4	Andrew DB846H80E-SX – Panel			
14		3	Alcatel Lucent RRH4X45-AWS – RRU			
15		3	Alcatel Lucent RRH2x60-700 – RRU			
16		3	Alcatel-Lucent RRH2X60-1900A-4R – RRU			
17		2	RFS Celwave DB-T1-6Z-8AB-0Z			
18	91.0	3	Powerwave 7770.00 – Panel	(1) Low Profile Platform	(12) 7/8" (1) 3/8" Fiber (2) 5/8" DC	AT&T
19		3	Powerwave P65-16-XLH-RR – Panel			
20		6	Powerwave LGP21401 – TMA			
21		6	Ericsson RRUS-11 – RRU			
22		1	Raycap DC-48-60-18-8F Surge Arrestor			
-	81.0	6	RFS APX16DWV-16DWV – Panel	(1) Low Profile Platform	(24) 7/8" Coax	T-Mobile
-		6	Remec S20057A1 – TMA			
28	75.0	1	GPS	Direct	(1) 1/2"	Sprint ¹

1. Sprint has (1) 1/2" transmission line installed outside of the pole's shaft, single stacked.

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
23	81.0	3	RFS APXV18-209014 – Panel	(1) Platform w/ Handrail kit and V-brace kit	(24) 7/8" Coax	T-Mobile
24		3	Commscope LNX-6515DS-A1M – Panel			
25		3	RFS ATMAA1412D-1A2 – TMA			
26		3	S20057A1 – TMA			
27		3	Kathrein 782 11054 – Bias Ts			

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

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	80.5%	78.4%	76.2%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Original Design Reactions	2006.0	22.0	20.0
Analysis Reactions	2547.8	28.3	36.2
Factored Reactions*	2708.1	29.7	27.0

* 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 1.6379 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.

Note:

The structure capacity usage percentage 80.5% on the cover sheet reflects the proposed antennas plus the new mount. The capacity usage considering the existing mount plus the proposed antennas is 76.2%. The new mount causes an additional 4.3% of overstress.

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 80.55% at 0.0ft

Structure: CT46132-A-SBA
Site Name: Newtown-ferris Rd
Height: 118.00 (ft)
Base Elev: 0.000 (ft)

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

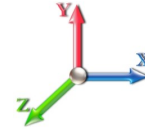
1/18/2017



Page: 1

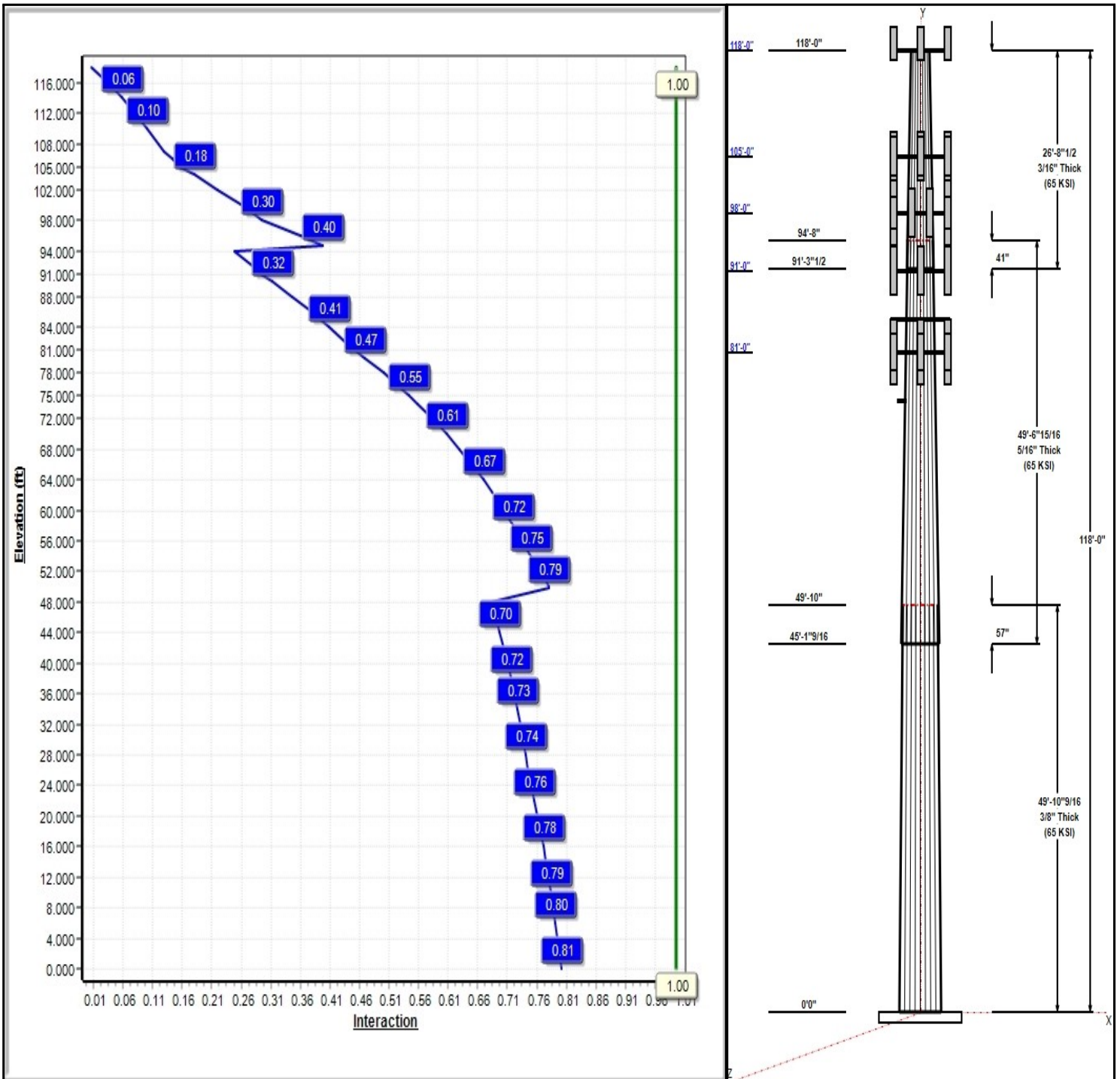
Dead Load Factor: 1.20
 Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 97 mph Wind



Iterations: 27

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Structure: CT46132-A-SBA

Type: Tapered
Site Name: Newtown-ferris Rd
Height: 118.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23093

1/18/2017

Page: 2



Shaft Properties

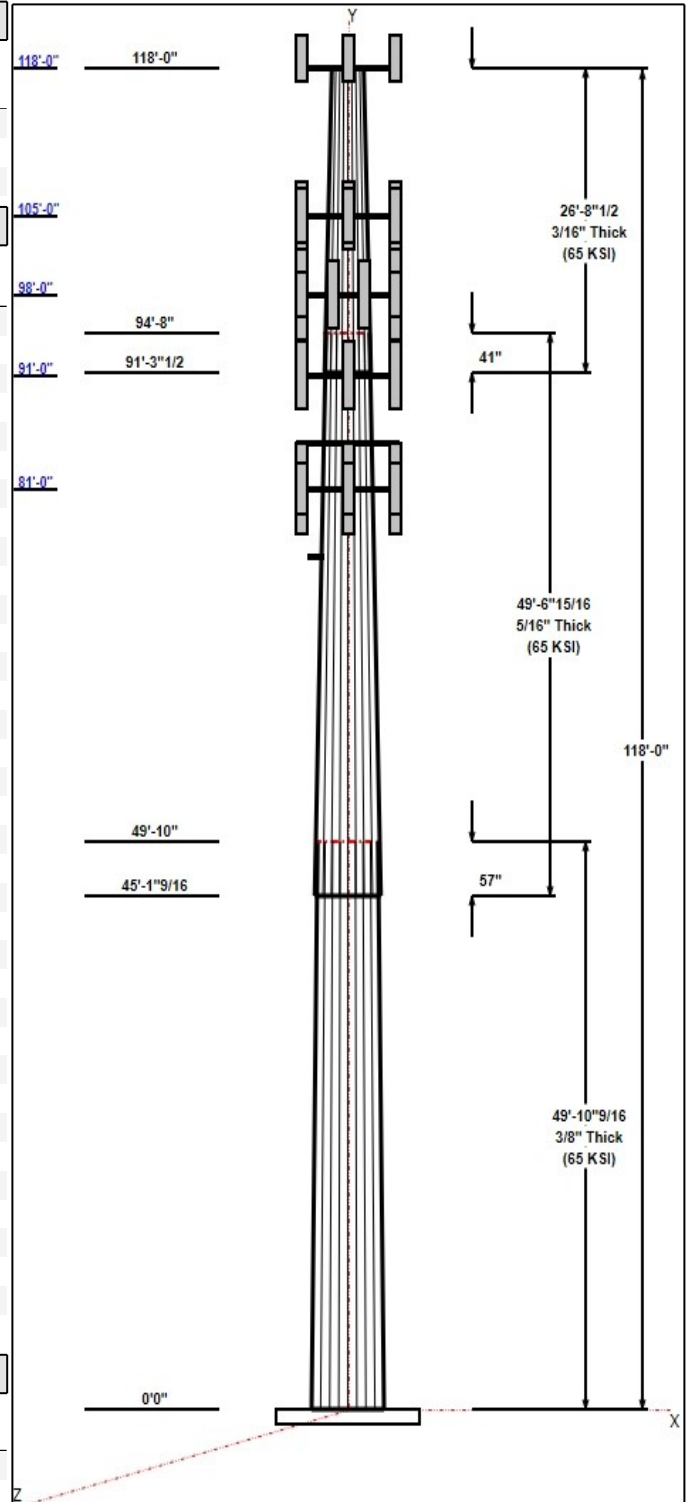
Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	49.88	31.73	43.25	0.375		0.23093	65
2	49.58	22.00	33.45	0.313	Slip	0.23093	65
3	26.71	17.00	23.17	0.188	Slip	0.23093	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
118.00	130.00	1	DB222	Town of Newtown
118.00	119.42	1	ANT150D	Town of Newtown
118.00	118.80	9	DB844H90E-XY	Nextel
118.00	118.00	1	Low Profile Platform	Town of
107.00	107.00	1	Universal Ring Mount	Sprint
107.00	107.00	3	1900 MHz 4X45 RRH	Sprint
107.00	107.00	3	800 MHz 2X50W RRH w/	Sprint
107.00	107.00	3	ALU 800MHz External	Sprint
107.00	107.00	3	TD-RRHx20-25	Sprint
107.00	107.00	4	ACU-A20-N	Sprint
105.00	105.00	1	Low Profile Platform	Sprint
105.00	105.00	3	APXVSP18-C-A20	Sprint
105.00	105.00	3	APXVTM14-C-120	Sprint
98.00	98.00	1	Low Profile Platform	Verizon
98.00	98.00	2	RFS APL868013	Verizon
98.00	98.00	6	Andrew SBNHH-1D85C	Verizon
98.00	98.00	3	Alcatel Lucent	Verizon
98.00	98.00	3	Alcatel Lucent	Verizon
98.00	98.00	3	Alcatel-Lucent	Verizon
98.00	98.00	2	Rfs Celwave	Verizon
98.00	98.00	4	Andrew DB846H80E-SX	Verizon
91.00	91.00	1	Low Profile Platform	AT&T
91.00	91.00	3	7770.00	AT&T
91.00	91.00	3	P65-16-XLH-RR	AT&T
91.00	91.00	6	LGP21401	AT&T
91.00	91.00	6	RRUS-11	AT&T
91.00	91.00	1	FD Series DC Surge	AT&T
85.00	85.00	1	V-brace kit	T-Mobile
81.00	81.00	1	Platform w/ Handrail kit	T-Mobile
81.00	81.00	3	RFS APXV18-209014	T-Mobile
81.00	81.00	3	Commscope	T-Mobile
81.00	81.00	3	RFS ATMAA1412D-1A2	T-Mobile
81.00	81.00	3	S20057A1	T-Mobile
81.00	81.00	3	Kathrein 782 11054	T-Mobile
75.00	75.00	1	GPS	Sprint
75.00	75.00	1	Standoff Mount	Sprint

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	130.00	Inside	7/8"	Town of Newtown
0.00	107.00	Inside	1-1/4"	Sprint
0.00	107.00	Inside	1-1/4" Fiber	Sprint
0.00	98.00	Inside	1-5/8" Coax	Verizon
0.00	98.00	Inside	1-5/8" Fiber	Verizon
0.00	91.00	Inside	3/8" Fiber	AT&T
0.00	91.00	Inside	5/8" DC	AT&T



Structure: CT46132-A-SBA

Type: Tapered
Site Name: Newtown-ferris Rd
Height: 118.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.23093

1/18/2017

Page: 3



0.00	91.00	Inside	7/8"	AT&T
0.00	81.00	Inside	7/8" Coax	T-Mobile
0.00	75.00	Outside	1/2"	Sprint

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
12	2.25" 18J	75.0	Radial

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
1.7500	58.0	60.0	Round

Reactions

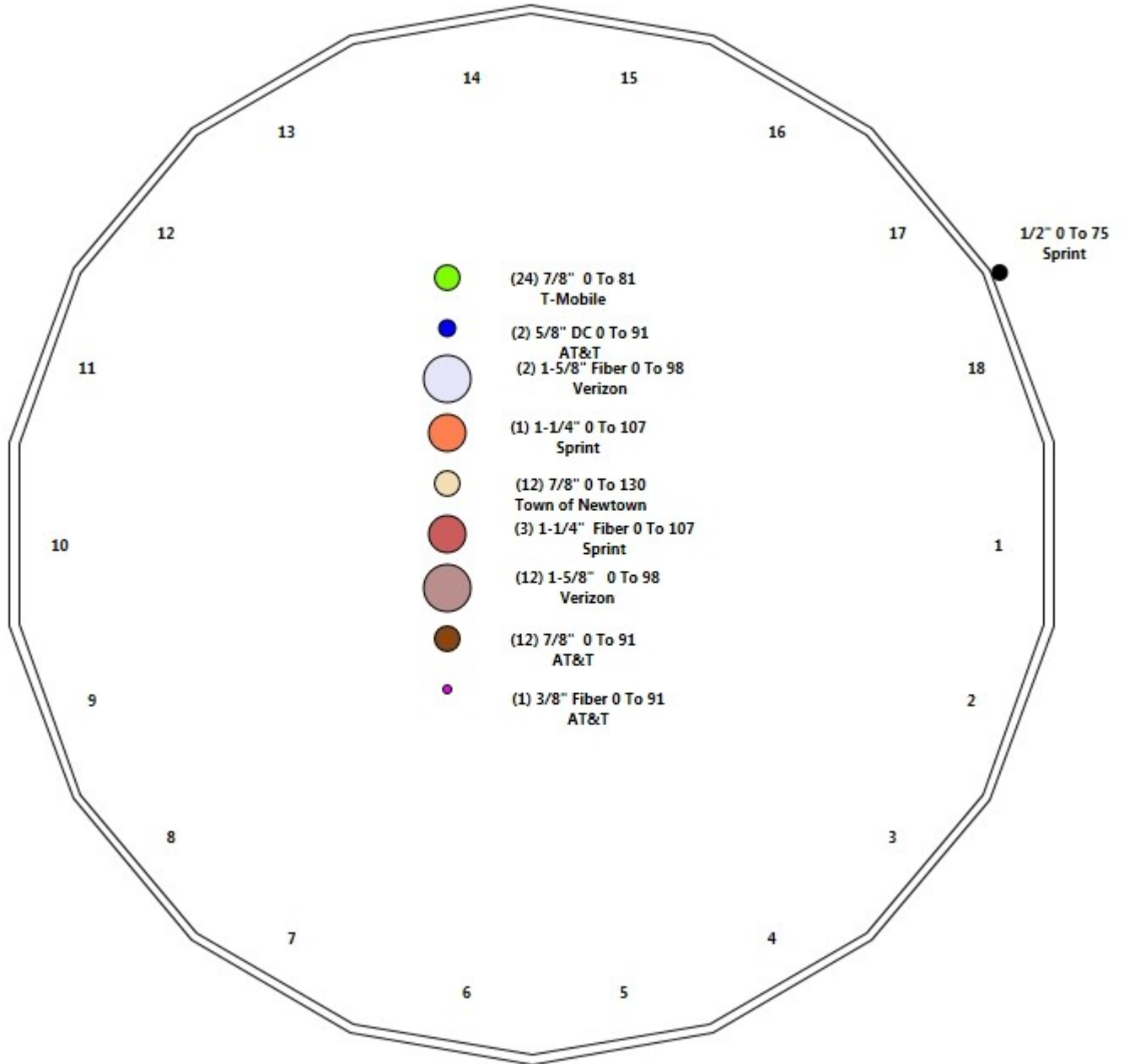
Load Case	Moment	Shear	Axial
1.2D + 1.6W 97 mph Wind	2547.8	28.3	36.2
0.9D + 1.6W 97 mph Wind	2514.5	28.3	27.2
1.2D + 1.0Di + 1.0Wi 50 mph Wind	673.5	7.5	59.0
1.2D + 1.0E	149.9	1.5	36.2
0.9D + 1.0E	147.7	1.5	27.2
1.0D + 1.0W 60 mph Wind	605.0	6.8	30.2

Structure: CT46132-A-SBA - Coax Line Placement

Type: Monopole
Site Name: Newtown-ferris Rd
Height: 118.00 (ft)

1/18/2017

Page: 4



Shaft Properties

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 5

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	49.880	0.3750	65		0.00	7,498
2	18	49.580	0.3125	65	Slip	57.00	4,588
3	18	26.707	0.1875	65	Slip	41.00	1,076
Total Shaft Weight:							13,161

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	43.25	0.00	51.03	11851.90	18.93	115.33	31.73	49.88	37.32	4635.98	13.51	84.62	0.230932
2	33.45	45.13	32.87	4561.13	17.47	107.05	22.00	94.71	21.51	1278.87	11.00	70.41	0.230932
3	23.17	91.29	13.68	912.41	20.38	123.56	17.00	118.00	10.01	357.31	14.58	90.67	0.230932

Load Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (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	118.00	DB222	1	16.00	2.25	1.00	83.66	8.168	1.00	0.00	12.00
2	118.00	ANT150D	1	6.00	1.00	1.00	14.49	2.675	1.00	0.00	1.42
3	118.00	DB844H90E-XY	9	14.00	3.05	1.00	121.41	3.900	1.00	0.00	0.80
4	118.00	Low Profile Platform	1	1800.00	28.47	1.00	3716.82	35.191	1.00	0.00	0.00
5	107.00	Universal Ring Mount	1	350.00	5.00	1.00	633.46	8.374	1.00	0.00	0.00
6	107.00	1900 MHz 4X45 RRH	3	60.00	2.71	0.67	138.07	3.932	0.69	0.00	0.00
7	107.00	800 MHz 2X50W RRH w/ Filter	3	64.00	2.40	0.67	138.64	3.482	0.69	0.00	0.00
8	107.00	ALU 800MHz External Notch Filt	3	8.80	0.78	0.67	25.86	1.405	0.69	0.00	0.00
9	107.00	TD-RRH8x20-25	3	70.00	4.05	0.67	176.05	4.834	0.69	0.00	0.00
10	107.00	ACU-A20-N	4	1.00	0.14	0.67	5.15	0.427	0.69	0.00	0.00
11	105.00	Low Profile Platform	1	2000.00	27.33	1.00	4105.08	33.707	1.00	0.00	0.00
12	105.00	APXVSP18-C-A20	3	57.00	8.02	0.83	223.80	10.716	0.85	0.00	0.00
13	105.00	APXVTM14-C-120	3	56.00	6.34	0.79	209.69	7.412	0.81	0.00	0.00
14	98.00	Low Profile Platform	1	2100.00	23.10	1.00	4295.14	28.453	1.00	0.00	0.00
15	98.00	RFS APL868013	2	6.30	2.86	1.15	108.04	3.687	1.15	0.00	0.00
16	98.00	Andrew SBNHH-1D85C	6	49.60	11.39	0.84	299.40	12.976	0.86	0.00	0.00
17	98.00	Alcatel Lucent RRH2x60-700	3	60.00	3.50	0.67	143.65	4.256	0.69	0.00	0.00
18	98.00	Alcatel Lucent RRH4X45-AWS	3	56.80	2.54	0.67	136.61	3.203	0.69	0.00	0.00
19	98.00	Alcatel-Lucent RRH2X60-1900A-4R	3	46.00	1.88	0.67	124.65	2.439	0.69	0.00	0.00
20	98.00	Rfs Celwave DB-T1-6Z-8AB-OZ	2	18.90	4.80	0.67	155.62	5.635	0.69	0.00	0.00
21	98.00	Andrew DB846H80E-SX	4	16.00	5.01	1.12	167.39	6.169	1.14	0.00	0.00
22	91.00	Low Profile Platform	1	1349.00	17.46	1.00	2468.76	30.794	1.00	0.00	0.00
23	91.00	7770.00	3	35.00	5.50	0.73	162.16	6.510	0.75	0.00	0.00
24	91.00	P65-16-XLH-RR	3	53.00	8.16	0.75	210.00	10.826	0.75	0.00	0.00
25	91.00	LGP21401	6	14.10	1.29	0.67	37.88	2.085	0.69	0.00	0.00
26	91.00	RRUS-11	6	55.00	4.42	0.67	140.57	5.846	0.69	0.00	0.00
27	91.00	FD Series DC Surge Protection	1	18.00	3.73	0.67	88.46	5.028	0.69	0.00	0.00
28	85.00	V-brace kit	1	421.10	12.00	1.00	768.27	21.102	1.00	0.00	0.00
29	81.00	Platform w/ Handrail kit	1	1868.20	37.16	1.00	3400.99	65.209	1.00	0.00	0.00
30	81.00	RFS APXV18-209014	3	18.70	3.58	0.74	100.52	4.451	0.76	0.00	0.00
31	81.00	Commscope LNX-6515DS-A1M	3	49.80	11.47	0.80	265.63	14.542	0.82	0.00	0.00
32	81.00	RFS ATMAA1412D-1A2	3	13.00	1.17	0.67	37.99	1.906	0.69	0.00	0.00
33	81.00	S20057A1	3	11.00	0.82	0.67	28.75	1.476	0.69	0.00	0.00
34	81.00	Kathrein 782 11054	3	1.80	0.15	0.67	8.11	0.406	0.69	0.00	0.00
35	75.00	GPS	1	10.00	1.00	1.00	37.36	1.664	1.00	0.00	0.00
36	75.00	Standoff Mount	1	40.00	2.63	1.00	114.90	8.199	1.00	0.00	0.00
Totals:			99	12,917.60			31,295.19				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	130.00	(12) 7/8"	0.00	Inside
0.00	107.00	(1) 1-1/4"	0.00	Inside
0.00	107.00	(3) 1-1/4" Fiber	0.00	Inside
0.00	98.00	(12) 1-5/8" Coax	0.00	Inside
0.00	98.00	(2) 1-5/8" Fiber	0.00	Inside

Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
0.00	91.00	(1) 3/8" Fiber		0.00							
0.00	91.00	(2) 5/8" DC		0.00							
0.00	91.00	(12) 7/8"		0.00							
0.00	81.00	(24) 7/8" Coax		0.00							
0.00	75.00	(1) 1/2"		1.00							

Shaft Section Properties

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 8

Increment Length: 2 (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		0.3750	43.250	51.030	11851.9	18.93	115.33	79.1	539.7	0.0
2.00		0.3750	42.788	50.480	11473.0	18.71	114.10	79.4	528.1	345.4
4.00		0.3750	42.326	49.931	11102.3	18.49	112.87	79.7	516.6	341.7
6.00		0.3750	41.864	49.381	10739.6	18.27	111.64	79.9	505.3	337.9
8.00		0.3750	41.403	48.831	10384.9	18.06	110.41	80.2	494.0	334.2
10.00		0.3750	40.941	48.282	10038.1	17.84	109.18	80.4	482.9	330.5
12.00		0.3750	40.479	47.732	9699.1	17.62	107.94	80.7	471.9	326.7
14.00		0.3750	40.017	47.182	9367.9	17.41	106.71	80.9	461.1	323.0
16.00		0.3750	39.555	46.632	9044.2	17.19	105.48	81.2	450.4	319.2
18.00		0.3750	39.093	46.083	8728.1	16.97	104.25	81.4	439.7	315.5
20.00		0.3750	38.631	45.533	8419.5	16.75	103.02	81.7	429.3	311.7
22.00		0.3750	38.169	44.983	8118.2	16.54	101.79	82.0	418.9	308.0
24.00		0.3750	37.708	44.434	7824.2	16.32	100.55	82.2	408.7	304.3
26.00		0.3750	37.246	43.884	7537.4	16.10	99.32	82.5	398.6	300.5
28.00		0.3750	36.784	43.334	7257.7	15.89	98.09	82.5	388.6	296.8
30.00		0.3750	36.322	42.784	6985.0	15.67	96.86	82.5	378.8	293.0
32.00		0.3750	35.860	42.235	6719.2	15.45	95.63	82.5	369.1	289.3
34.00		0.3750	35.398	41.685	6460.2	15.23	94.40	82.5	359.5	285.6
36.00		0.3750	34.936	41.135	6208.0	15.02	93.16	82.5	350.0	281.8
38.00		0.3750	34.475	40.586	5962.4	14.80	91.93	82.5	340.6	278.1
40.00		0.3750	34.013	40.036	5723.4	14.58	90.70	82.5	331.4	274.3
42.00		0.3750	33.551	39.486	5490.9	14.37	89.47	82.5	322.3	270.6
44.00		0.3750	33.089	38.936	5264.7	14.15	88.24	82.5	313.4	266.9
45.13	Bot - Section 2	0.3750	32.828	38.626	5139.7	14.03	87.54	82.5	308.4	149.1
46.00		0.3750	32.627	38.387	5044.9	13.93	87.01	82.5	304.5	211.0
48.00		0.3750	32.165	37.837	4831.2	13.71	85.77	82.5	295.8	480.2
49.88	Top - Section 1	0.3125	32.356	31.782	4123.0	16.85	103.54	0.0	0.0	445.1
50.00		0.3125	32.328	31.755	4112.4	16.83	103.45	81.6	250.5	13.0
52.00		0.3125	31.867	31.297	3936.9	16.57	101.97	81.9	243.3	214.5
54.00		0.3125	31.405	30.838	3766.6	16.31	100.49	82.2	236.2	211.4
56.00		0.3125	30.943	30.380	3601.2	16.05	99.02	82.5	229.2	208.3
58.00		0.3125	30.481	29.922	3440.7	15.79	97.54	82.5	222.3	205.2
60.00		0.3125	30.019	29.464	3285.1	15.53	96.06	82.5	215.5	202.1
62.00		0.3125	29.557	29.006	3134.3	15.27	94.58	82.5	208.9	199.0
64.00		0.3125	29.095	28.548	2988.1	15.01	93.11	82.5	202.3	195.8
66.00		0.3125	28.633	28.090	2846.6	14.75	91.63	82.5	195.8	192.7
68.00		0.3125	28.172	27.632	2709.5	14.49	90.15	82.5	189.4	189.6
70.00		0.3125	27.710	27.174	2577.0	14.22	88.67	82.5	183.2	186.5
72.00		0.3125	27.248	26.716	2448.9	13.96	87.19	82.5	177.0	183.4
74.00		0.3125	26.786	26.257	2325.0	13.70	85.72	82.5	171.0	180.3
75.00		0.3125	26.555	26.028	2264.7	13.57	84.98	82.5	168.0	89.0
76.00		0.3125	26.324	25.799	2205.5	13.44	84.24	82.5	165.0	88.2
78.00		0.3125	25.862	25.341	2090.0	13.18	82.76	82.5	159.2	174.0
80.00		0.3125	25.400	24.883	1978.7	12.92	81.28	82.5	153.4	170.9
81.00		0.3125	25.169	24.654	1924.6	12.79	80.54	82.5	150.6	84.3
82.00		0.3125	24.939	24.425	1871.5	12.66	79.80	82.5	147.8	83.5
84.00		0.3125	24.477	23.967	1768.1	12.40	78.33	82.5	142.3	164.7
85.00		0.3125	24.246	23.738	1717.9	12.27	77.59	82.5	139.6	81.2
86.00		0.3125	24.015	23.509	1668.7	12.14	76.85	82.5	136.9	80.4
88.00		0.3125	23.553	23.051	1573.0	11.88	75.37	82.5	131.5	158.4

Increment Length: 2 (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)
90.00		0.3125	23.091	22.593	1481.1	11.62	73.89	82.5	126.3	155.3
91.00		0.3125	22.860	22.364	1436.5	11.49	73.15	82.5	123.8	76.5
91.29	Bot - Section 3	0.3125	22.792	22.296	1423.6	11.45	72.94	82.5	123.0	22.3
92.00		0.3125	22.629	22.135	1392.8	11.36	72.41	82.5	121.2	86.2
94.00		0.3125	22.167	21.677	1308.1	11.10	70.94	82.5	116.2	240.6
94.71	Top - Section 2	0.1875	22.378	13.206	821.6	19.63	119.35	0.0	0.0	84.2
96.00		0.1875	22.081	13.029	789.0	19.35	117.76	78.6	70.4	57.6
98.00		0.1875	21.619	12.754	740.1	18.92	115.30	79.1	67.4	87.7
100.00		0.1875	21.157	12.479	693.3	18.49	112.84	79.7	64.5	85.9
102.00		0.1875	20.695	12.204	648.5	18.05	110.37	80.2	61.7	84.0
104.00		0.1875	20.233	11.929	605.6	17.62	107.91	80.7	59.0	82.1
105.00		0.1875	20.002	11.792	584.9	17.40	106.68	80.9	57.6	40.4
106.00		0.1875	19.771	11.654	564.7	17.18	105.45	81.2	56.3	39.9
107.00		0.1875	19.540	11.517	545.0	16.97	104.21	81.4	54.9	39.4
108.00		0.1875	19.309	11.379	525.7	16.75	102.98	81.7	53.6	39.0
110.00		0.1875	18.847	11.105	488.5	16.31	100.52	82.2	51.1	76.5
112.00		0.1875	18.386	10.830	453.1	15.88	98.06	82.5	48.5	74.6
114.00		0.1875	17.924	10.555	419.5	15.45	95.59	82.5	46.1	72.8
116.00		0.1875	17.462	10.280	387.6	15.01	93.13	82.5	43.7	70.9
118.00		0.1875	17.000	10.005	357.3	14.58	90.67	82.5	41.4	69.0
										13161.4

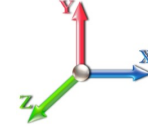
Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

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	19.450	21.40	327.29	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	19.450	21.40	323.80	0.650	0.000	2.00	7.280	4.73	162.0	0.0	414.5
4.00		1.00	0.85	19.450	21.40	320.30	0.650	0.000	2.00	7.202	4.68	160.3	0.0	410.0
6.00		1.00	0.85	19.450	21.40	316.81	0.650	0.000	2.00	7.124	4.63	158.5	0.0	405.5
8.00		1.00	0.85	19.450	21.40	313.31	0.650	0.000	2.00	7.046	4.58	156.8	0.0	401.0
10.00		1.00	0.85	19.450	21.40	309.82	0.650	0.000	2.00	6.968	4.53	155.0	0.0	396.5
12.00		1.00	0.85	19.450	21.40	306.32	0.650	0.000	2.00	6.890	4.48	153.3	0.0	392.1
14.00		1.00	0.85	19.450	21.40	302.83	0.650	0.000	2.00	6.811	4.43	151.6	0.0	387.6
16.00		1.00	0.86	19.690	21.66	301.17	0.650	0.000	2.00	6.733	4.38	151.7	0.0	383.1
18.00		1.00	0.88	20.185	22.20	301.37	0.650	0.000	2.00	6.655	4.33	153.7	0.0	378.6
20.00		1.00	0.90	20.638	22.70	301.13	0.650	0.000	2.00	6.577	4.28	155.3	0.0	374.1
22.00		1.00	0.92	21.056	23.16	300.53	0.650	0.000	2.00	6.499	4.22	156.5	0.0	369.6
24.00		1.00	0.94	21.445	23.59	299.63	0.650	0.000	2.00	6.421	4.17	157.5	0.0	365.1
26.00		1.00	0.95	21.810	23.99	298.46	0.650	0.000	2.00	6.342	4.12	158.2	0.0	360.6
28.00		1.00	0.97	22.152	24.37	297.07	0.650	0.000	2.00	6.264	4.07	158.8	0.0	356.1
30.00		1.00	0.98	22.477	24.72	295.48	0.650	0.000	2.00	6.186	4.02	159.1	0.0	351.7
32.00		1.00	1.00	22.784	25.06	293.71	0.650	0.000	2.00	6.108	3.97	159.2	0.0	347.2
34.00		1.00	1.01	23.077	25.38	291.78	0.650	0.000	2.00	6.030	3.92	159.2	0.0	342.7
36.00		1.00	1.02	23.356	25.69	289.71	0.650	0.000	2.00	5.952	3.87	159.0	0.0	338.2
38.00		1.00	1.03	23.623	25.99	287.51	0.650	0.000	2.00	5.873	3.82	158.7	0.0	333.7
40.00		1.00	1.04	23.880	26.27	285.20	0.650	0.000	2.00	5.795	3.77	158.3	0.0	329.2
42.00		1.00	1.05	24.126	26.54	282.77	0.650	0.000	2.00	5.717	3.72	157.8	0.0	324.7
44.00		1.00	1.06	24.364	26.80	280.25	0.650	0.000	2.00	5.639	3.67	157.2	0.0	320.2
45.13 Bot - Section 2		1.00	1.07	24.494	26.94	278.78	0.650	0.000	1.13	3.151	2.05	88.3	0.0	178.9
46.00		1.00	1.07	24.593	27.05	277.63	0.650	0.000	0.87	2.455	1.60	69.1	0.0	253.2
48.00		1.00	1.08	24.814	27.30	274.93	0.650	0.000	2.00	5.588	3.63	158.6	0.0	576.2
49.88 Top - Section 1		1.00	1.09	25.016	27.52	272.32	0.650	0.000	1.88	5.182	3.37	148.3	0.0	534.1
50.00		1.00	1.09	25.029	27.53	277.52	0.650	0.000	0.12	0.328	0.21	9.4	0.0	15.6
52.00		1.00	1.10	25.236	27.76	274.68	0.650	0.000	2.00	5.432	3.53	156.8	0.0	257.5
54.00		1.00	1.11	25.437	27.98	271.78	0.650	0.000	2.00	5.354	3.48	155.8	0.0	253.7
56.00		1.00	1.12	25.633	28.20	268.81	0.650	0.000	2.00	5.276	3.43	154.7	0.0	250.0
58.00		1.00	1.13	25.823	28.41	265.78	0.650	0.000	2.00	5.198	3.38	153.5	0.0	246.2
60.00		1.00	1.14	26.008	28.61	262.68	0.650	0.000	2.00	5.119	3.33	152.3	0.0	242.5
62.00		1.00	1.14	26.188	28.81	259.54	0.650	0.000	2.00	5.041	3.28	151.0	0.0	238.8
64.00		1.00	1.15	26.364	29.00	256.34	0.650	0.000	2.00	4.963	3.23	149.7	0.0	235.0
66.00		1.00	1.16	26.535	29.19	253.09	0.650	0.000	2.00	4.885	3.18	148.3	0.0	231.3
68.00		1.00	1.17	26.702	29.37	249.79	0.650	0.000	2.00	4.807	3.12	146.8	0.0	227.5
70.00		1.00	1.17	26.866	29.55	246.44	0.650	0.000	2.00	4.729	3.07	145.3	0.0	223.8
72.00		1.00	1.18	27.026	29.73	243.06	0.650	0.000	2.00	4.650	3.02	143.8	0.0	220.0
74.00		1.00	1.19	27.182	29.90	239.63	0.650	0.000	2.00	4.572	2.97	142.2	0.0	216.3
75.00 Appurtenance(s)		1.00	1.19	27.259	29.98	237.90	0.650	0.000	1.00	2.257	1.47	70.4	0.0	106.8
76.00		1.00	1.19	27.335	30.07	236.16	0.650	0.000	1.00	2.237	1.45	70.0	0.0	105.8
78.00		1.00	1.20	27.485	30.23	232.65	0.650	0.000	2.00	4.416	2.87	138.8	0.0	208.8
80.00		1.00	1.21	27.632	30.39	229.10	0.650	0.000	2.00	4.338	2.82	137.1	0.0	205.1
81.00 Appurtenance(s)		1.00	1.21	27.704	30.47	227.32	0.650	0.000	1.00	2.140	1.39	67.8	0.0	101.1
82.00		1.00	1.21	27.776	30.55	225.52	0.650	0.000	1.00	2.120	1.38	67.4	0.0	100.2
84.00		1.00	1.22	27.917	30.71	221.91	0.650	0.000	2.00	4.181	2.72	133.5	0.0	197.6

Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 11

85.00 Appurtenance(s)	1.00	1.22	27.987	30.79	220.09	0.650	0.000	1.00	2.061	1.34	66.0	0.0	97.4
86.00	1.00	1.23	28.056	30.86	218.26	0.650	0.000	1.00	2.042	1.33	65.5	0.0	96.5
88.00	1.00	1.23	28.192	31.01	214.58	0.650	0.000	2.00	4.025	2.62	129.8	0.0	190.1
90.00	1.00	1.24	28.325	31.16	210.87	0.650	0.000	2.00	3.947	2.57	127.9	0.0	186.4
91.00 Appurtenance(s)	1.00	1.24	28.391	31.23	209.01	0.650	0.000	1.00	1.944	1.26	63.1	0.0	91.8
91.29 Bot - Section 3	1.00	1.24	28.411	31.25	208.46	0.650	0.000	0.29	0.567	0.37	18.4	0.0	26.7
92.00	1.00	1.24	28.457	31.30	207.13	0.650	0.000	0.71	1.380	0.90	44.9	0.0	103.4
94.00	1.00	1.25	28.586	31.44	203.36	0.650	0.000	2.00	3.854	2.51	126.0	0.0	288.7
94.71 Top - Section 2	1.00	1.25	28.631	31.49	202.02	0.650	0.000	0.71	1.349	0.88	44.2	0.0	101.0
96.00	1.00	1.25	28.713	31.58	203.02	0.650	0.000	1.29	2.427	1.58	79.7	0.0	69.1
98.00 Appurtenance(s)	1.00	1.26	28.838	31.72	199.20	0.650	0.000	2.00	3.698	2.40	122.0	0.0	105.3
100.00	1.00	1.27	28.961	31.86	195.36	0.650	0.000	2.00	3.620	2.35	119.9	0.0	103.0
102.00	1.00	1.27	29.082	31.99	191.50	0.650	0.000	2.00	3.541	2.30	117.8	0.0	100.8
104.00	1.00	1.28	29.201	32.12	187.61	0.650	0.000	2.00	3.463	2.25	115.7	0.0	98.5
105.00 Appurtenance(s)	1.00	1.28	29.260	32.19	185.65	0.650	0.000	1.00	1.702	1.11	57.0	0.0	48.4
106.00	1.00	1.28	29.318	32.25	183.69	0.650	0.000	1.00	1.683	1.09	56.4	0.0	47.9
107.00 Appurtenance(s)	1.00	1.28	29.376	32.31	181.72	0.650	0.000	1.00	1.663	1.08	55.9	0.0	47.3
108.00	1.00	1.29	29.434	32.38	179.75	0.650	0.000	1.00	1.644	1.07	55.3	0.0	46.7
110.00	1.00	1.29	29.548	32.50	175.79	0.650	0.000	2.00	3.229	2.10	109.1	0.0	91.8
112.00	1.00	1.30	29.660	32.63	171.81	0.650	0.000	2.00	3.151	2.05	106.9	0.0	89.6
114.00	1.00	1.30	29.771	32.75	167.81	0.650	0.000	2.00	3.072	2.00	104.6	0.0	87.3
116.00	1.00	1.31	29.880	32.87	163.78	0.650	0.000	2.00	2.994	1.95	102.4	0.0	85.1
118.00 Appurtenance(s)	1.00	1.31	29.988	32.99	159.74	0.650	0.000	2.00	2.916	1.90	100.0	0.0	82.8
Totals:								118.00			8,405.6		15,793.7

Discrete Appurtenance Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 12

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

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	118.00	DB844H90E-XY	9	30.030	33.033	1.00	1.00	27.45	151.20	0.000	0.800	1450.83	0.00	1160.66
2	118.00	ANT150D	1	30.063	33.070	1.00	1.00	1.00	7.20	0.000	1.420	52.91	0.00	75.13
3	118.00	DB222	1	30.605	33.666	1.00	1.00	2.25	19.20	0.000	12.000	121.20	0.00	1454.37
4	118.00	Low Profile Platform	1	29.988	32.986	1.00	1.00	28.47	2160.00	0.000	0.000	1502.60	0.00	0.00
5	107.00	800 MHz 2X50W RRH w/	3	29.376	32.314	0.54	0.80	3.86	230.40	0.000	0.000	199.53	0.00	0.00
6	107.00	Universal Ring Mount	1	29.376	32.314	1.00	1.00	5.00	420.00	0.000	0.000	258.51	0.00	0.00
7	107.00	1900 MHz 4X45 RRH	3	29.376	32.314	0.54	0.80	4.36	216.00	0.000	0.000	225.30	0.00	0.00
8	107.00	TD-RRH8x20-25	3	29.376	32.314	0.54	0.80	6.51	252.00	0.000	0.000	336.71	0.00	0.00
9	107.00	ACU-A20-N	4	29.376	32.314	0.54	0.80	0.30	4.80	0.000	0.000	15.52	0.00	0.00
10	107.00	ALU 800MHz External	3	29.376	32.314	0.54	0.80	1.25	31.68	0.000	0.000	64.85	0.00	0.00
11	105.00	APXVSPP18-C-A20	3	29.260	32.186	0.66	0.80	15.98	205.20	0.000	0.000	822.71	0.00	0.00
12	105.00	Low Profile Platform	1	29.260	32.186	1.00	1.00	27.33	2400.00	0.000	0.000	1407.42	0.00	0.00
13	105.00	APXVTM14-C-120	3	29.260	32.186	0.63	0.80	12.02	201.60	0.000	0.000	619.03	0.00	0.00
14	98.00	Andrew DB846H80E-SX	4	28.838	31.722	0.90	0.80	17.96	76.80	0.000	0.000	911.34	0.00	0.00
15	98.00	Rfs Celwave	2	28.838	31.722	0.54	0.80	5.15	45.36	0.000	0.000	261.16	0.00	0.00
16	98.00	Alcatel-Lucent	3	28.838	31.722	0.54	0.80	3.02	165.60	0.000	0.000	153.43	0.00	0.00
17	98.00	Alcatel Lucent	3	28.838	31.722	0.54	0.80	4.08	204.48	0.000	0.000	207.30	0.00	0.00
18	98.00	Alcatel Lucent	3	28.838	31.722	0.54	0.80	5.63	216.00	0.000	0.000	285.65	0.00	0.00
19	98.00	Andrew SBNHH-1D85C	6	28.838	31.722	0.67	0.80	45.92	357.12	0.000	0.000	2330.88	0.00	0.00
20	98.00	RFS APL868013	2	28.838	31.722	0.92	0.80	5.27	15.12	0.000	0.000	267.32	0.00	0.00
21	98.00	Low Profile Platform	1	28.838	31.722	1.00	1.00	23.10	2520.00	0.000	0.000	1172.43	0.00	0.00
22	91.00	FD Series DC Surge	1	28.391	31.231	0.54	0.80	2.00	21.60	0.000	0.000	99.90	0.00	0.00
23	91.00	RRUS-11	6	28.391	31.231	0.54	0.80	14.21	396.00	0.000	0.000	710.29	0.00	0.00
24	91.00	LGP21401	6	28.391	31.231	0.54	0.80	4.15	101.52	0.000	0.000	207.30	0.00	0.00
25	91.00	P65-16-XLH-RR	3	28.391	31.231	0.60	0.80	14.69	190.80	0.000	0.000	733.94	0.00	0.00
26	91.00	7770.00	3	28.391	31.231	0.58	0.80	9.64	126.00	0.000	0.000	481.50	0.00	0.00
27	91.00	Low Profile Platform	1	28.391	31.231	1.00	1.00	17.46	1618.80	0.000	0.000	872.46	0.00	0.00
28	85.00	V-brace kit	1	27.987	30.785	1.00	1.00	12.00	505.32	0.000	0.000	591.08	0.00	0.00
29	81.00	Kathrein 782 11054	3	27.704	30.474	0.54	0.80	0.24	6.48	0.000	0.000	11.76	0.00	0.00
30	81.00	S20057A1	3	27.704	30.474	0.54	0.80	1.32	39.60	0.000	0.000	64.29	0.00	0.00
31	81.00	RFS ATMAA1412D-1A2	3	27.704	30.474	0.54	0.80	1.88	46.80	0.000	0.000	91.73	0.00	0.00
32	81.00	Commscope	3	27.704	30.474	0.64	0.80	22.02	179.28	0.000	0.000	1073.79	0.00	0.00
33	81.00	RFS APXV18-209014	3	27.704	30.474	0.59	0.80	6.36	67.32	0.000	0.000	310.01	0.00	0.00
34	81.00	Platform w/ Handrail kit	1	27.704	30.474	1.00	1.00	37.16	2241.84	0.000	0.000	1811.89	0.00	0.00
35	75.00	Standoff Mount	1	27.259	29.985	1.00	1.00	2.63	48.00	0.000	0.000	126.18	0.00	0.00
36	75.00	GPS	1	27.259	29.985	1.00	1.00	1.00	12.00	0.000	0.000	47.98	0.00	0.00
Totals:								15,501.12				19,900.74		

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

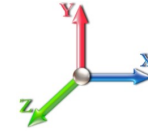


Page: 13

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 27

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		162.00	518.42	0.00	0.00
4.00		160.26	513.93	0.00	0.00
6.00		158.52	509.44	0.00	0.00
8.00		156.78	504.95	0.00	0.00
10.00		155.04	500.46	0.00	0.00
12.00		153.30	495.97	0.00	0.00
14.00		151.56	491.49	0.00	0.00
16.00		151.67	487.00	0.00	0.00
18.00		153.68	482.51	0.00	0.00
20.00		155.28	478.02	0.00	0.00
22.00		156.54	473.53	0.00	0.00
24.00		157.52	469.04	0.00	0.00
26.00		158.25	464.55	0.00	0.00
28.00		158.75	460.06	0.00	0.00
30.00		159.07	455.57	0.00	0.00
32.00		159.20	451.08	0.00	0.00
34.00		159.19	446.59	0.00	0.00
36.00		159.02	442.10	0.00	0.00
38.00		158.73	437.61	0.00	0.00
40.00		158.32	433.12	0.00	0.00
42.00		157.80	428.63	0.00	0.00
44.00		157.17	424.15	0.00	0.00
45.13		88.31	237.66	0.00	0.00
46.00		69.08	298.42	0.00	0.00
48.00		158.64	680.11	0.00	0.00
49.88		148.30	631.80	0.00	0.00
50.00		9.40	21.80	0.00	0.00
52.00		156.82	361.38	0.00	0.00
54.00		155.80	357.64	0.00	0.00
56.00		154.71	353.90	0.00	0.00
58.00		153.54	350.16	0.00	0.00
60.00		152.32	346.41	0.00	0.00
62.00		151.03	342.67	0.00	0.00
64.00		149.69	338.93	0.00	0.00
66.00		148.29	335.19	0.00	0.00
68.00		146.83	331.45	0.00	0.00
70.00		145.33	327.71	0.00	0.00
72.00		143.78	323.97	0.00	0.00
74.00		142.18	320.23	0.00	0.00
75.00	(2) attachments	244.53	218.71	0.00	0.00
76.00		69.96	157.58	0.00	0.00
78.00		138.85	312.36	0.00	0.00
80.00		137.12	308.62	0.00	0.00
81.00	(16) attachments	3431.30	2734.23	0.00	0.00
82.00		67.37	137.00	0.00	0.00
84.00		133.54	271.19	0.00	0.00

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 14

85.00	(1) attachments	657.08	639.51	0.00	0.00
86.00		65.54	133.25	0.00	0.00
88.00		129.82	263.70	0.00	0.00
90.00		127.90	259.96	0.00	0.00
91.00	(20) attachments	3168.55	2583.30	0.00	0.00
91.29		18.41	35.04	0.00	0.00
92.00		44.94	123.40	0.00	0.00
94.00		126.04	345.21	0.00	0.00
94.71		44.20	121.11	0.00	0.00
96.00		79.71	105.57	0.00	0.00
98.00	(24) attachments	5711.51	3762.30	0.00	0.00
100.00		119.92	124.35	0.00	0.00
102.00		117.82	122.10	0.00	0.00
104.00		115.69	119.86	0.00	0.00
105.00	(7) attachments	2906.14	2865.89	0.00	0.00
106.00		56.44	58.53	0.00	0.00
107.00	(17) attachments	1156.31	1212.84	0.00	0.00
108.00		55.35	54.23	0.00	0.00
110.00		109.14	106.79	0.00	0.00
112.00		106.90	104.54	0.00	0.00
114.00		104.64	102.30	0.00	0.00
116.00		102.35	100.05	0.00	0.00
118.00	(12) attachments	3227.58	2435.41	0.00	2690.16
	Totals:	28,306.35	36,246.56	0.00	2,690.16

Linear Appurtenance Segment Forces (Factored)

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 15

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.38
4.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.38
6.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.38
8.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.38
10.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.450	0.00	0.38
12.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.450	0.00	0.38
14.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.450	0.00	0.38
16.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.690	0.00	0.38
18.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	20.185	0.00	0.38
20.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	20.638	0.00	0.38
22.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	21.056	0.00	0.38
24.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	21.445	0.00	0.38
26.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	21.810	0.00	0.38
28.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	22.152	0.00	0.38
30.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	22.477	0.00	0.38
32.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	22.784	0.00	0.38
34.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	23.077	0.00	0.38
36.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	23.356	0.00	0.38
38.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	23.623	0.00	0.38
40.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	23.880	0.00	0.38
42.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	24.126	0.00	0.38
44.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	24.364	0.00	0.38
45.13	1/2"	Yes	1.13	0.000	0.65	0.06	0.00	0.019	0.000	24.494	0.00	0.22
46.00	1/2"	Yes	0.87	0.000	0.65	0.05	0.00	0.020	0.000	24.593	0.00	0.17
48.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	24.814	0.00	0.38
49.88	1/2"	Yes	1.88	0.000	0.65	0.10	0.00	0.020	0.000	25.016	0.00	0.36
50.00	1/2"	Yes	0.12	0.000	0.65	0.01	0.00	0.020	0.000	25.029	0.00	0.02
52.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	25.236	0.00	0.38
54.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	25.437	0.00	0.38
56.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	25.633	0.00	0.38
58.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	25.823	0.00	0.38
60.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	26.008	0.00	0.38
62.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	26.188	0.00	0.38
64.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.022	0.000	26.364	0.00	0.38
66.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.022	0.000	26.535	0.00	0.38
68.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	26.702	0.00	0.38
70.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	26.866	0.00	0.38
72.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	27.026	0.00	0.38
74.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.024	0.000	27.182	0.00	0.38
75.00	1/2"	Yes	1.00	0.000	0.65	0.05	0.00	0.024	0.000	27.259	0.00	0.19
Totals:											0.0	14.4

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



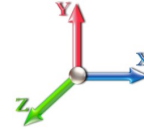
Page: 16

Load Case: 1.2D + 1.6W 97 mph Wind

Iterations 27

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	-36.22	-28.35	0.00	-2547.8	0.00	2547.82	3634.70	1817.35	6397.77	3203.64	0.00	0.000	0.000	0.805
2.00	-35.64	-28.26	0.00	-2491.1	0.00	2491.13	3607.15	1803.57	6280.28	3144.81	0.03	-0.121	0.000	0.802
4.00	-35.06	-28.17	0.00	-2434.6	0.00	2434.62	3579.34	1789.67	6163.42	3086.29	0.10	-0.243	0.000	0.799
6.00	-34.49	-28.09	0.00	-2378.2	0.00	2378.27	3551.29	1775.64	6047.19	3028.09	0.23	-0.366	0.000	0.795
8.00	-33.93	-28.00	0.00	-2322.1	0.00	2322.11	3522.98	1761.49	5931.61	2970.21	0.41	-0.491	0.000	0.792
10.00	-33.37	-27.91	0.00	-2266.1	0.00	2266.11	3494.42	1747.21	5816.69	2912.67	0.65	-0.617	0.000	0.788
12.00	-32.81	-27.83	0.00	-2210.2	0.00	2210.29	3465.61	1732.80	5702.44	2855.46	0.93	-0.744	0.000	0.784
14.00	-32.26	-27.74	0.00	-2154.6	0.00	2154.64	3436.54	1718.27	5588.89	2798.60	1.27	-0.872	0.000	0.780
16.00	-31.71	-27.65	0.00	-2099.1	0.00	2099.16	3407.22	1703.61	5476.05	2742.09	1.66	-1.001	0.000	0.775
18.00	-31.17	-27.56	0.00	-2043.8	0.00	2043.85	3377.65	1688.83	5363.92	2685.95	2.11	-1.131	0.000	0.770
20.00	-30.63	-27.47	0.00	-1988.7	0.00	1988.73	3347.83	1673.91	5252.53	2630.17	2.61	-1.263	0.000	0.766
22.00	-30.10	-27.37	0.00	-1933.8	0.00	1933.80	3317.75	1658.87	5141.89	2574.76	3.17	-1.395	0.000	0.760
24.00	-29.57	-27.27	0.00	-1879.0	0.00	1879.06	3287.42	1643.71	5032.01	2519.74	3.79	-1.529	0.000	0.755
26.00	-29.05	-27.17	0.00	-1824.5	0.00	1824.53	3256.84	1628.42	4922.91	2465.11	4.46	-1.663	0.000	0.749
28.00	-28.53	-27.06	0.00	-1770.1	0.00	1770.19	3219.51	1609.75	4804.91	2406.03	5.18	-1.799	0.000	0.745
30.00	-28.01	-26.96	0.00	-1716.0	0.00	1716.07	3178.67	1589.33	4683.16	2345.06	5.96	-1.936	0.000	0.741
32.00	-27.50	-26.85	0.00	-1662.1	0.00	1662.16	3137.83	1568.91	4562.98	2284.88	6.81	-2.073	0.000	0.737
34.00	-27.00	-26.74	0.00	-1608.4	0.00	1608.47	3096.99	1548.49	4444.36	2225.48	7.70	-2.212	0.000	0.732
36.00	-26.50	-26.62	0.00	-1555.0	0.00	1555.00	3056.15	1528.07	4327.30	2166.87	8.66	-2.351	0.000	0.727
38.00	-26.00	-26.51	0.00	-1501.7	0.00	1501.75	3015.30	1507.65	4211.81	2109.03	9.68	-2.491	0.000	0.721
40.00	-25.51	-26.40	0.00	-1448.7	0.00	1448.73	2974.46	1487.23	4097.87	2051.98	10.75	-2.632	0.000	0.715
42.00	-25.03	-26.28	0.00	-1395.9	0.00	1395.94	2933.62	1466.81	3985.50	1995.71	11.88	-2.773	0.000	0.708
44.00	-24.56	-26.15	0.00	-1343.3	0.00	1343.38	2892.78	1446.39	3874.69	1940.23	13.07	-2.915	0.000	0.701
45.13	-24.30	-26.08	0.00	-1313.8	0.00	1313.83	2869.71	1434.85	3812.78	1909.22	13.77	-2.996	0.000	0.697
46.00	-23.95	-26.04	0.00	-1291.1	0.00	1291.14	2851.94	1425.97	3765.45	1885.52	14.33	-3.059	0.000	0.693
48.00	-23.22	-25.90	0.00	-1239.0	0.00	1239.06	2811.10	1405.55	3657.76	1831.60	15.64	-3.202	0.000	0.685
49.88	-22.57	-25.74	0.00	-1190.3	0.00	1190.37	2333.69	1166.84	3066.96	1535.76	16.93	-3.336	0.000	0.785
50.00	-22.51	-25.77	0.00	-1187.2	0.00	1187.28	2332.20	1166.10	3062.32	1533.44	17.01	-3.345	0.000	0.784
52.00	-22.08	-25.65	0.00	-1135.7	0.00	1135.75	2307.18	1153.59	2985.35	1494.89	18.45	-3.506	0.000	0.770
54.00	-21.67	-25.53	0.00	-1084.4	0.00	1084.45	2281.92	1140.96	2909.02	1456.67	19.95	-3.666	0.000	0.754
56.00	-21.25	-25.42	0.00	-1033.3	0.00	1033.39	2256.40	1128.20	2833.34	1418.77	21.52	-3.826	0.000	0.738
58.00	-20.84	-25.30	0.00	-982.56	0.00	982.56	2223.07	1111.54	2748.96	1376.53	23.15	-3.985	0.000	0.724
60.00	-20.44	-25.18	0.00	-931.97	0.00	931.97	2189.04	1094.52	2665.01	1334.49	24.86	-4.144	0.000	0.708
62.00	-20.04	-25.05	0.00	-881.62	0.00	881.62	2155.00	1077.50	2582.36	1293.10	26.63	-4.301	0.000	0.692
64.00	-19.65	-24.93	0.00	-831.51	0.00	831.51	2120.97	1060.48	2501.02	1252.37	28.46	-4.456	0.000	0.674
66.00	-19.26	-24.81	0.00	-781.64	0.00	781.64	2086.94	1043.47	2420.97	1212.28	30.36	-4.610	0.000	0.655
68.00	-18.88	-24.69	0.00	-732.03	0.00	732.03	2052.90	1026.45	2342.23	1172.85	32.32	-4.761	0.000	0.634
70.00	-18.50	-24.56	0.00	-682.66	0.00	682.66	2018.87	1009.43	2264.79	1134.08	34.35	-4.910	0.000	0.612
72.00	-18.13	-24.43	0.00	-633.54	0.00	633.54	1984.83	992.42	2188.65	1095.95	36.43	-5.055	0.000	0.588
74.00	-17.78	-24.30	0.00	-584.67	0.00	584.67	1950.80	975.40	2113.81	1058.48	38.58	-5.197	0.000	0.562
75.00	-17.55	-24.06	0.00	-560.37	0.00	560.37	1933.78	966.89	2076.88	1039.98	39.67	-5.267	0.000	0.549
76.00	-17.36	-24.00	0.00	-536.32	0.00	536.32	1916.76	958.38	2040.27	1021.65	40.78	-5.336	0.000	0.535
78.00	-17.01	-23.87	0.00	-488.31	0.00	488.31	1882.73	941.37	1968.04	985.48	43.04	-5.468	0.000	0.505
80.00	-16.67	-23.73	0.00	-440.57	0.00	440.57	1848.70	924.35	1897.11	949.96	45.36	-5.594	0.000	0.473
81.00	-14.27	-20.07	0.00	-416.84	0.00	416.84	1831.68	915.84	1862.13	932.45	46.54	-5.656	0.000	0.455
82.00	-14.11	-20.01	0.00	-396.77	0.00	396.77	1814.66	907.33	1827.48	915.10	47.73	-5.716	0.000	0.442
84.00	-13.82	-19.87	0.00	-356.76	0.00	356.76	1780.63	890.31	1759.15	880.88	50.14	-5.831	0.000	0.413
85.00	-13.24	-19.16	0.00	-336.89	0.00	336.89	1763.61	881.81	1725.48	864.02	51.37	-5.886	0.000	0.398

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 17
	Struct Class: II	



86.00	-13.08	-19.10	0.00	-317.73	0.00	317.73	1746.59	873.30	1692.13	847.32	52.60	-5.941	0.000	0.383
88.00	-12.80	-18.97	0.00	-279.53	0.00	279.53	1712.56	856.28	1626.40	814.41	55.11	-6.042	0.000	0.351
90.00	-12.53	-18.83	0.00	-241.60	0.00	241.60	1678.53	839.26	1561.98	782.15	57.66	-6.137	0.000	0.317
91.00	-10.30	-15.40	0.00	-222.78	0.00	222.78	1661.51	830.75	1530.26	766.27	58.95	-6.181	0.000	0.297
91.29	-10.26	-15.38	0.00	-218.26	0.00	218.26	1656.52	828.26	1521.01	761.64	59.33	-6.194	0.000	0.293
92.00	-10.13	-15.34	0.00	-207.39	0.00	207.39	1644.49	822.25	1498.86	750.54	60.24	-6.224	0.000	0.283
94.00	-9.78	-15.18	0.00	-176.72	0.00	176.72	1610.46	805.23	1437.04	719.59	62.86	-6.303	0.000	0.252
94.71	-9.66	-15.13	0.00	-165.94	0.00	165.94	930.70	465.35	848.15	424.70	63.80	-6.329	0.000	0.402
96.00	-9.54	-15.05	0.00	-146.42	0.00	146.42	922.07	461.04	828.91	415.07	65.51	-6.374	0.000	0.364
98.00	-6.43	-8.97	0.00	-116.31	0.00	116.31	908.49	454.24	799.32	400.25	68.20	-6.469	0.000	0.298
100.00	-6.31	-8.84	0.00	-98.38	0.00	98.38	894.64	447.32	770.03	385.59	70.92	-6.551	0.000	0.263
102.00	-6.19	-8.72	0.00	-80.70	0.00	80.70	880.55	440.27	741.05	371.08	73.68	-6.625	0.000	0.225
104.00	-6.08	-8.59	0.00	-63.27	0.00	63.27	866.20	433.10	712.41	356.74	76.46	-6.688	0.000	0.185
105.00	-3.57	-5.37	0.00	-54.67	0.00	54.67	858.93	429.47	698.22	349.63	77.86	-6.715	0.000	0.161
106.00	-3.52	-5.31	0.00	-49.30	0.00	49.30	851.60	425.80	684.12	342.57	79.27	-6.741	0.000	0.148
107.00	-2.45	-4.02	0.00	-43.99	0.00	43.99	844.21	422.10	670.11	335.55	80.68	-6.764	0.000	0.134
108.00	-2.40	-3.96	0.00	-39.97	0.00	39.97	836.75	418.38	656.18	328.58	82.10	-6.786	0.000	0.125
110.00	-2.30	-3.84	0.00	-32.04	0.00	32.04	821.65	410.82	628.62	314.78	84.94	-6.825	0.000	0.105
112.00	-2.21	-3.73	0.00	-24.36	0.00	24.36	804.60	402.30	600.19	300.54	87.80	-6.858	0.000	0.084
114.00	-2.12	-3.61	0.00	-16.90	0.00	16.90	784.18	392.09	569.96	285.40	90.67	-6.884	0.000	0.062
116.00	-2.03	-3.50	0.00	-9.68	0.00	9.68	763.76	381.88	540.51	270.66	93.55	-6.902	0.000	0.039
118.00	0.00	-3.23	0.00	-2.69	0.00	2.69	743.33	371.67	511.84	256.30	96.44	-6.911	0.000	0.011

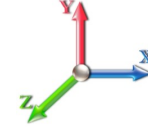
Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 27

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	19.450	21.40	327.29	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	19.450	21.40	323.80	0.650	0.000	2.00	7.280	4.73	162.0	0.0	310.9
4.00		1.00	0.85	19.450	21.40	320.30	0.650	0.000	2.00	7.202	4.68	160.3	0.0	307.5
6.00		1.00	0.85	19.450	21.40	316.81	0.650	0.000	2.00	7.124	4.63	158.5	0.0	304.1
8.00		1.00	0.85	19.450	21.40	313.31	0.650	0.000	2.00	7.046	4.58	156.8	0.0	300.8
10.00		1.00	0.85	19.450	21.40	309.82	0.650	0.000	2.00	6.968	4.53	155.0	0.0	297.4
12.00		1.00	0.85	19.450	21.40	306.32	0.650	0.000	2.00	6.890	4.48	153.3	0.0	294.0
14.00		1.00	0.85	19.450	21.40	302.83	0.650	0.000	2.00	6.811	4.43	151.6	0.0	290.7
16.00		1.00	0.86	19.690	21.66	301.17	0.650	0.000	2.00	6.733	4.38	151.7	0.0	287.3
18.00		1.00	0.88	20.185	22.20	301.37	0.650	0.000	2.00	6.655	4.33	153.7	0.0	283.9
20.00		1.00	0.90	20.638	22.70	301.13	0.650	0.000	2.00	6.577	4.28	155.3	0.0	280.6
22.00		1.00	0.92	21.056	23.16	300.53	0.650	0.000	2.00	6.499	4.22	156.5	0.0	277.2
24.00		1.00	0.94	21.445	23.59	299.63	0.650	0.000	2.00	6.421	4.17	157.5	0.0	273.8
26.00		1.00	0.95	21.810	23.99	298.46	0.650	0.000	2.00	6.342	4.12	158.2	0.0	270.5
28.00		1.00	0.97	22.152	24.37	297.07	0.650	0.000	2.00	6.264	4.07	158.8	0.0	267.1
30.00		1.00	0.98	22.477	24.72	295.48	0.650	0.000	2.00	6.186	4.02	159.1	0.0	263.7
32.00		1.00	1.00	22.784	25.06	293.71	0.650	0.000	2.00	6.108	3.97	159.2	0.0	260.4
34.00		1.00	1.01	23.077	25.38	291.78	0.650	0.000	2.00	6.030	3.92	159.2	0.0	257.0
36.00		1.00	1.02	23.356	25.69	289.71	0.650	0.000	2.00	5.952	3.87	159.0	0.0	253.6
38.00		1.00	1.03	23.623	25.99	287.51	0.650	0.000	2.00	5.873	3.82	158.7	0.0	250.3
40.00		1.00	1.04	23.880	26.27	285.20	0.650	0.000	2.00	5.795	3.77	158.3	0.0	246.9
42.00		1.00	1.05	24.126	26.54	282.77	0.650	0.000	2.00	5.717	3.72	157.8	0.0	243.5
44.00		1.00	1.06	24.364	26.80	280.25	0.650	0.000	2.00	5.639	3.67	157.2	0.0	240.2
45.13 Bot - Section 2		1.00	1.07	24.494	26.94	278.78	0.650	0.000	1.13	3.151	2.05	88.3	0.0	134.2
46.00		1.00	1.07	24.593	27.05	277.63	0.650	0.000	0.87	2.455	1.60	69.1	0.0	189.9
48.00		1.00	1.08	24.814	27.30	274.93	0.650	0.000	2.00	5.588	3.63	158.6	0.0	432.1
49.88 Top - Section 1		1.00	1.09	25.016	27.52	272.32	0.650	0.000	1.88	5.182	3.37	148.3	0.0	400.6
50.00		1.00	1.09	25.029	27.53	277.52	0.650	0.000	0.12	0.328	0.21	9.4	0.0	11.7
52.00		1.00	1.10	25.236	27.76	274.68	0.650	0.000	2.00	5.432	3.53	156.8	0.0	193.1
54.00		1.00	1.11	25.437	27.98	271.78	0.650	0.000	2.00	5.354	3.48	155.8	0.0	190.3
56.00		1.00	1.12	25.633	28.20	268.81	0.650	0.000	2.00	5.276	3.43	154.7	0.0	187.5
58.00		1.00	1.13	25.823	28.41	265.78	0.650	0.000	2.00	5.198	3.38	153.5	0.0	184.7
60.00		1.00	1.14	26.008	28.61	262.68	0.650	0.000	2.00	5.119	3.33	152.3	0.0	181.9
62.00		1.00	1.14	26.188	28.81	259.54	0.650	0.000	2.00	5.041	3.28	151.0	0.0	179.1
64.00		1.00	1.15	26.364	29.00	256.34	0.650	0.000	2.00	4.963	3.23	149.7	0.0	176.3
66.00		1.00	1.16	26.535	29.19	253.09	0.650	0.000	2.00	4.885	3.18	148.3	0.0	173.5
68.00		1.00	1.17	26.702	29.37	249.79	0.650	0.000	2.00	4.807	3.12	146.8	0.0	170.6
70.00		1.00	1.17	26.866	29.55	246.44	0.650	0.000	2.00	4.729	3.07	145.3	0.0	167.8
72.00		1.00	1.18	27.026	29.73	243.06	0.650	0.000	2.00	4.650	3.02	143.8	0.0	165.0
74.00		1.00	1.19	27.182	29.90	239.63	0.650	0.000	2.00	4.572	2.97	142.2	0.0	162.2
75.00 Appurtenance(s)		1.00	1.19	27.259	29.98	237.90	0.650	0.000	1.00	2.257	1.47	70.4	0.0	80.1
76.00		1.00	1.19	27.335	30.07	236.16	0.650	0.000	1.00	2.237	1.45	70.0	0.0	79.4
78.00		1.00	1.20	27.485	30.23	232.65	0.650	0.000	2.00	4.416	2.87	138.8	0.0	156.6
80.00		1.00	1.21	27.632	30.39	229.10	0.650	0.000	2.00	4.338	2.82	137.1	0.0	153.8
81.00 Appurtenance(s)		1.00	1.21	27.704	30.47	227.32	0.650	0.000	1.00	2.140	1.39	67.8	0.0	75.9
82.00		1.00	1.21	27.776	30.55	225.52	0.650	0.000	1.00	2.120	1.38	67.4	0.0	75.2
84.00		1.00	1.22	27.917	30.71	221.91	0.650	0.000	2.00	4.181	2.72	133.5	0.0	148.2

Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 19

85.00 Appurtenance(s)	1.00	1.22	27.987	30.79	220.09	0.650	0.000	1.00	2.061	1.34	66.0	0.0	73.0
86.00	1.00	1.23	28.056	30.86	218.26	0.650	0.000	1.00	2.042	1.33	65.5	0.0	72.3
88.00	1.00	1.23	28.192	31.01	214.58	0.650	0.000	2.00	4.025	2.62	129.8	0.0	142.6
90.00	1.00	1.24	28.325	31.16	210.87	0.650	0.000	2.00	3.947	2.57	127.9	0.0	139.8
91.00 Appurtenance(s)	1.00	1.24	28.391	31.23	209.01	0.650	0.000	1.00	1.944	1.26	63.1	0.0	68.8
91.29 Bot - Section 3	1.00	1.24	28.411	31.25	208.46	0.650	0.000	0.29	0.567	0.37	18.4	0.0	20.1
92.00	1.00	1.24	28.457	31.30	207.13	0.650	0.000	0.71	1.380	0.90	44.9	0.0	77.6
94.00	1.00	1.25	28.586	31.44	203.36	0.650	0.000	2.00	3.854	2.51	126.0	0.0	216.5
94.71 Top - Section 2	1.00	1.25	28.631	31.49	202.02	0.650	0.000	0.71	1.349	0.88	44.2	0.0	75.8
96.00	1.00	1.25	28.713	31.58	203.02	0.650	0.000	1.29	2.427	1.58	79.7	0.0	51.8
98.00 Appurtenance(s)	1.00	1.26	28.838	31.72	199.20	0.650	0.000	2.00	3.698	2.40	122.0	0.0	79.0
100.00	1.00	1.27	28.961	31.86	195.36	0.650	0.000	2.00	3.620	2.35	119.9	0.0	77.3
102.00	1.00	1.27	29.082	31.99	191.50	0.650	0.000	2.00	3.541	2.30	117.8	0.0	75.6
104.00	1.00	1.28	29.201	32.12	187.61	0.650	0.000	2.00	3.463	2.25	115.7	0.0	73.9
105.00 Appurtenance(s)	1.00	1.28	29.260	32.19	185.65	0.650	0.000	1.00	1.702	1.11	57.0	0.0	36.3
106.00	1.00	1.28	29.318	32.25	183.69	0.650	0.000	1.00	1.683	1.09	56.4	0.0	35.9
107.00 Appurtenance(s)	1.00	1.28	29.376	32.31	181.72	0.650	0.000	1.00	1.663	1.08	55.9	0.0	35.5
108.00	1.00	1.29	29.434	32.38	179.75	0.650	0.000	1.00	1.644	1.07	55.3	0.0	35.1
110.00	1.00	1.29	29.548	32.50	175.79	0.650	0.000	2.00	3.229	2.10	109.1	0.0	68.9
112.00	1.00	1.30	29.660	32.63	171.81	0.650	0.000	2.00	3.151	2.05	106.9	0.0	67.2
114.00	1.00	1.30	29.771	32.75	167.81	0.650	0.000	2.00	3.072	2.00	104.6	0.0	65.5
116.00	1.00	1.31	29.880	32.87	163.78	0.650	0.000	2.00	2.994	1.95	102.4	0.0	63.8
118.00 Appurtenance(s)	1.00	1.31	29.988	32.99	159.74	0.650	0.000	2.00	2.916	1.90	100.0	0.0	62.1
Totals:								118.00			8,405.6		11,845.3

Discrete Appurtenance Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 20

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 27

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	118.00	DB844H90E-XY	9	30.030	33.033	1.00	1.00	27.45	113.40	0.000	0.800	1450.83	0.00	1160.66			
2	118.00	ANT150D	1	30.063	33.070	1.00	1.00	1.00	5.40	0.000	1.420	52.91	0.00	75.13			
3	118.00	DB222	1	30.605	33.666	1.00	1.00	2.25	14.40	0.000	12.000	121.20	0.00	1454.37			
4	118.00	Low Profile Platform	1	29.988	32.986	1.00	1.00	28.47	1620.00	0.000	0.000	1502.60	0.00	0.00			
5	107.00	800 MHz 2X50W RRH w/	3	29.376	32.314	0.54	0.80	3.86	172.80	0.000	0.000	199.53	0.00	0.00			
6	107.00	Universal Ring Mount	1	29.376	32.314	1.00	1.00	5.00	315.00	0.000	0.000	258.51	0.00	0.00			
7	107.00	1900 MHz 4X45 RRH	3	29.376	32.314	0.54	0.80	4.36	162.00	0.000	0.000	225.30	0.00	0.00			
8	107.00	TD-RRH8x20-25	3	29.376	32.314	0.54	0.80	6.51	189.00	0.000	0.000	336.71	0.00	0.00			
9	107.00	ACU-A20-N	4	29.376	32.314	0.54	0.80	0.30	3.60	0.000	0.000	15.52	0.00	0.00			
10	107.00	ALU 800MHz External	3	29.376	32.314	0.54	0.80	1.25	23.76	0.000	0.000	64.85	0.00	0.00			
11	105.00	APXVSPP18-C-A20	3	29.260	32.186	0.66	0.80	15.98	153.90	0.000	0.000	822.71	0.00	0.00			
12	105.00	Low Profile Platform	1	29.260	32.186	1.00	1.00	27.33	1800.00	0.000	0.000	1407.42	0.00	0.00			
13	105.00	APXVTM14-C-120	3	29.260	32.186	0.63	0.80	12.02	151.20	0.000	0.000	619.03	0.00	0.00			
14	98.00	Andrew DB846H80E-SX	4	28.838	31.722	0.90	0.80	17.96	57.60	0.000	0.000	911.34	0.00	0.00			
15	98.00	Rfs Celwave	2	28.838	31.722	0.54	0.80	5.15	34.02	0.000	0.000	261.16	0.00	0.00			
16	98.00	Alcatel-Lucent	3	28.838	31.722	0.54	0.80	3.02	124.20	0.000	0.000	153.43	0.00	0.00			
17	98.00	Alcatel Lucent	3	28.838	31.722	0.54	0.80	4.08	153.36	0.000	0.000	207.30	0.00	0.00			
18	98.00	Alcatel Lucent	3	28.838	31.722	0.54	0.80	5.63	162.00	0.000	0.000	285.65	0.00	0.00			
19	98.00	Andrew SBNHH-1D85C	6	28.838	31.722	0.67	0.80	45.92	267.84	0.000	0.000	2330.88	0.00	0.00			
20	98.00	RFS APL868013	2	28.838	31.722	0.92	0.80	5.27	11.34	0.000	0.000	267.32	0.00	0.00			
21	98.00	Low Profile Platform	1	28.838	31.722	1.00	1.00	23.10	1890.00	0.000	0.000	1172.43	0.00	0.00			
22	91.00	FD Series DC Surge	1	28.391	31.231	0.54	0.80	2.00	16.20	0.000	0.000	99.90	0.00	0.00			
23	91.00	RRUS-11	6	28.391	31.231	0.54	0.80	14.21	297.00	0.000	0.000	710.29	0.00	0.00			
24	91.00	LGP21401	6	28.391	31.231	0.54	0.80	4.15	76.14	0.000	0.000	207.30	0.00	0.00			
25	91.00	P65-16-XLH-RR	3	28.391	31.231	0.60	0.80	14.69	143.10	0.000	0.000	733.94	0.00	0.00			
26	91.00	7770.00	3	28.391	31.231	0.58	0.80	9.64	94.50	0.000	0.000	481.50	0.00	0.00			
27	91.00	Low Profile Platform	1	28.391	31.231	1.00	1.00	17.46	1214.10	0.000	0.000	872.46	0.00	0.00			
28	85.00	V-brace kit	1	27.987	30.785	1.00	1.00	12.00	378.99	0.000	0.000	591.08	0.00	0.00			
29	81.00	Kathrein 782 11054	3	27.704	30.474	0.54	0.80	0.24	4.86	0.000	0.000	11.76	0.00	0.00			
30	81.00	S20057A1	3	27.704	30.474	0.54	0.80	1.32	29.70	0.000	0.000	64.29	0.00	0.00			
31	81.00	RFS ATMAA1412D-1A2	3	27.704	30.474	0.54	0.80	1.88	35.10	0.000	0.000	91.73	0.00	0.00			
32	81.00	Commscope	3	27.704	30.474	0.64	0.80	22.02	134.46	0.000	0.000	1073.79	0.00	0.00			
33	81.00	RFS APXV18-209014	3	27.704	30.474	0.59	0.80	6.36	50.49	0.000	0.000	310.01	0.00	0.00			
34	81.00	Platform w/ Handrail kit	1	27.704	30.474	1.00	1.00	37.16	1681.38	0.000	0.000	1811.89	0.00	0.00			
35	75.00	Standoff Mount	1	27.259	29.985	1.00	1.00	2.63	36.00	0.000	0.000	126.18	0.00	0.00			
36	75.00	GPS	1	27.259	29.985	1.00	1.00	1.00	9.00	0.000	0.000	47.98	0.00	0.00			
Totals:									11,625.84						19,900.74		

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

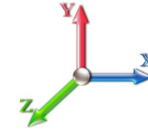


Page: 21

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 27

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		162.00	388.82	0.00	0.00
4.00		160.26	385.45	0.00	0.00
6.00		158.52	382.08	0.00	0.00
8.00		156.78	378.72	0.00	0.00
10.00		155.04	375.35	0.00	0.00
12.00		153.30	371.98	0.00	0.00
14.00		151.56	368.61	0.00	0.00
16.00		151.67	365.25	0.00	0.00
18.00		153.68	361.88	0.00	0.00
20.00		155.28	358.51	0.00	0.00
22.00		156.54	355.15	0.00	0.00
24.00		157.52	351.78	0.00	0.00
26.00		158.25	348.41	0.00	0.00
28.00		158.75	345.05	0.00	0.00
30.00		159.07	341.68	0.00	0.00
32.00		159.20	338.31	0.00	0.00
34.00		159.19	334.94	0.00	0.00
36.00		159.02	331.58	0.00	0.00
38.00		158.73	328.21	0.00	0.00
40.00		158.32	324.84	0.00	0.00
42.00		157.80	321.48	0.00	0.00
44.00		157.17	318.11	0.00	0.00
45.13		88.31	178.24	0.00	0.00
46.00		69.08	223.81	0.00	0.00
48.00		158.64	510.08	0.00	0.00
49.88		148.30	473.85	0.00	0.00
50.00		9.40	16.35	0.00	0.00
52.00		156.82	271.03	0.00	0.00
54.00		155.80	268.23	0.00	0.00
56.00		154.71	265.42	0.00	0.00
58.00		153.54	262.62	0.00	0.00
60.00		152.32	259.81	0.00	0.00
62.00		151.03	257.00	0.00	0.00
64.00		149.69	254.20	0.00	0.00
66.00		148.29	251.39	0.00	0.00
68.00		146.83	248.59	0.00	0.00
70.00		145.33	245.78	0.00	0.00
72.00		143.78	242.98	0.00	0.00
74.00		142.18	240.17	0.00	0.00
75.00	(2) attachments	244.53	164.03	0.00	0.00
76.00		69.96	118.19	0.00	0.00
78.00		138.85	234.27	0.00	0.00
80.00		137.12	231.46	0.00	0.00
81.00	(16) attachments	3431.30	2050.67	0.00	0.00
82.00		67.37	102.75	0.00	0.00
84.00		133.54	203.39	0.00	0.00

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (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

85.00	(1) attachments	657.08	479.63	0.00	0.00
86.00		65.54	99.94	0.00	0.00
88.00		129.82	197.78	0.00	0.00
90.00		127.90	194.97	0.00	0.00
91.00	(20) attachments	3168.55	1937.47	0.00	0.00
91.29		18.41	26.28	0.00	0.00
92.00		44.94	92.55	0.00	0.00
94.00		126.04	258.91	0.00	0.00
94.71		44.20	90.83	0.00	0.00
96.00		79.71	79.17	0.00	0.00
98.00	(24) attachments	5711.51	2821.73	0.00	0.00
100.00		119.92	93.26	0.00	0.00
102.00		117.82	91.58	0.00	0.00
104.00		115.69	89.89	0.00	0.00
105.00	(7) attachments	2906.14	2149.41	0.00	0.00
106.00		56.44	43.89	0.00	0.00
107.00	(17) attachments	1156.31	909.63	0.00	0.00
108.00		55.35	40.68	0.00	0.00
110.00		109.14	80.09	0.00	0.00
112.00		106.90	78.41	0.00	0.00
114.00		104.64	76.72	0.00	0.00
116.00		102.35	75.04	0.00	0.00
118.00	(12) attachments	3227.58	1826.56	0.00	2690.16
	Totals:	28,306.35	27,184.92	0.00	2,690.16

Linear Appurtenance Segment Forces (Factored)

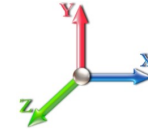
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 23

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



Iterations 27

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.29
4.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.29
6.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.29
8.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	19.450	0.00	0.29
10.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.450	0.00	0.29
12.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.450	0.00	0.29
14.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.450	0.00	0.29
16.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	19.690	0.00	0.29
18.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	20.185	0.00	0.29
20.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	20.638	0.00	0.29
22.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	21.056	0.00	0.29
24.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	21.445	0.00	0.29
26.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	21.810	0.00	0.29
28.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	22.152	0.00	0.29
30.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	22.477	0.00	0.29
32.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	22.784	0.00	0.29
34.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	23.077	0.00	0.29
36.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	23.356	0.00	0.29
38.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	23.623	0.00	0.29
40.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	23.880	0.00	0.29
42.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	24.126	0.00	0.29
44.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	24.364	0.00	0.29
45.13	1/2"	Yes	1.13	0.000	0.65	0.06	0.00	0.019	0.000	24.494	0.00	0.16
46.00	1/2"	Yes	0.87	0.000	0.65	0.05	0.00	0.020	0.000	24.593	0.00	0.13
48.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	24.814	0.00	0.29
49.88	1/2"	Yes	1.88	0.000	0.65	0.10	0.00	0.020	0.000	25.016	0.00	0.27
50.00	1/2"	Yes	0.12	0.000	0.65	0.01	0.00	0.020	0.000	25.029	0.00	0.02
52.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	25.236	0.00	0.29
54.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	25.437	0.00	0.29
56.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	25.633	0.00	0.29
58.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	25.823	0.00	0.29
60.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	26.008	0.00	0.29
62.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	26.188	0.00	0.29
64.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.022	0.000	26.364	0.00	0.29
66.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.022	0.000	26.535	0.00	0.29
68.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	26.702	0.00	0.29
70.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	26.866	0.00	0.29
72.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	27.026	0.00	0.29
74.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.024	0.000	27.182	0.00	0.29
75.00	1/2"	Yes	1.00	0.000	0.65	0.05	0.00	0.024	0.000	27.259	0.00	0.14
Totals:											0.0	10.8

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



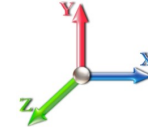
Page: 24

Load Case: 0.9D + 1.6W 97 mph Wind

Iterations 27

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	-27.15	-28.33	0.00	-2514.5	0.00	2514.52	3634.70	1817.35	6397.77	3203.64	0.00	0.000	0.000	0.793
2.00	-26.71	-28.23	0.00	-2457.8	0.00	2457.85	3607.15	1803.57	6280.28	3144.81	0.03	-0.119	0.000	0.789
4.00	-26.26	-28.12	0.00	-2401.3	0.00	2401.39	3579.34	1789.67	6163.42	3086.29	0.10	-0.240	0.000	0.786
6.00	-25.82	-28.02	0.00	-2345.1	0.00	2345.15	3551.29	1775.64	6047.19	3028.09	0.23	-0.361	0.000	0.782
8.00	-25.38	-27.91	0.00	-2289.1	0.00	2289.12	3522.98	1761.49	5931.61	2970.21	0.41	-0.484	0.000	0.778
10.00	-24.95	-27.81	0.00	-2233.2	0.00	2233.29	3494.42	1747.21	5816.69	2912.67	0.64	-0.608	0.000	0.774
12.00	-24.52	-27.70	0.00	-2177.6	0.00	2177.68	3465.61	1732.80	5702.44	2855.46	0.92	-0.733	0.000	0.770
14.00	-24.09	-27.60	0.00	-2122.2	0.00	2122.27	3436.54	1718.27	5588.89	2798.60	1.25	-0.859	0.000	0.766
16.00	-23.67	-27.50	0.00	-2067.0	0.00	2067.07	3407.22	1703.61	5476.05	2742.09	1.64	-0.987	0.000	0.761
18.00	-23.25	-27.39	0.00	-2012.0	0.00	2012.08	3377.65	1688.83	5363.92	2685.95	2.08	-1.115	0.000	0.756
20.00	-22.83	-27.28	0.00	-1957.3	0.00	1957.30	3347.83	1673.91	5252.53	2630.17	2.58	-1.244	0.000	0.751
22.00	-22.42	-27.16	0.00	-1902.7	0.00	1902.75	3317.75	1658.87	5141.89	2574.76	3.13	-1.375	0.000	0.746
24.00	-22.01	-27.05	0.00	-1848.4	0.00	1848.42	3287.42	1643.71	5032.01	2519.74	3.73	-1.506	0.000	0.741
26.00	-21.60	-26.93	0.00	-1794.3	0.00	1794.32	3256.84	1628.42	4922.91	2465.11	4.39	-1.639	0.000	0.735
28.00	-21.20	-26.81	0.00	-1740.4	0.00	1740.46	3219.51	1609.75	4804.91	2406.03	5.11	-1.772	0.000	0.730
30.00	-20.80	-26.69	0.00	-1686.8	0.00	1686.84	3178.67	1589.33	4683.16	2345.06	5.88	-1.906	0.000	0.726
32.00	-20.40	-26.57	0.00	-1633.4	0.00	1633.46	3137.83	1568.91	4562.98	2284.88	6.71	-2.042	0.000	0.722
34.00	-20.01	-26.44	0.00	-1580.3	0.00	1580.33	3096.99	1548.49	4444.36	2225.48	7.59	-2.178	0.000	0.717
36.00	-19.62	-26.32	0.00	-1527.4	0.00	1527.44	3056.15	1528.07	4327.30	2166.87	8.53	-2.315	0.000	0.712
38.00	-19.24	-26.19	0.00	-1474.8	0.00	1474.80	3015.30	1507.65	4211.81	2109.03	9.53	-2.452	0.000	0.706
40.00	-18.86	-26.07	0.00	-1422.4	0.00	1422.41	2974.46	1487.23	4097.87	2051.98	10.59	-2.590	0.000	0.700
42.00	-18.48	-25.94	0.00	-1370.2	0.00	1370.28	2933.62	1466.81	3985.50	1995.71	11.70	-2.729	0.000	0.693
44.00	-18.12	-25.80	0.00	-1318.4	0.00	1318.40	2892.78	1446.39	3874.69	1940.23	12.88	-2.869	0.000	0.686
45.13	-17.92	-25.73	0.00	-1289.2	0.00	1289.24	2869.71	1434.85	3812.78	1909.22	13.57	-2.948	0.000	0.682
46.00	-17.65	-25.68	0.00	-1266.8	0.00	1266.86	2851.94	1425.97	3765.45	1885.52	14.11	-3.010	0.000	0.678
48.00	-17.09	-25.53	0.00	-1215.5	0.00	1215.51	2811.10	1405.55	3657.76	1831.60	15.40	-3.150	0.000	0.670
49.88	-16.59	-25.38	0.00	-1167.5	0.00	1167.51	2333.69	1166.84	3066.96	1535.76	16.67	-3.282	0.000	0.768
50.00	-16.54	-25.39	0.00	-1164.4	0.00	1164.47	2332.20	1166.10	3062.32	1533.44	16.75	-3.290	0.000	0.767
52.00	-16.21	-25.26	0.00	-1113.6	0.00	1113.68	2307.18	1153.59	2985.35	1494.89	18.16	-3.448	0.000	0.752
54.00	-15.88	-25.14	0.00	-1063.1	0.00	1063.16	2281.92	1140.96	2909.02	1456.67	19.64	-3.605	0.000	0.737
56.00	-15.56	-25.01	0.00	-1012.8	0.00	1012.89	2256.40	1128.20	2833.34	1418.77	21.18	-3.762	0.000	0.721
58.00	-15.24	-24.88	0.00	-962.88	0.00	962.88	2223.07	1111.54	2748.96	1376.53	22.79	-3.918	0.000	0.707
60.00	-14.93	-24.75	0.00	-913.12	0.00	913.12	2189.04	1094.52	2665.01	1334.49	24.46	-4.073	0.000	0.692
62.00	-14.61	-24.62	0.00	-863.63	0.00	863.63	2155.00	1077.50	2582.36	1293.10	26.20	-4.227	0.000	0.675
64.00	-14.31	-24.49	0.00	-814.40	0.00	814.40	2120.97	1060.48	2501.02	1252.37	28.01	-4.379	0.000	0.658
66.00	-14.01	-24.36	0.00	-765.42	0.00	765.42	2086.94	1043.47	2420.97	1212.28	29.87	-4.530	0.000	0.639
68.00	-13.71	-24.22	0.00	-716.71	0.00	716.71	2052.90	1026.45	2342.23	1172.85	31.80	-4.678	0.000	0.618
70.00	-13.41	-24.09	0.00	-668.26	0.00	668.26	2018.87	1009.43	2264.79	1134.08	33.79	-4.823	0.000	0.596
72.00	-13.13	-23.96	0.00	-620.08	0.00	620.08	1984.83	992.42	2188.65	1095.95	35.84	-4.965	0.000	0.573
74.00	-12.86	-23.82	0.00	-572.16	0.00	572.16	1950.80	975.40	2113.81	1058.48	37.95	-5.104	0.000	0.548
75.00	-12.69	-23.58	0.00	-548.33	0.00	548.33	1933.78	966.89	2076.88	1039.98	39.02	-5.173	0.000	0.534
76.00	-12.53	-23.52	0.00	-524.76	0.00	524.76	1916.76	958.38	2040.27	1021.65	40.11	-5.240	0.000	0.521
78.00	-12.26	-23.39	0.00	-477.72	0.00	477.72	1882.73	941.37	1968.04	985.48	42.33	-5.369	0.000	0.492
80.00	-12.01	-23.25	0.00	-430.94	0.00	430.94	1848.70	924.35	1897.11	949.96	44.61	-5.493	0.000	0.461
81.00	-10.28	-19.65	0.00	-407.69	0.00	407.69	1831.68	915.84	1862.13	932.45	45.76	-5.553	0.000	0.443
82.00	-10.15	-19.58	0.00	-388.05	0.00	388.05	1814.66	907.33	1827.48	915.10	46.93	-5.612	0.000	0.430
84.00	-9.93	-19.45	0.00	-348.88	0.00	348.88	1780.63	890.31	1759.15	880.88	49.30	-5.724	0.000	0.402
85.00	-9.51	-18.75	0.00	-329.43	0.00	329.43	1763.61	881.81	1725.48	864.02	50.50	-5.779	0.000	0.387

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 25
	Struct Class: II	



86.00	-9.39	-18.69	0.00	-310.68	0.00	310.68	1746.59	873.30	1692.13	847.32	51.72	-5.832	0.000	0.372
88.00	-9.17	-18.56	0.00	-273.30	0.00	273.30	1712.56	856.28	1626.40	814.41	54.18	-5.931	0.000	0.341
90.00	-8.97	-18.42	0.00	-236.19	0.00	236.19	1678.53	839.26	1561.98	782.15	56.68	-6.023	0.000	0.308
91.00	-7.37	-15.07	0.00	-217.77	0.00	217.77	1661.51	830.75	1530.26	766.27	57.95	-6.067	0.000	0.289
91.29	-7.34	-15.05	0.00	-213.35	0.00	213.35	1656.52	828.26	1521.01	761.64	58.32	-6.080	0.000	0.285
92.00	-7.24	-15.00	0.00	-202.72	0.00	202.72	1644.49	822.25	1498.86	750.54	59.22	-6.109	0.000	0.275
94.00	-6.98	-14.85	0.00	-172.71	0.00	172.71	1610.46	805.23	1437.04	719.59	61.79	-6.186	0.000	0.245
94.71	-6.89	-14.81	0.00	-162.17	0.00	162.17	930.70	465.35	848.15	424.70	62.71	-6.211	0.000	0.390
96.00	-6.80	-14.73	0.00	-143.07	0.00	143.07	922.07	461.04	828.91	415.07	64.39	-6.255	0.000	0.353
98.00	-4.61	-8.75	0.00	-113.62	0.00	113.62	908.49	454.24	799.32	400.25	67.03	-6.348	0.000	0.289
100.00	-4.52	-8.62	0.00	-96.13	0.00	96.13	894.64	447.32	770.03	385.59	69.70	-6.428	0.000	0.255
102.00	-4.43	-8.50	0.00	-78.88	0.00	78.88	880.55	440.27	741.05	371.08	72.40	-6.500	0.000	0.218
104.00	-4.35	-8.38	0.00	-61.88	0.00	61.88	866.20	433.10	712.41	356.74	75.14	-6.562	0.000	0.179
105.00	-2.54	-5.25	0.00	-53.51	0.00	53.51	858.93	429.47	698.22	349.63	76.51	-6.589	0.000	0.156
106.00	-2.51	-5.19	0.00	-48.26	0.00	48.26	851.60	425.80	684.12	342.57	77.89	-6.614	0.000	0.144
107.00	-1.73	-3.93	0.00	-43.08	0.00	43.08	844.21	422.10	670.11	335.55	79.28	-6.637	0.000	0.131
108.00	-1.70	-3.87	0.00	-39.14	0.00	39.14	836.75	418.38	656.18	328.58	80.67	-6.658	0.000	0.121
110.00	-1.63	-3.76	0.00	-31.39	0.00	31.39	821.65	410.82	628.62	314.78	83.46	-6.697	0.000	0.102
112.00	-1.56	-3.64	0.00	-23.88	0.00	23.88	804.60	402.30	600.19	300.54	86.26	-6.729	0.000	0.081
114.00	-1.50	-3.53	0.00	-16.59	0.00	16.59	784.18	392.09	569.96	285.40	89.08	-6.754	0.000	0.060
116.00	-1.43	-3.42	0.00	-9.53	0.00	9.53	763.76	381.88	540.51	270.66	91.91	-6.772	0.000	0.037
118.00	0.00	-3.23	0.00	-2.69	0.00	2.69	743.33	371.67	511.84	256.30	94.74	-6.781	0.000	0.011

Wind Loading - Shaft

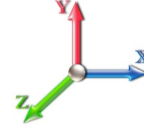
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Iterations 26

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
2.00		1.00	0.85	5.168	5.68	0.00	1.200	1.133	2.00	7.658	9.19	52.2	124.7	539.2
4.00		1.00	0.85	5.168	5.68	0.00	1.200	1.215	2.00	7.607	9.13	51.9	132.5	542.5
6.00		1.00	0.85	5.168	5.68	0.00	1.200	1.265	2.00	7.546	9.05	51.5	136.7	542.2
8.00		1.00	0.85	5.168	5.68	0.00	1.200	1.302	2.00	7.480	8.98	51.0	139.3	540.3
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.331	2.00	7.412	8.89	50.6	141.0	537.5
12.00		1.00	0.85	5.168	5.68	0.00	1.200	1.356	2.00	7.342	8.81	50.1	142.1	534.1
14.00		1.00	0.85	5.168	5.68	0.00	1.200	1.377	2.00	7.270	8.72	49.6	142.8	530.3
16.00		1.00	0.86	5.232	5.76	0.00	1.200	1.395	2.00	7.198	8.64	49.7	143.1	526.2
18.00		1.00	0.88	5.363	5.90	0.00	1.200	1.412	2.00	7.126	8.55	50.4	143.3	521.9
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.427	2.00	7.053	8.46	51.0	143.2	517.3
22.00		1.00	0.92	5.595	6.15	0.00	1.200	1.440	2.00	6.979	8.37	51.5	142.9	512.5
24.00		1.00	0.94	5.698	6.27	0.00	1.200	1.453	2.00	6.905	8.29	51.9	142.5	507.7
26.00		1.00	0.95	5.795	6.37	0.00	1.200	1.465	2.00	6.831	8.20	52.2	142.0	502.7
28.00		1.00	0.97	5.886	6.47	0.00	1.200	1.476	2.00	6.756	8.11	52.5	141.4	497.6
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.486	2.00	6.681	8.02	52.7	140.7	492.4
32.00		1.00	1.00	6.054	6.66	0.00	1.200	1.495	2.00	6.606	7.93	52.8	139.9	487.1
34.00		1.00	1.01	6.132	6.74	0.00	1.200	1.504	2.00	6.531	7.84	52.9	139.1	481.8
36.00		1.00	1.02	6.206	6.83	0.00	1.200	1.513	2.00	6.456	7.75	52.9	138.2	476.3
38.00		1.00	1.03	6.277	6.90	0.00	1.200	1.521	2.00	6.381	7.66	52.9	137.2	470.9
40.00		1.00	1.04	6.345	6.98	0.00	1.200	1.529	2.00	6.305	7.57	52.8	136.1	465.3
42.00		1.00	1.05	6.410	7.05	0.00	1.200	1.537	2.00	6.229	7.48	52.7	135.1	459.8
44.00		1.00	1.06	6.474	7.12	0.00	1.200	1.544	2.00	6.154	7.38	52.6	133.9	454.2
45.13 Bot - Section 2		1.00	1.07	6.508	7.16	0.00	1.200	1.548	1.13	3.443	4.13	29.6	75.3	254.2
46.00		1.00	1.07	6.534	7.19	0.00	1.200	1.551	0.87	2.680	3.22	23.1	58.8	312.0
48.00		1.00	1.08	6.593	7.25	0.00	1.200	1.557	2.00	6.108	7.33	53.2	134.0	710.2
49.88 Top - Section 1		1.00	1.09	6.647	7.31	0.00	1.200	1.563	1.88	5.672	6.81	49.8	124.9	659.0
50.00		1.00	1.09	6.650	7.32	0.00	1.200	1.564	0.12	0.360	0.43	3.2	8.0	23.5
52.00		1.00	1.10	6.705	7.38	0.00	1.200	1.570	2.00	5.955	7.15	52.7	131.5	388.9
54.00		1.00	1.11	6.759	7.43	0.00	1.200	1.576	2.00	5.879	7.06	52.5	130.2	383.9
56.00		1.00	1.12	6.811	7.49	0.00	1.200	1.581	2.00	5.803	6.96	52.2	128.8	378.8
58.00		1.00	1.13	6.861	7.55	0.00	1.200	1.587	2.00	5.727	6.87	51.9	127.5	373.7
60.00		1.00	1.14	6.910	7.60	0.00	1.200	1.592	2.00	5.650	6.78	51.5	126.1	368.6
62.00		1.00	1.14	6.958	7.65	0.00	1.200	1.598	2.00	5.574	6.69	51.2	124.7	363.4
64.00		1.00	1.15	7.005	7.71	0.00	1.200	1.603	2.00	5.497	6.60	50.8	123.2	358.2
66.00		1.00	1.16	7.050	7.76	0.00	1.200	1.608	2.00	5.421	6.51	50.4	121.8	353.0
68.00		1.00	1.17	7.095	7.80	0.00	1.200	1.612	2.00	5.344	6.41	50.1	120.3	347.8
70.00		1.00	1.17	7.138	7.85	0.00	1.200	1.617	2.00	5.268	6.32	49.6	118.8	342.6
72.00		1.00	1.18	7.181	7.90	0.00	1.200	1.622	2.00	5.191	6.23	49.2	117.3	337.3
74.00		1.00	1.19	7.222	7.94	0.00	1.200	1.626	2.00	5.114	6.14	48.8	115.7	332.0
75.00 Appurtenance(s)		1.00	1.19	7.243	7.97	0.00	1.200	1.628	1.00	2.528	3.03	24.2	57.5	164.2
76.00		1.00	1.19	7.263	7.99	0.00	1.200	1.631	1.00	2.509	3.01	24.1	57.1	162.9
78.00		1.00	1.20	7.303	8.03	0.00	1.200	1.635	2.00	4.961	5.95	47.8	112.6	321.4
80.00		1.00	1.21	7.342	8.08	0.00	1.200	1.639	2.00	4.884	5.86	47.3	111.0	316.1
81.00 Appurtenance(s)		1.00	1.21	7.361	8.10	0.00	1.200	1.641	1.00	2.413	2.90	23.4	55.1	156.2
82.00		1.00	1.21	7.380	8.12	0.00	1.200	1.643	1.00	2.394	2.87	23.3	54.7	154.9
84.00		1.00	1.22	7.418	8.16	0.00	1.200	1.647	2.00	4.730	5.68	46.3	107.7	305.3

Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 27
	Struct Class: II	



85.00 Appurtenance(s)	1.00	1.22	7.436	8.18	0.00	1.200	1.649	1.00	2.336	2.80	22.9	53.5	150.9	
86.00	1.00	1.23	7.454	8.20	0.00	1.200	1.651	1.00	2.317	2.78	22.8	53.0	149.5	
88.00	1.00	1.23	7.491	8.24	0.00	1.200	1.655	2.00	4.577	5.49	45.3	104.4	294.6	
90.00	1.00	1.24	7.526	8.28	0.00	1.200	1.658	2.00	4.500	5.40	44.7	102.8	289.2	
91.00 Appurtenance(s)	1.00	1.24	7.544	8.30	0.00	1.200	1.660	1.00	2.221	2.67	22.1	51.0	142.8	
91.29 Bot - Section 3	1.00	1.24	7.549	8.30	0.00	1.200	1.661	0.29	0.648	0.78	6.5	14.9	41.7	
92.00	1.00	1.24	7.561	8.32	0.00	1.200	1.662	0.71	1.576	1.89	15.7	36.3	139.7	
94.00	1.00	1.25	7.595	8.35	0.00	1.200	1.666	2.00	4.409	5.29	44.2	101.0	389.6	
94.71 Top - Section 2	1.00	1.25	7.607	8.37	0.00	1.200	1.667	0.71	1.547	1.86	15.5	35.6	136.7	
96.00	1.00	1.25	7.629	8.39	0.00	1.200	1.669	1.29	2.785	3.34	28.0	64.0	133.1	
98.00 Appurtenance(s)	1.00	1.26	7.662	8.43	0.00	1.200	1.672	2.00	4.255	5.11	43.0	97.5	202.8	
100.00	1.00	1.27	7.695	8.46	0.00	1.200	1.676	2.00	4.178	5.01	42.4	95.8	198.8	
102.00	1.00	1.27	7.727	8.50	0.00	1.200	1.679	2.00	4.101	4.92	41.8	94.1	194.9	
104.00	1.00	1.28	7.759	8.53	0.00	1.200	1.682	2.00	4.024	4.83	41.2	92.3	190.9	
105.00 Appurtenance(s)	1.00	1.28	7.774	8.55	0.00	1.200	1.684	1.00	1.983	2.38	20.4	45.7	94.1	
106.00	1.00	1.28	7.790	8.57	0.00	1.200	1.686	1.00	1.964	2.36	20.2	45.3	93.1	
107.00 Appurtenance(s)	1.00	1.28	7.805	8.59	0.00	1.200	1.687	1.00	1.944	2.33	20.0	44.8	92.1	
108.00	1.00	1.29	7.821	8.60	0.00	1.200	1.689	1.00	1.925	2.31	19.9	44.4	91.1	
110.00	1.00	1.29	7.851	8.64	0.00	1.200	1.692	2.00	3.793	4.55	39.3	87.0	178.8	
112.00	1.00	1.30	7.881	8.67	0.00	1.200	1.695	2.00	3.716	4.46	38.7	85.2	174.8	
114.00	1.00	1.30	7.910	8.70	0.00	1.200	1.698	2.00	3.638	4.37	38.0	83.4	170.7	
116.00	1.00	1.31	7.939	8.73	0.00	1.200	1.701	2.00	3.561	4.27	37.3	81.6	166.7	
118.00 Appurtenance(s)	1.00	1.31	7.968	8.76	0.00	1.200	1.704	2.00	3.484	4.18	36.6	79.8	162.6	
Totals:							118.00					2,851.2		22,887.2

Discrete Appurtenance Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 28

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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 26

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	118.00	DB844H90E-XY	9	7.979	8.777	1.00	1.00	35.10	1117.86	0.000	0.800	308.08	0.00	246.46	
2	118.00	ANT150D	1	7.988	8.787	1.00	1.00	2.68	-5.21	0.000	1.420	23.51	0.00	33.38	
3	118.00	DB222	1	8.132	8.945	1.00	1.00	8.17	66.96	0.000	12.000	73.06	0.00	876.72	
4	118.00	Low Profile Platform	1	7.968	8.765	1.00	1.00	35.19	3776.82	0.000	0.000	308.43	0.00	0.00	
5	107.00	800 MHz 2X50W RRH w/	3	7.805	8.586	0.55	0.80	5.77	388.02	0.000	0.000	49.51	0.00	0.00	
6	107.00	Universal Ring Mount	1	7.805	8.586	1.00	1.00	8.37	603.46	0.000	0.000	71.90	0.00	0.00	
7	107.00	1900 MHz 4X45 RRH	3	7.805	8.586	0.55	0.80	6.51	380.92	0.000	0.000	55.90	0.00	0.00	
8	107.00	TD-RRH8x20-25	3	7.805	8.586	0.55	0.80	8.01	570.16	0.000	0.000	68.73	0.00	0.00	
9	107.00	ACU-A20-N	4	7.805	8.586	0.55	0.80	0.94	16.21	0.000	0.000	8.09	0.00	0.00	
10	107.00	ALU 800MHz External	3	7.805	8.586	0.55	0.80	2.33	67.85	0.000	0.000	19.98	0.00	0.00	
11	105.00	APXVSPP18-C-A20	3	7.774	8.552	0.68	0.80	21.86	557.09	0.000	0.000	186.95	0.00	0.00	
12	105.00	Low Profile Platform	1	7.774	8.552	1.00	1.00	33.71	4405.08	0.000	0.000	288.26	0.00	0.00	
13	105.00	APXVTM14-C-120	3	7.774	8.552	0.65	0.80	14.41	662.68	0.000	0.000	123.22	0.00	0.00	
14	98.00	Andrew DB846H80E-SX	4	7.662	8.429	0.91	0.80	22.51	682.35	0.000	0.000	189.69	0.00	0.00	
15	98.00	Rfs Celwave	2	7.662	8.429	0.55	0.80	6.22	318.79	0.000	0.000	52.43	0.00	0.00	
16	98.00	Alcatel-Lucent	3	7.662	8.429	0.55	0.80	4.04	401.56	0.000	0.000	34.05	0.00	0.00	
17	98.00	Alcatel Lucent	3	7.662	8.429	0.55	0.80	5.30	443.90	0.000	0.000	44.70	0.00	0.00	
18	98.00	Alcatel Lucent	3	7.662	8.429	0.55	0.80	7.05	406.65	0.000	0.000	59.41	0.00	0.00	
19	98.00	Andrew SBNHH-1D85C	6	7.662	8.429	0.69	0.80	53.56	1855.90	0.000	0.000	451.46	0.00	0.00	
20	98.00	RFS APL868013	2	7.662	8.429	0.92	0.80	6.80	218.61	0.000	0.000	57.28	0.00	0.00	
21	98.00	Low Profile Platform	1	7.662	8.429	1.00	1.00	28.45	4715.14	0.000	0.000	239.82	0.00	0.00	
22	91.00	FD Series DC Surge	1	7.544	8.298	0.55	0.80	2.78	70.86	0.000	0.000	23.03	0.00	0.00	
23	91.00	RRUS-11	6	7.544	8.298	0.55	0.80	19.36	755.24	0.000	0.000	160.68	0.00	0.00	
24	91.00	LGP21401	6	7.544	8.298	0.55	0.80	6.91	201.61	0.000	0.000	57.30	0.00	0.00	
25	91.00	P65-16-XLH-RR	3	7.544	8.298	0.60	0.80	19.49	520.21	0.000	0.000	161.70	0.00	0.00	
26	91.00	7770.00	3	7.544	8.298	0.60	0.80	11.72	507.48	0.000	0.000	97.24	0.00	0.00	
27	91.00	Low Profile Platform	1	7.544	8.298	1.00	1.00	30.79	2287.56	0.000	0.000	255.53	0.00	0.00	
28	85.00	V-brace kit	1	7.436	8.180	1.00	1.00	21.10	-526.41	0.000	0.000	172.61	0.00	0.00	
29	81.00	Kathrein 782 11054	3	7.361	8.097	0.55	0.80	0.67	20.60	0.000	0.000	5.45	0.00	0.00	
30	81.00	S20057A1	3	7.361	8.097	0.55	0.80	2.44	76.64	0.000	0.000	19.79	0.00	0.00	
31	81.00	RFS ATMAA1412D-1A2	3	7.361	8.097	0.55	0.80	3.16	98.98	0.000	0.000	25.55	0.00	0.00	
32	81.00	Commscope	3	7.361	8.097	0.66	0.80	28.62	629.38	0.000	0.000	231.72	0.00	0.00	
33	81.00	RFS APXV18-209014	3	7.361	8.097	0.61	0.80	8.12	312.78	0.000	0.000	65.74	0.00	0.00	
34	81.00	Platform w/ Handrail kit	1	7.361	8.097	1.00	1.00	65.21	3842.83	0.000	0.000	528.01	0.00	0.00	
35	75.00	Standoff Mount	1	7.243	7.967	1.00	1.00	8.20	99.90	0.000	0.000	65.32	0.00	0.00	
36	75.00	GPS	1	7.243	7.967	1.00	1.00	1.66	31.36	0.000	0.000	13.26	0.00	0.00	
Totals:									30,579.81						4,597.40

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 29

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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 26

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		52.24	647.50	0.00	0.00
4.00		51.89	651.35	0.00	0.00
6.00		51.48	651.39	0.00	0.00
8.00		51.03	649.77	0.00	0.00
10.00		50.56	647.20	0.00	0.00
12.00		50.08	644.00	0.00	0.00
14.00		49.60	640.36	0.00	0.00
16.00		49.71	636.38	0.00	0.00
18.00		50.45	632.14	0.00	0.00
20.00		51.05	627.69	0.00	0.00
22.00		51.54	623.06	0.00	0.00
24.00		51.93	618.28	0.00	0.00
26.00		52.25	613.38	0.00	0.00
28.00		52.49	608.37	0.00	0.00
30.00		52.67	603.26	0.00	0.00
32.00		52.79	598.07	0.00	0.00
34.00		52.86	592.80	0.00	0.00
36.00		52.89	587.46	0.00	0.00
38.00		52.87	582.06	0.00	0.00
40.00		52.81	576.60	0.00	0.00
42.00		52.71	571.09	0.00	0.00
44.00		52.58	565.53	0.00	0.00
45.13		29.58	317.19	0.00	0.00
46.00		23.12	360.49	0.00	0.00
48.00		53.15	821.66	0.00	0.00
49.88		49.76	763.81	0.00	0.00
50.00		3.16	30.22	0.00	0.00
52.00		52.71	500.53	0.00	0.00
54.00		52.45	495.54	0.00	0.00
56.00		52.17	490.51	0.00	0.00
58.00		51.86	485.46	0.00	0.00
60.00		51.54	480.38	0.00	0.00
62.00		51.19	475.27	0.00	0.00
64.00		50.83	470.13	0.00	0.00
66.00		50.45	464.97	0.00	0.00
68.00		50.05	459.79	0.00	0.00
70.00		49.63	454.59	0.00	0.00
72.00		49.20	449.36	0.00	0.00
74.00		48.76	444.12	0.00	0.00
75.00	(2) attachments	102.75	351.54	0.00	0.00
76.00		24.05	214.66	0.00	0.00
78.00		47.82	424.93	0.00	0.00
80.00		47.33	419.60	0.00	0.00
81.00	(16) attachments	899.72	5189.20	0.00	0.00
82.00		23.32	191.68	0.00	0.00
84.00		46.32	378.93	0.00	0.00

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 30

85.00	(1) attachments	195.54	-338.76	0.00	0.00
86.00		22.80	186.30	0.00	0.00
88.00		45.25	368.15	0.00	0.00
90.00		44.70	362.74	0.00	0.00
91.00	(20) attachments	777.59	4522.52	0.00	0.00
91.29		6.45	49.95	0.00	0.00
92.00		15.73	159.67	0.00	0.00
94.00		44.21	446.17	0.00	0.00
94.71		15.53	156.74	0.00	0.00
96.00		28.05	169.59	0.00	0.00
98.00	(24) attachments	1171.88	9302.25	0.00	0.00
100.00		42.44	220.15	0.00	0.00
102.00		41.83	216.17	0.00	0.00
104.00		41.21	212.17	0.00	0.00
105.00	(7) attachments	618.77	5729.66	0.00	0.00
106.00		20.19	103.80	0.00	0.00
107.00	(17) attachments	294.15	2129.42	0.00	0.00
108.00		19.87	98.63	0.00	0.00
110.00		39.31	193.79	0.00	0.00
112.00		38.65	189.75	0.00	0.00
114.00		37.99	185.70	0.00	0.00
116.00		37.32	181.65	0.00	0.00
118.00	(12) attachments	749.72	5134.01	0.00	1156.56
	Totals:	7,448.63	58,682.47	0.00	1,156.56

Linear Appurtenance Segment Forces (Factored)

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 31

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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 26

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1/2"	Yes	2.00	0.000	0.65	0.49	0.00	0.015	0.000	5.168	0.00	4.74
4.00	1/2"	Yes	2.00	0.000	0.65	0.51	0.00	0.015	0.000	5.168	0.00	5.29
6.00	1/2"	Yes	2.00	0.000	0.65	0.53	0.00	0.015	0.000	5.168	0.00	5.64
8.00	1/2"	Yes	2.00	0.000	0.65	0.54	0.00	0.015	0.000	5.168	0.00	5.91
10.00	1/2"	Yes	2.00	0.000	0.65	0.55	0.00	0.016	0.000	5.168	0.00	6.13
12.00	1/2"	Yes	2.00	0.000	0.65	0.56	0.00	0.016	0.000	5.168	0.00	6.32
14.00	1/2"	Yes	2.00	0.000	0.65	0.57	0.00	0.016	0.000	5.168	0.00	6.48
16.00	1/2"	Yes	2.00	0.000	0.65	0.57	0.00	0.016	0.000	5.232	0.00	6.62
18.00	1/2"	Yes	2.00	0.000	0.65	0.58	0.00	0.016	0.000	5.363	0.00	6.75
20.00	1/2"	Yes	2.00	0.000	0.65	0.58	0.00	0.016	0.000	5.483	0.00	6.87
22.00	1/2"	Yes	2.00	0.000	0.65	0.59	0.00	0.017	0.000	5.595	0.00	6.98
24.00	1/2"	Yes	2.00	0.000	0.65	0.59	0.00	0.017	0.000	5.698	0.00	7.08
26.00	1/2"	Yes	2.00	0.000	0.65	0.60	0.00	0.017	0.000	5.795	0.00	7.18
28.00	1/2"	Yes	2.00	0.000	0.65	0.60	0.00	0.017	0.000	5.886	0.00	7.27
30.00	1/2"	Yes	2.00	0.000	0.65	0.60	0.00	0.018	0.000	5.972	0.00	7.35
32.00	1/2"	Yes	2.00	0.000	0.65	0.61	0.00	0.018	0.000	6.054	0.00	7.43
34.00	1/2"	Yes	2.00	0.000	0.65	0.61	0.00	0.018	0.000	6.132	0.00	7.51
36.00	1/2"	Yes	2.00	0.000	0.65	0.61	0.00	0.018	0.000	6.206	0.00	7.58
38.00	1/2"	Yes	2.00	0.000	0.65	0.62	0.00	0.018	0.000	6.277	0.00	7.65
40.00	1/2"	Yes	2.00	0.000	0.65	0.62	0.00	0.019	0.000	6.345	0.00	7.71
42.00	1/2"	Yes	2.00	0.000	0.65	0.62	0.00	0.019	0.000	6.410	0.00	7.78
44.00	1/2"	Yes	2.00	0.000	0.65	0.62	0.00	0.019	0.000	6.474	0.00	7.84
45.13	1/2"	Yes	1.13	0.000	0.65	0.35	0.00	0.019	0.000	6.508	0.00	4.45
46.00	1/2"	Yes	0.87	0.000	0.65	0.27	0.00	0.020	0.000	6.534	0.00	3.44
48.00	1/2"	Yes	2.00	0.000	0.65	0.63	0.00	0.020	0.000	6.593	0.00	7.95
49.88	1/2"	Yes	1.88	0.000	0.65	0.59	0.00	0.020	0.000	6.647	0.00	7.53
50.00	1/2"	Yes	0.12	0.000	0.65	0.04	0.00	0.020	0.000	6.650	0.00	0.48
52.00	1/2"	Yes	2.00	0.000	0.65	0.63	0.00	0.020	0.000	6.705	0.00	8.06
54.00	1/2"	Yes	2.00	0.000	0.65	0.63	0.00	0.020	0.000	6.759	0.00	8.11
56.00	1/2"	Yes	2.00	0.000	0.65	0.64	0.00	0.021	0.000	6.811	0.00	8.16
58.00	1/2"	Yes	2.00	0.000	0.65	0.64	0.00	0.021	0.000	6.861	0.00	8.21
60.00	1/2"	Yes	2.00	0.000	0.65	0.64	0.00	0.021	0.000	6.910	0.00	8.26
62.00	1/2"	Yes	2.00	0.000	0.65	0.64	0.00	0.021	0.000	6.958	0.00	8.31
64.00	1/2"	Yes	2.00	0.000	0.65	0.64	0.00	0.022	0.000	7.005	0.00	8.35
66.00	1/2"	Yes	2.00	0.000	0.65	0.64	0.00	0.022	0.000	7.050	0.00	8.40
68.00	1/2"	Yes	2.00	0.000	0.65	0.65	0.00	0.023	0.000	7.095	0.00	8.44
70.00	1/2"	Yes	2.00	0.000	0.65	0.65	0.00	0.023	0.000	7.138	0.00	8.48
72.00	1/2"	Yes	2.00	0.000	0.65	0.65	0.00	0.023	0.000	7.181	0.00	8.52
74.00	1/2"	Yes	2.00	0.000	0.65	0.65	0.00	0.024	0.000	7.222	0.00	8.56
75.00	1/2"	Yes	1.00	0.000	0.65	0.33	0.00	0.024	0.000	7.243	0.00	4.29
Totals:											0.0	278.1

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

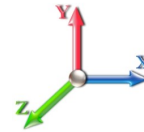


Page: 32

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

Iterations 26

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	-59.02	-7.46	0.00	-673.51	0.00	673.51	3634.70	1817.35	6397.77	3203.64	0.00	0.000	0.000	0.226
2.00	-58.37	-7.44	0.00	-658.58	0.00	658.58	3607.15	1803.57	6280.28	3144.81	0.01	-0.032	0.000	0.226
4.00	-57.71	-7.43	0.00	-643.69	0.00	643.69	3579.34	1789.67	6163.42	3086.29	0.03	-0.064	0.000	0.225
6.00	-57.06	-7.41	0.00	-628.84	0.00	628.84	3551.29	1775.64	6047.19	3028.09	0.06	-0.097	0.000	0.224
8.00	-56.40	-7.39	0.00	-614.03	0.00	614.03	3522.98	1761.49	5931.61	2970.21	0.11	-0.130	0.000	0.223
10.00	-55.75	-7.37	0.00	-599.26	0.00	599.26	3494.42	1747.21	5816.69	2912.67	0.17	-0.163	0.000	0.222
12.00	-55.10	-7.35	0.00	-584.53	0.00	584.53	3465.61	1732.80	5702.44	2855.46	0.25	-0.197	0.000	0.221
14.00	-54.46	-7.33	0.00	-569.84	0.00	569.84	3436.54	1718.27	5588.89	2798.60	0.34	-0.230	0.000	0.219
16.00	-53.82	-7.31	0.00	-555.19	0.00	555.19	3407.22	1703.61	5476.05	2742.09	0.44	-0.265	0.000	0.218
18.00	-53.18	-7.29	0.00	-540.57	0.00	540.57	3377.65	1688.83	5363.92	2685.95	0.56	-0.299	0.000	0.217
20.00	-52.55	-7.26	0.00	-526.00	0.00	526.00	3347.83	1673.91	5252.53	2630.17	0.69	-0.334	0.000	0.216
22.00	-51.92	-7.24	0.00	-511.48	0.00	511.48	3317.75	1658.87	5141.89	2574.76	0.84	-0.369	0.000	0.214
24.00	-51.30	-7.21	0.00	-497.00	0.00	497.00	3287.42	1643.71	5032.01	2519.74	1.00	-0.404	0.000	0.213
26.00	-50.68	-7.19	0.00	-482.57	0.00	482.57	3256.84	1628.42	4922.91	2465.11	1.18	-0.440	0.000	0.211
28.00	-50.07	-7.16	0.00	-468.20	0.00	468.20	3219.51	1609.75	4804.91	2406.03	1.37	-0.476	0.000	0.210
30.00	-49.46	-7.14	0.00	-453.87	0.00	453.87	3178.67	1589.33	4683.16	2345.06	1.58	-0.512	0.000	0.209
32.00	-48.86	-7.11	0.00	-439.59	0.00	439.59	3137.83	1568.91	4562.98	2284.88	1.80	-0.548	0.000	0.208
34.00	-48.26	-7.08	0.00	-425.38	0.00	425.38	3096.99	1548.49	4444.36	2225.48	2.04	-0.585	0.000	0.207
36.00	-47.67	-7.05	0.00	-411.21	0.00	411.21	3056.15	1528.07	4327.30	2166.87	2.29	-0.622	0.000	0.205
38.00	-47.09	-7.03	0.00	-397.10	0.00	397.10	3015.30	1507.65	4211.81	2109.03	2.56	-0.659	0.000	0.204
40.00	-46.51	-7.00	0.00	-383.06	0.00	383.06	2974.46	1487.23	4097.87	2051.98	2.84	-0.696	0.000	0.202
42.00	-45.93	-6.97	0.00	-369.06	0.00	369.06	2933.62	1466.81	3985.50	1995.71	3.14	-0.733	0.000	0.201
44.00	-45.36	-6.93	0.00	-355.13	0.00	355.13	2892.78	1446.39	3874.69	1940.23	3.46	-0.771	0.000	0.199
45.13	-45.04	-6.91	0.00	-347.30	0.00	347.30	2869.71	1434.85	3812.78	1909.22	3.64	-0.792	0.000	0.198
46.00	-44.68	-6.90	0.00	-341.29	0.00	341.29	2851.94	1425.97	3765.45	1885.52	3.79	-0.809	0.000	0.197
48.00	-43.86	-6.87	0.00	-327.49	0.00	327.49	2811.10	1405.55	3657.76	1831.60	4.14	-0.847	0.000	0.194
49.88	-43.09	-6.82	0.00	-314.58	0.00	314.58	2333.69	1166.84	3066.96	1535.76	4.48	-0.882	0.000	0.223
50.00	-43.06	-6.83	0.00	-313.76	0.00	313.76	2332.20	1166.10	3062.32	1533.44	4.50	-0.885	0.000	0.223
52.00	-42.55	-6.80	0.00	-300.09	0.00	300.09	2307.18	1153.59	2985.35	1494.89	4.88	-0.927	0.000	0.219
54.00	-42.05	-6.77	0.00	-286.49	0.00	286.49	2281.92	1140.96	2909.02	1456.67	5.28	-0.969	0.000	0.215
56.00	-41.56	-6.74	0.00	-272.94	0.00	272.94	2256.40	1128.20	2833.34	1418.77	5.69	-1.012	0.000	0.211
58.00	-41.07	-6.71	0.00	-259.45	0.00	259.45	2223.07	1111.54	2748.96	1376.53	6.12	-1.054	0.000	0.207
60.00	-40.59	-6.68	0.00	-246.03	0.00	246.03	2189.04	1094.52	2665.01	1334.49	6.58	-1.096	0.000	0.203
62.00	-40.11	-6.65	0.00	-232.66	0.00	232.66	2155.00	1077.50	2582.36	1293.10	7.04	-1.137	0.000	0.199
64.00	-39.63	-6.62	0.00	-219.36	0.00	219.36	2120.97	1060.48	2501.02	1252.37	7.53	-1.178	0.000	0.194
66.00	-39.16	-6.59	0.00	-206.13	0.00	206.13	2086.94	1043.47	2420.97	1212.28	8.03	-1.219	0.000	0.189
68.00	-38.70	-6.55	0.00	-192.95	0.00	192.95	2052.90	1026.45	2342.23	1172.85	8.55	-1.258	0.000	0.183
70.00	-38.24	-6.52	0.00	-179.85	0.00	179.85	2018.87	1009.43	2264.79	1134.08	9.09	-1.298	0.000	0.178
72.00	-37.79	-6.48	0.00	-166.81	0.00	166.81	1984.83	992.42	2188.65	1095.95	9.64	-1.336	0.000	0.171
74.00	-37.34	-6.44	0.00	-153.84	0.00	153.84	1950.80	975.40	2113.81	1058.48	10.21	-1.373	0.000	0.165
75.00	-36.99	-6.34	0.00	-147.40	0.00	147.40	1933.78	966.89	2076.88	1039.98	10.50	-1.392	0.000	0.161
76.00	-36.78	-6.33	0.00	-141.06	0.00	141.06	1916.76	958.38	2040.27	1021.65	10.79	-1.410	0.000	0.157
78.00	-36.35	-6.29	0.00	-128.40	0.00	128.40	1882.73	941.37	1968.04	985.48	11.39	-1.444	0.000	0.150
80.00	-35.93	-6.25	0.00	-115.81	0.00	115.81	1848.70	924.35	1897.11	949.96	12.00	-1.478	0.000	0.141
81.00	-30.76	-5.23	0.00	-109.56	0.00	109.56	1831.68	915.84	1862.13	932.45	12.31	-1.494	0.000	0.134
82.00	-30.57	-5.21	0.00	-104.33	0.00	104.33	1814.66	907.33	1827.48	915.10	12.63	-1.510	0.000	0.131
84.00	-30.19	-5.17	0.00	-93.91	0.00	93.91	1780.63	890.31	1759.15	880.88	13.26	-1.540	0.000	0.124
85.00	-30.19	-4.98	0.00	-88.74	0.00	88.74	1763.61	881.81	1725.48	864.02	13.59	-1.554	0.000	0.120

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 33
	Struct Class: II	



86.00	-30.01	-4.96	0.00	-83.76	0.00	83.76	1746.59	873.30	1692.13	847.32	13.92	-1.569	0.000	0.116
88.00	-29.64	-4.92	0.00	-73.84	0.00	73.84	1712.56	856.28	1626.40	814.41	14.58	-1.596	0.000	0.108
90.00	-29.28	-4.87	0.00	-64.00	0.00	64.00	1678.53	839.26	1561.98	782.15	15.25	-1.621	0.000	0.099
91.00	-24.78	-3.97	0.00	-59.13	0.00	59.13	1661.51	830.75	1530.26	766.27	15.59	-1.632	0.000	0.092
91.29	-24.73	-3.97	0.00	-57.97	0.00	57.97	1656.52	828.26	1521.01	761.64	15.69	-1.636	0.000	0.091
92.00	-24.57	-3.95	0.00	-55.16	0.00	55.16	1644.49	822.25	1498.86	750.54	15.94	-1.644	0.000	0.088
94.00	-24.12	-3.90	0.00	-47.26	0.00	47.26	1610.46	805.23	1437.04	719.59	16.63	-1.665	0.000	0.081
94.71	-23.96	-3.88	0.00	-44.49	0.00	44.49	930.70	465.35	848.15	424.70	16.88	-1.672	0.000	0.131
96.00	-23.79	-3.86	0.00	-39.48	0.00	39.48	922.07	461.04	828.91	415.07	17.33	-1.684	0.000	0.121
98.00	-14.53	-2.42	0.00	-31.76	0.00	31.76	908.49	454.24	799.32	400.25	18.04	-1.710	0.000	0.095
100.00	-14.31	-2.38	0.00	-26.92	0.00	26.92	894.64	447.32	770.03	385.59	18.76	-1.732	0.000	0.086
102.00	-14.09	-2.33	0.00	-22.17	0.00	22.17	880.55	440.27	741.05	371.08	19.49	-1.752	0.000	0.076
104.00	-13.88	-2.29	0.00	-17.51	0.00	17.51	866.20	433.10	712.41	356.74	20.23	-1.770	0.000	0.065
105.00	-8.17	-1.49	0.00	-15.23	0.00	15.23	858.93	429.47	698.22	349.63	20.60	-1.777	0.000	0.053
106.00	-8.07	-1.47	0.00	-13.73	0.00	13.73	851.60	425.80	684.12	342.57	20.98	-1.784	0.000	0.050
107.00	-5.95	-1.11	0.00	-12.26	0.00	12.26	844.21	422.10	670.11	335.55	21.35	-1.791	0.000	0.044
108.00	-5.85	-1.09	0.00	-11.16	0.00	11.16	836.75	418.38	656.18	328.58	21.73	-1.797	0.000	0.041
110.00	-5.66	-1.04	0.00	-8.98	0.00	8.98	821.65	410.82	628.62	314.78	22.48	-1.808	0.000	0.035
112.00	-5.47	-1.00	0.00	-6.89	0.00	6.89	804.60	402.30	600.19	300.54	23.24	-1.817	0.000	0.030
114.00	-5.29	-0.96	0.00	-4.90	0.00	4.90	784.18	392.09	569.96	285.40	24.00	-1.825	0.000	0.024
116.00	-5.11	-0.91	0.00	-2.98	0.00	2.98	763.76	381.88	540.51	270.66	24.77	-1.830	0.000	0.018
118.00	0.00	-0.75	0.00	-1.16	0.00	1.16	743.33	371.67	511.84	256.30	25.54	-1.833	0.000	0.005

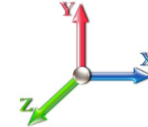
Seismic Segment Forces (Factored)

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 34

Load Case: 1.2D + 1.0E					Iterations 24
Gust Response Factor	1.10			Sds 0.23	Ss 0.21
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1 0.10	S1 0.07
Wind Load Factor	0.00	Structure Frequency	0.34	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	
2.00		345.42	0.00	0.02	0.01	5.34	
4.00		341.68	0.00	0.03	0.02	8.46	
6.00		337.94	0.00	0.04	0.02	10.42	
8.00		334.19	0.01	0.05	0.03	11.68	
10.00		330.45	0.01	0.06	0.03	12.48	
12.00		326.71	0.02	0.06	0.04	12.99	
14.00		322.97	0.03	0.07	0.04	13.29	
16.00		319.23	0.03	0.07	0.04	13.46	
18.00		315.49	0.04	0.07	0.04	13.54	
20.00		311.75	0.05	0.07	0.04	13.58	
22.00		308.01	0.07	0.07	0.04	13.59	
24.00		304.27	0.08	0.07	0.04	13.59	
26.00		300.52	0.09	0.07	0.04	13.59	
28.00		296.78	0.11	0.07	0.04	13.59	
30.00		293.04	0.12	0.07	0.03	13.58	
32.00		289.30	0.14	0.07	0.03	13.56	
34.00		285.56	0.16	0.07	0.03	13.52	
36.00		281.82	0.18	0.07	0.03	13.44	
38.00		278.08	0.20	0.06	0.02	13.29	
40.00		274.34	0.22	0.06	0.02	13.05	
42.00		270.60	0.24	0.06	0.02	12.70	
44.00		266.85	0.26	0.05	0.02	12.19	
45.13	Bot - Section 2	149.12	0.28	0.05	0.01	6.66	
46.00		211.01	0.29	0.05	0.01	9.22	
48.00		480.16	0.31	0.04	0.01	19.60	
49.88	Top - Section 1	445.09	0.34	0.04	0.01	16.52	
50.00		12.97	0.34	0.04	0.01	0.48	
52.00		214.55	0.37	0.03	0.01	6.80	
54.00		211.43	0.40	0.02	0.01	5.34	
56.00		208.31	0.43	0.01	0.01	3.67	
58.00		205.20	0.46	0.00	0.01	1.83	
60.00		202.08	0.49	-0.01	0.01	-0.10	
62.00		198.96	0.52	-0.02	0.01	-2.04	
64.00		195.84	0.56	-0.04	0.01	-3.87	
66.00		192.73	0.59	-0.05	0.01	-5.50	
68.00		189.61	0.63	-0.06	0.02	-6.87	
70.00		186.49	0.67	-0.08	0.02	-7.92	
72.00		183.37	0.70	-0.09	0.03	-8.63	
74.00		180.26	0.74	-0.10	0.04	-9.01	
75.00	Appurtenance(s)	138.96	0.76	-0.10	0.04	-7.06	
76.00		88.18	0.78	-0.11	0.05	-4.52	
78.00		174.02	0.83	-0.12	0.06	-8.84	
80.00		170.90	0.87	-0.12	0.08	-8.33	
81.00	Appurtenance(s)	2235.3	0.89	-0.12	0.08	-105.24	
82.00		83.50	0.91	-0.12	0.09	-3.76	

Seismic Segment Forces (Factored)

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 35

84.00		164.67	0.96	-0.12	0.11	-6.55
85.00	Appurtenance(s)	502.26	0.98	-0.11	0.12	-18.37
86.00		80.39	1.00	-0.11	0.13	-2.65
88.00		158.43	1.05	-0.09	0.16	-3.91
90.00		155.31	1.10	-0.07	0.19	-2.31
91.00	Appurtenance(s)	2122.0	1.12	-0.06	0.20	-19.87
91.29	Bot - Section 3	22.29	1.13	-0.05	0.21	-0.17
92.00		86.19	1.15	-0.04	0.22	-0.30
94.00		240.55	1.20	0.00	0.25	2.25
94.71	Top - Section 2	84.20	1.22	0.02	0.27	1.20
96.00		57.58	1.25	0.06	0.29	1.37
98.00	Appurtenance(s)	3088.1	1.30	0.13	0.34	122.35
100.00		85.86	1.36	0.21	0.39	4.90
102.00		83.99	1.41	0.31	0.44	6.39
104.00		82.12	1.47	0.43	0.51	7.94
105.00	Appurtenance(s)	2379.3	1.50	0.49	0.54	255.98
106.00		39.89	1.53	0.56	0.57	4.74
107.00	Appurtenance(s)	1001.8	1.55	0.64	0.61	130.83
108.00		38.96	1.58	0.73	0.65	5.56
110.00		76.51	1.64	0.92	0.73	12.87
112.00		74.64	1.70	1.13	0.82	14.58
114.00		72.77	1.76	1.38	0.92	16.31
116.00		70.90	1.83	1.66	1.02	18.06
118.00	Appurtenance(s)	2017.0	1.89	1.98	1.14	578.74
Totals:		26,079.0				1,293.3
						Total Wind: 28,306.3

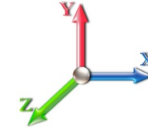
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.0E						Iterations 24
Gust Response Factor	1.10		Sds	0.23		Ss 0.21
Dead Load Factor	1.20	Seismic Load Factor	1.00	Sd1	0.10	S1 0.07
Wind Load Factor	0.00	Structure Frequency	0.34	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	-36.25	-1.53	0.00	-149.90	0.00	149.90	3634.70	1817.35	6397.77	3203.64	0.00	0.00	0.00	0.057
2.00	-35.73	-1.53	0.00	-146.84	0.00	146.84	3607.15	1803.57	6280.28	3144.81	0.00	-0.01	0.00	0.057
4.00	-35.21	-1.52	0.00	-143.78	0.00	143.78	3579.34	1789.67	6163.42	3086.29	0.01	-0.01	-0.01	0.056
6.00	-34.70	-1.52	0.00	-140.73	0.00	140.73	3551.29	1775.64	6047.19	3028.09	0.01	-0.02	-0.02	0.056
8.00	-34.20	-1.51	0.00	-137.70	0.00	137.70	3522.98	1761.49	5931.61	2970.21	0.02	-0.03	-0.03	0.056
10.00	-33.70	-1.50	0.00	-134.67	0.00	134.67	3494.42	1747.21	5816.69	2912.67	0.04	-0.04	-0.04	0.056
12.00	-33.20	-1.49	0.00	-131.67	0.00	131.67	3465.61	1732.80	5702.44	2855.46	0.06	-0.04	-0.04	0.056
14.00	-32.71	-1.48	0.00	-128.68	0.00	128.68	3436.54	1718.27	5588.89	2798.60	0.08	-0.05	-0.05	0.055
16.00	-32.22	-1.48	0.00	-125.71	0.00	125.71	3407.22	1703.61	5476.05	2742.09	0.10	-0.06	-0.06	0.055
18.00	-31.74	-1.47	0.00	-122.76	0.00	122.76	3377.65	1688.83	5363.92	2685.95	0.12	-0.07	-0.07	0.055
20.00	-31.26	-1.46	0.00	-119.83	0.00	119.83	3347.83	1673.91	5252.53	2630.17	0.15	-0.08	-0.08	0.055
22.00	-30.79	-1.45	0.00	-116.92	0.00	116.92	3317.75	1658.87	5141.89	2574.76	0.19	-0.08	-0.08	0.055
24.00	-30.32	-1.44	0.00	-114.03	0.00	114.03	3287.42	1643.71	5032.01	2519.74	0.22	-0.09	-0.09	0.054
26.00	-29.85	-1.43	0.00	-111.15	0.00	111.15	3256.84	1628.42	4922.91	2465.11	0.26	-0.10	-0.10	0.054
28.00	-29.39	-1.42	0.00	-108.30	0.00	108.30	3219.51	1609.75	4804.91	2406.03	0.31	-0.11	-0.11	0.054
30.00	-28.94	-1.41	0.00	-105.47	0.00	105.47	3178.67	1589.33	4683.16	2345.06	0.35	-0.12	-0.12	0.054
32.00	-28.49	-1.40	0.00	-102.66	0.00	102.66	3137.83	1568.91	4562.98	2284.88	0.41	-0.12	-0.12	0.054
34.00	-28.04	-1.38	0.00	-99.87	0.00	99.87	3096.99	1548.49	4444.36	2225.48	0.46	-0.13	-0.13	0.054
36.00	-27.60	-1.37	0.00	-97.10	0.00	97.10	3056.15	1528.07	4327.30	2166.87	0.52	-0.14	-0.14	0.054
38.00	-27.16	-1.36	0.00	-94.35	0.00	94.35	3015.30	1507.65	4211.81	2109.03	0.58	-0.15	-0.15	0.054
40.00	-26.73	-1.35	0.00	-91.63	0.00	91.63	2974.46	1487.23	4097.87	2051.98	0.64	-0.16	-0.16	0.054
42.00	-26.30	-1.34	0.00	-88.92	0.00	88.92	2933.62	1466.81	3985.50	1995.71	0.71	-0.17	-0.17	0.054
44.00	-25.87	-1.33	0.00	-86.23	0.00	86.23	2892.78	1446.39	3874.69	1940.23	0.78	-0.18	-0.18	0.053
45.13	-25.64	-1.33	0.00	-84.72	0.00	84.72	2869.71	1434.85	3812.78	1909.22	0.83	-0.18	-0.18	0.053
46.00	-25.34	-1.32	0.00	-83.56	0.00	83.56	2851.94	1425.97	3765.45	1885.52	0.86	-0.19	-0.19	0.053
48.00	-24.66	-1.30	0.00	-80.92	0.00	80.92	2811.10	1405.55	3657.76	1831.60	0.94	-0.20	-0.20	0.053
49.88	-24.03	-1.29	0.00	-78.47	0.00	78.47	2333.69	1166.84	3066.96	1535.76	1.02	-0.20	-0.20	0.061
50.00	-24.00	-1.29	0.00	-78.32	0.00	78.32	2332.20	1166.10	3062.32	1533.44	1.03	-0.21	-0.21	0.061
52.00	-23.64	-1.29	0.00	-75.74	0.00	75.74	2307.18	1153.59	2985.35	1494.89	1.11	-0.22	-0.22	0.061
54.00	-23.28	-1.28	0.00	-73.17	0.00	73.17	2281.92	1140.96	2909.02	1456.67	1.21	-0.23	-0.23	0.060
56.00	-22.93	-1.28	0.00	-70.60	0.00	70.60	2256.40	1128.20	2833.34	1418.77	1.30	-0.24	-0.24	0.060
58.00	-22.58	-1.28	0.00	-68.04	0.00	68.04	2223.07	1111.54	2748.96	1376.53	1.41	-0.25	-0.25	0.060
60.00	-22.23	-1.29	0.00	-65.47	0.00	65.47	2189.04	1094.52	2665.01	1334.49	1.51	-0.26	-0.26	0.059
62.00	-21.89	-1.29	0.00	-62.90	0.00	62.90	2155.00	1077.50	2582.36	1293.10	1.62	-0.27	-0.27	0.059
64.00	-21.55	-1.29	0.00	-60.33	0.00	60.33	2120.97	1060.48	2501.02	1252.37	1.74	-0.28	-0.28	0.058
66.00	-21.22	-1.29	0.00	-57.74	0.00	57.74	2086.94	1043.47	2420.97	1212.28	1.86	-0.29	-0.29	0.058
68.00	-20.88	-1.30	0.00	-55.16	0.00	55.16	2052.90	1026.45	2342.23	1172.85	1.99	-0.30	-0.30	0.057
70.00	-20.56	-1.30	0.00	-52.56	0.00	52.56	2018.87	1009.43	2264.79	1134.08	2.12	-0.32	-0.32	0.057
72.00	-20.23	-1.30	0.00	-49.97	0.00	49.97	1984.83	992.42	2188.65	1095.95	2.25	-0.33	-0.33	0.056
74.00	-19.91	-1.30	0.00	-47.37	0.00	47.37	1950.80	975.40	2113.81	1058.48	2.39	-0.34	-0.34	0.055
75.00	-19.69	-1.30	0.00	-46.07	0.00	46.07	1933.78	966.89	2076.88	1039.98	2.46	-0.34	-0.34	0.054
76.00	-19.53	-1.30	0.00	-44.76	0.00	44.76	1916.76	958.38	2040.27	1021.65	2.53	-0.35	-0.35	0.054
78.00	-19.22	-1.31	0.00	-42.15	0.00	42.15	1882.73	941.37	1968.04	985.48	2.68	-0.36	-0.36	0.053
80.00	-18.91	-1.31	0.00	-39.54	0.00	39.54	1848.70	924.35	1897.11	949.96	2.84	-0.37	-0.37	0.052
81.00	-16.18	-1.29	0.00	-38.24	0.00	38.24	1831.68	915.84	1862.13	932.45	2.91	-0.38	-0.38	0.050
82.00	-16.04	-1.29	0.00	-36.95	0.00	36.95	1814.66	907.33	1827.48	915.10	2.99	-0.38	-0.38	0.049
84.00	-15.77	-1.29	0.00	-34.36	0.00	34.36	1780.63	890.31	1759.15	880.88	3.16	-0.39	-0.39	0.048

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 37

85.00	-15.13	-1.29	0.00	-33.07	0.00	33.07	1763.61	881.81	1725.48	864.02	3.24	-0.40	0.047
86.00	-15.00	-1.29	0.00	-31.78	0.00	31.78	1746.59	873.30	1692.13	847.32	3.33	-0.40	0.046
88.00	-14.73	-1.29	0.00	-29.20	0.00	29.20	1712.56	856.28	1626.40	814.41	3.50	-0.42	0.044
90.00	-14.47	-1.29	0.00	-26.62	0.00	26.62	1678.53	839.26	1561.98	782.15	3.67	-0.43	0.043
91.00	-11.89	-1.27	0.00	-25.32	0.00	25.32	1661.51	830.75	1530.26	766.27	3.76	-0.43	0.040
91.29	-11.86	-1.27	0.00	-24.95	0.00	24.95	1656.52	828.26	1521.01	761.64	3.79	-0.43	0.040
92.00	-11.73	-1.27	0.00	-24.05	0.00	24.05	1644.49	822.25	1498.86	750.54	3.85	-0.44	0.039
94.00	-11.39	-1.27	0.00	-21.50	0.00	21.50	1610.46	805.23	1437.04	719.59	4.04	-0.44	0.037
94.71	-11.27	-1.27	0.00	-20.60	0.00	20.60	930.70	465.35	848.15	424.70	4.10	-0.45	0.061
96.00	-11.16	-1.27	0.00	-18.97	0.00	18.97	922.07	461.04	828.91	415.07	4.23	-0.45	0.058
98.00	-7.40	-1.12	0.00	-16.43	0.00	16.43	908.49	454.24	799.32	400.25	4.42	-0.47	0.049
100.00	-7.27	-1.11	0.00	-14.20	0.00	14.20	894.64	447.32	770.03	385.59	4.62	-0.48	0.045
102.00	-7.15	-1.11	0.00	-11.97	0.00	11.97	880.55	440.27	741.05	371.08	4.82	-0.49	0.040
104.00	-7.03	-1.10	0.00	-9.76	0.00	9.76	866.20	433.10	712.41	356.74	5.03	-0.50	0.035
105.00	-4.17	-0.82	0.00	-8.66	0.00	8.66	858.93	429.47	698.22	349.63	5.13	-0.50	0.030
106.00	-4.11	-0.81	0.00	-7.84	0.00	7.84	851.60	425.80	684.12	342.57	5.24	-0.51	0.028
107.00	-2.90	-0.67	0.00	-7.03	0.00	7.03	844.21	422.10	670.11	335.55	5.34	-0.51	0.024
108.00	-2.84	-0.67	0.00	-6.35	0.00	6.35	836.75	418.38	656.18	328.58	5.45	-0.51	0.023
110.00	-2.74	-0.65	0.00	-5.02	0.00	5.02	821.65	410.82	628.62	314.78	5.67	-0.52	0.019
112.00	-2.63	-0.64	0.00	-3.72	0.00	3.72	804.60	402.30	600.19	300.54	5.89	-0.53	0.016
114.00	-2.53	-0.62	0.00	-2.44	0.00	2.44	784.18	392.09	569.96	285.40	6.11	-0.53	0.012
116.00	-2.43	-0.60	0.00	-1.20	0.00	1.20	763.76	381.88	540.51	270.66	6.33	-0.53	0.008
118.00	0.00	-0.58	0.00	0.00	0.00	0.00	743.33	371.67	511.84	256.30	6.55	-0.53	0.000

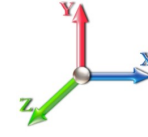
Seismic Segment Forces (Factored)

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 38

Load Case: 0.9D + 1.0E					Iterations 24
Gust Response Factor	1.10			Sds 0.23	Ss 0.21
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1 0.10	S1 0.07
Wind Load Factor	0.00	Structure Frequency	0.34	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	
2.00		345.42	0.00	0.02	0.01	5.34	
4.00		341.68	0.00	0.03	0.02	8.46	
6.00		337.94	0.00	0.04	0.02	10.42	
8.00		334.19	0.01	0.05	0.03	11.68	
10.00		330.45	0.01	0.06	0.03	12.48	
12.00		326.71	0.02	0.06	0.04	12.99	
14.00		322.97	0.03	0.07	0.04	13.29	
16.00		319.23	0.03	0.07	0.04	13.46	
18.00		315.49	0.04	0.07	0.04	13.54	
20.00		311.75	0.05	0.07	0.04	13.58	
22.00		308.01	0.07	0.07	0.04	13.59	
24.00		304.27	0.08	0.07	0.04	13.59	
26.00		300.52	0.09	0.07	0.04	13.59	
28.00		296.78	0.11	0.07	0.04	13.59	
30.00		293.04	0.12	0.07	0.03	13.58	
32.00		289.30	0.14	0.07	0.03	13.56	
34.00		285.56	0.16	0.07	0.03	13.52	
36.00		281.82	0.18	0.07	0.03	13.44	
38.00		278.08	0.20	0.06	0.02	13.29	
40.00		274.34	0.22	0.06	0.02	13.05	
42.00		270.60	0.24	0.06	0.02	12.70	
44.00		266.85	0.26	0.05	0.02	12.19	
45.13	Bot - Section 2	149.12	0.28	0.05	0.01	6.66	
46.00		211.01	0.29	0.05	0.01	9.22	
48.00		480.16	0.31	0.04	0.01	19.60	
49.88	Top - Section 1	445.09	0.34	0.04	0.01	16.52	
50.00		12.97	0.34	0.04	0.01	0.48	
52.00		214.55	0.37	0.03	0.01	6.80	
54.00		211.43	0.40	0.02	0.01	5.34	
56.00		208.31	0.43	0.01	0.01	3.67	
58.00		205.20	0.46	0.00	0.01	1.83	
60.00		202.08	0.49	-0.01	0.01	-0.10	
62.00		198.96	0.52	-0.02	0.01	-2.04	
64.00		195.84	0.56	-0.04	0.01	-3.87	
66.00		192.73	0.59	-0.05	0.01	-5.50	
68.00		189.61	0.63	-0.06	0.02	-6.87	
70.00		186.49	0.67	-0.08	0.02	-7.92	
72.00		183.37	0.70	-0.09	0.03	-8.63	
74.00		180.26	0.74	-0.10	0.04	-9.01	
75.00	Appurtenance(s)	138.96	0.76	-0.10	0.04	-7.06	
76.00		88.18	0.78	-0.11	0.05	-4.52	
78.00		174.02	0.83	-0.12	0.06	-8.84	
80.00		170.90	0.87	-0.12	0.08	-8.33	
81.00	Appurtenance(s)	2235.3	0.89	-0.12	0.08	-105.24	
82.00		83.50	0.91	-0.12	0.09	-3.76	

Seismic Segment Forces (Factored)

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017	
Site Name: Newtown-ferris Rd	Exposure: C		
Height: 118.00 (ft)	Crest Height: 0.00		
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil		
Gh: 1.1	Topography: 1	Struct Class: II	Page: 39



84.00		164.67	0.96	-0.12	0.11	-6.55
85.00	Appurtenance(s)	502.26	0.98	-0.11	0.12	-18.37
86.00		80.39	1.00	-0.11	0.13	-2.65
88.00		158.43	1.05	-0.09	0.16	-3.91
90.00		155.31	1.10	-0.07	0.19	-2.31
91.00	Appurtenance(s)	2122.0	1.12	-0.06	0.20	-19.87
91.29	Bot - Section 3	22.29	1.13	-0.05	0.21	-0.17
92.00		86.19	1.15	-0.04	0.22	-0.30
94.00		240.55	1.20	0.00	0.25	2.25
94.71	Top - Section 2	84.20	1.22	0.02	0.27	1.20
96.00		57.58	1.25	0.06	0.29	1.37
98.00	Appurtenance(s)	3088.1	1.30	0.13	0.34	122.35
100.00		85.86	1.36	0.21	0.39	4.90
102.00		83.99	1.41	0.31	0.44	6.39
104.00		82.12	1.47	0.43	0.51	7.94
105.00	Appurtenance(s)	2379.3	1.50	0.49	0.54	255.98
106.00		39.89	1.53	0.56	0.57	4.74
107.00	Appurtenance(s)	1001.8	1.55	0.64	0.61	130.83
108.00		38.96	1.58	0.73	0.65	5.56
110.00		76.51	1.64	0.92	0.73	12.87
112.00		74.64	1.70	1.13	0.82	14.58
114.00		72.77	1.76	1.38	0.92	16.31
116.00		70.90	1.83	1.66	1.02	18.06
118.00	Appurtenance(s)	2017.0	1.89	1.98	1.14	578.74
Totals:		26,079.0				1,293.3
						Total Wind: 28,306.3

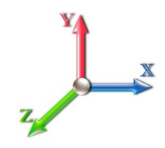
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 0.9D + 1.0E										Iterations 24
Gust Response Factor	1.10						Sds	0.23		Ss 0.21
Dead Load Factor	0.90	Seismic Load Factor	1.00	Sd1	0.10					S1 0.07
Wind Load Factor	0.00	Structure Frequency	0.34	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	-27.18	-1.53	0.00	-147.74	0.00	147.74	3634.70	1817.35	6397.77	3203.64	0.00	0.00	0.00	0.054
2.00	-26.80	-1.53	0.00	-144.68	0.00	144.68	3607.15	1803.57	6280.28	3144.81	0.00	-0.01	-0.01	0.053
4.00	-26.41	-1.52	0.00	-141.63	0.00	141.63	3579.34	1789.67	6163.42	3086.29	0.01	-0.01	-0.01	0.053
6.00	-26.03	-1.51	0.00	-138.59	0.00	138.59	3551.29	1775.64	6047.19	3028.09	0.01	-0.02	-0.02	0.053
8.00	-25.65	-1.51	0.00	-135.56	0.00	135.56	3522.98	1761.49	5931.61	2970.21	0.02	-0.03	-0.03	0.053
10.00	-25.27	-1.50	0.00	-132.54	0.00	132.54	3494.42	1747.21	5816.69	2912.67	0.04	-0.04	-0.04	0.053
12.00	-24.90	-1.49	0.00	-129.55	0.00	129.55	3465.61	1732.80	5702.44	2855.46	0.05	-0.04	-0.04	0.053
14.00	-24.53	-1.48	0.00	-126.58	0.00	126.58	3436.54	1718.27	5588.89	2798.60	0.07	-0.05	-0.05	0.052
16.00	-24.17	-1.47	0.00	-123.62	0.00	123.62	3407.22	1703.61	5476.05	2742.09	0.10	-0.06	-0.06	0.052
18.00	-23.81	-1.46	0.00	-120.69	0.00	120.69	3377.65	1688.83	5363.92	2685.95	0.12	-0.07	-0.07	0.052
20.00	-23.45	-1.44	0.00	-117.78	0.00	117.78	3347.83	1673.91	5252.53	2630.17	0.15	-0.07	-0.07	0.052
22.00	-23.09	-1.43	0.00	-114.89	0.00	114.89	3317.75	1658.87	5141.89	2574.76	0.19	-0.08	-0.08	0.052
24.00	-22.74	-1.42	0.00	-112.02	0.00	112.02	3287.42	1643.71	5032.01	2519.74	0.22	-0.09	-0.09	0.051
26.00	-22.39	-1.41	0.00	-109.18	0.00	109.18	3256.84	1628.42	4922.91	2465.11	0.26	-0.10	-0.10	0.051
28.00	-22.05	-1.40	0.00	-106.36	0.00	106.36	3219.51	1609.75	4804.91	2406.03	0.30	-0.11	-0.11	0.051
30.00	-21.70	-1.39	0.00	-103.55	0.00	103.55	3178.67	1589.33	4683.16	2345.06	0.35	-0.11	-0.11	0.051
32.00	-21.36	-1.38	0.00	-100.78	0.00	100.78	3137.83	1568.91	4562.98	2284.88	0.40	-0.12	-0.12	0.051
34.00	-21.03	-1.37	0.00	-98.02	0.00	98.02	3096.99	1548.49	4444.36	2225.48	0.45	-0.13	-0.13	0.051
36.00	-20.70	-1.36	0.00	-95.29	0.00	95.29	3056.15	1528.07	4327.30	2166.87	0.51	-0.14	-0.14	0.051
38.00	-20.37	-1.35	0.00	-92.57	0.00	92.57	3015.30	1507.65	4211.81	2109.03	0.57	-0.15	-0.15	0.051
40.00	-20.04	-1.33	0.00	-89.88	0.00	89.88	2974.46	1487.23	4097.87	2051.98	0.63	-0.16	-0.16	0.051
42.00	-19.72	-1.32	0.00	-87.21	0.00	87.21	2933.62	1466.81	3985.50	1995.71	0.70	-0.17	-0.17	0.050
44.00	-19.40	-1.31	0.00	-84.57	0.00	84.57	2892.78	1446.39	3874.69	1940.23	0.77	-0.17	-0.17	0.050
45.13	-19.23	-1.31	0.00	-83.08	0.00	83.08	2869.71	1434.85	3812.78	1909.22	0.81	-0.18	-0.18	0.050
46.00	-19.00	-1.30	0.00	-81.95	0.00	81.95	2851.94	1425.97	3765.45	1885.52	0.85	-0.18	-0.18	0.050
48.00	-18.49	-1.28	0.00	-79.35	0.00	79.35	2811.10	1405.55	3657.76	1831.60	0.93	-0.19	-0.19	0.050
49.88	-18.02	-1.26	0.00	-76.94	0.00	76.94	2333.69	1166.84	3066.96	1535.76	1.00	-0.20	-0.20	0.058
50.00	-18.00	-1.27	0.00	-76.79	0.00	76.79	2332.20	1166.10	3062.32	1533.44	1.01	-0.20	-0.20	0.058
52.00	-17.73	-1.26	0.00	-74.26	0.00	74.26	2307.18	1153.59	2985.35	1494.89	1.09	-0.21	-0.21	0.057
54.00	-17.46	-1.26	0.00	-71.73	0.00	71.73	2281.92	1140.96	2909.02	1456.67	1.19	-0.22	-0.22	0.057
56.00	-17.20	-1.26	0.00	-69.22	0.00	69.22	2256.40	1128.20	2833.34	1418.77	1.28	-0.23	-0.23	0.056
58.00	-16.93	-1.26	0.00	-66.71	0.00	66.71	2223.07	1111.54	2748.96	1376.53	1.38	-0.24	-0.24	0.056
60.00	-16.67	-1.26	0.00	-64.19	0.00	64.19	2189.04	1094.52	2665.01	1334.49	1.49	-0.26	-0.26	0.056
62.00	-16.42	-1.26	0.00	-61.68	0.00	61.68	2155.00	1077.50	2582.36	1293.10	1.60	-0.27	-0.27	0.055
64.00	-16.16	-1.26	0.00	-59.15	0.00	59.15	2120.97	1060.48	2501.02	1252.37	1.71	-0.28	-0.28	0.055
66.00	-15.91	-1.26	0.00	-56.63	0.00	56.63	2086.94	1043.47	2420.97	1212.28	1.83	-0.29	-0.29	0.054
68.00	-15.66	-1.27	0.00	-54.10	0.00	54.10	2052.90	1026.45	2342.23	1172.85	1.95	-0.30	-0.30	0.054
70.00	-15.42	-1.27	0.00	-51.57	0.00	51.57	2018.87	1009.43	2264.79	1134.08	2.08	-0.31	-0.31	0.053
72.00	-15.17	-1.27	0.00	-49.03	0.00	49.03	1984.83	992.42	2188.65	1095.95	2.21	-0.32	-0.32	0.052
74.00	-14.93	-1.27	0.00	-46.49	0.00	46.49	1950.80	975.40	2113.81	1058.48	2.35	-0.33	-0.33	0.052
75.00	-14.77	-1.27	0.00	-45.22	0.00	45.22	1933.78	966.89	2076.88	1039.98	2.42	-0.34	-0.34	0.051
76.00	-14.65	-1.27	0.00	-43.95	0.00	43.95	1916.76	958.38	2040.27	1021.65	2.49	-0.34	-0.34	0.051
78.00	-14.41	-1.27	0.00	-41.41	0.00	41.41	1882.73	941.37	1968.04	985.48	2.64	-0.35	-0.35	0.050
80.00	-14.18	-1.27	0.00	-38.86	0.00	38.86	1848.70	924.35	1897.11	949.96	2.79	-0.37	-0.37	0.049
81.00	-12.13	-1.26	0.00	-37.59	0.00	37.59	1831.68	915.84	1862.13	932.45	2.86	-0.37	-0.37	0.047
82.00	-12.03	-1.26	0.00	-36.32	0.00	36.32	1814.66	907.33	1827.48	915.10	2.94	-0.38	-0.38	0.046
84.00	-11.83	-1.26	0.00	-33.80	0.00	33.80	1780.63	890.31	1759.15	880.88	3.10	-0.39	-0.39	0.045

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 41

85.00	-11.35	-1.26	0.00	-32.53	0.00	32.53	1763.61	881.81	1725.48	864.02	3.18	-0.39	0.044
86.00	-11.25	-1.26	0.00	-31.27	0.00	31.27	1746.59	873.30	1692.13	847.32	3.27	-0.40	0.043
88.00	-11.05	-1.26	0.00	-28.75	0.00	28.75	1712.56	856.28	1626.40	814.41	3.44	-0.41	0.042
90.00	-10.85	-1.26	0.00	-26.22	0.00	26.22	1678.53	839.26	1561.98	782.15	3.61	-0.42	0.040
91.00	-8.92	-1.25	0.00	-24.96	0.00	24.96	1661.51	830.75	1530.26	766.27	3.70	-0.42	0.038
91.29	-8.89	-1.25	0.00	-24.59	0.00	24.59	1656.52	828.26	1521.01	761.64	3.72	-0.42	0.038
92.00	-8.80	-1.25	0.00	-23.71	0.00	23.71	1644.49	822.25	1498.86	750.54	3.79	-0.43	0.037
94.00	-8.54	-1.25	0.00	-21.21	0.00	21.21	1610.46	805.23	1437.04	719.59	3.97	-0.44	0.035
94.71	-8.45	-1.25	0.00	-20.32	0.00	20.32	930.70	465.35	848.15	424.70	4.03	-0.44	0.057
96.00	-8.37	-1.24	0.00	-18.72	0.00	18.72	922.07	461.04	828.91	415.07	4.15	-0.45	0.054
98.00	-5.55	-1.10	0.00	-16.23	0.00	16.23	908.49	454.24	799.32	400.25	4.34	-0.46	0.047
100.00	-5.45	-1.10	0.00	-14.02	0.00	14.02	894.64	447.32	770.03	385.59	4.54	-0.47	0.042
102.00	-5.36	-1.09	0.00	-11.83	0.00	11.83	880.55	440.27	741.05	371.08	4.73	-0.48	0.038
104.00	-5.27	-1.08	0.00	-9.65	0.00	9.65	866.20	433.10	712.41	356.74	4.94	-0.49	0.033
105.00	-3.12	-0.81	0.00	-8.57	0.00	8.57	858.93	429.47	698.22	349.63	5.04	-0.49	0.028
106.00	-3.08	-0.80	0.00	-7.76	0.00	7.76	851.60	425.80	684.12	342.57	5.15	-0.50	0.026
107.00	-2.17	-0.66	0.00	-6.96	0.00	6.96	844.21	422.10	670.11	335.55	5.25	-0.50	0.023
108.00	-2.13	-0.66	0.00	-6.29	0.00	6.29	836.75	418.38	656.18	328.58	5.36	-0.51	0.022
110.00	-2.05	-0.65	0.00	-4.97	0.00	4.97	821.65	410.82	628.62	314.78	5.57	-0.51	0.018
112.00	-1.97	-0.63	0.00	-3.68	0.00	3.68	804.60	402.30	600.19	300.54	5.78	-0.52	0.015
114.00	-1.90	-0.61	0.00	-2.42	0.00	2.42	784.18	392.09	569.96	285.40	6.00	-0.52	0.011
116.00	-1.82	-0.60	0.00	-1.19	0.00	1.19	763.76	381.88	540.51	270.66	6.22	-0.52	0.007
118.00	0.00	-0.58	0.00	0.00	0.00	0.00	743.33	371.67	511.84	256.30	6.44	-0.52	0.000

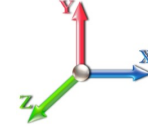
Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

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	202.45	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
2.00		1.00	0.85	7.442	8.19	200.29	0.650	0.000	2.00	7.280	4.73	38.7	0.0	345.4
4.00		1.00	0.85	7.442	8.19	198.12	0.650	0.000	2.00	7.202	4.68	38.3	0.0	341.7
6.00		1.00	0.85	7.442	8.19	195.96	0.650	0.000	2.00	7.124	4.63	37.9	0.0	337.9
8.00		1.00	0.85	7.442	8.19	193.80	0.650	0.000	2.00	7.046	4.58	37.5	0.0	334.2
10.00		1.00	0.85	7.442	8.19	191.64	0.650	0.000	2.00	6.968	4.53	37.1	0.0	330.5
12.00		1.00	0.85	7.442	8.19	189.48	0.650	0.000	2.00	6.890	4.48	36.7	0.0	326.7
14.00		1.00	0.85	7.442	8.19	187.31	0.650	0.000	2.00	6.811	4.43	36.2	0.0	323.0
16.00		1.00	0.86	7.534	8.29	186.29	0.650	0.000	2.00	6.733	4.38	36.3	0.0	319.2
18.00		1.00	0.88	7.723	8.50	186.41	0.650	0.000	2.00	6.655	4.33	36.7	0.0	315.5
20.00		1.00	0.90	7.896	8.69	186.27	0.650	0.000	2.00	6.577	4.28	37.1	0.0	311.7
22.00		1.00	0.92	8.056	8.86	185.89	0.650	0.000	2.00	6.499	4.22	37.4	0.0	308.0
24.00		1.00	0.94	8.205	9.03	185.34	0.650	0.000	2.00	6.421	4.17	37.7	0.0	304.3
26.00		1.00	0.95	8.345	9.18	184.61	0.650	0.000	2.00	6.342	4.12	37.8	0.0	300.5
28.00		1.00	0.97	8.476	9.32	183.75	0.650	0.000	2.00	6.264	4.07	38.0	0.0	296.8
30.00		1.00	0.98	8.600	9.46	182.77	0.650	0.000	2.00	6.186	4.02	38.0	0.0	293.0
32.00		1.00	1.00	8.717	9.59	181.67	0.650	0.000	2.00	6.108	3.97	38.1	0.0	289.3
34.00		1.00	1.01	8.829	9.71	180.48	0.650	0.000	2.00	6.030	3.92	38.1	0.0	285.6
36.00		1.00	1.02	8.936	9.83	179.20	0.650	0.000	2.00	5.952	3.87	38.0	0.0	281.8
38.00		1.00	1.03	9.039	9.94	177.84	0.650	0.000	2.00	5.873	3.82	38.0	0.0	278.1
40.00		1.00	1.04	9.137	10.05	176.41	0.650	0.000	2.00	5.795	3.77	37.9	0.0	274.3
42.00		1.00	1.05	9.231	10.15	174.91	0.650	0.000	2.00	5.717	3.72	37.7	0.0	270.6
44.00		1.00	1.06	9.322	10.25	173.35	0.650	0.000	2.00	5.639	3.67	37.6	0.0	266.9
45.13 Bot - Section 2		1.00	1.07	9.372	10.31	172.44	0.650	0.000	1.13	3.151	2.05	21.1	0.0	149.1
46.00		1.00	1.07	9.410	10.35	171.73	0.650	0.000	0.87	2.455	1.60	16.5	0.0	211.0
48.00		1.00	1.08	9.494	10.44	170.06	0.650	0.000	2.00	5.588	3.63	37.9	0.0	480.2
49.88 Top - Section 1		1.00	1.09	9.571	10.53	168.44	0.650	0.000	1.88	5.182	3.37	35.5	0.0	445.1
50.00		1.00	1.09	9.576	10.53	171.66	0.650	0.000	0.12	0.328	0.21	2.2	0.0	13.0
52.00		1.00	1.10	9.656	10.62	169.91	0.650	0.000	2.00	5.432	3.53	37.5	0.0	214.5
54.00		1.00	1.11	9.733	10.71	168.11	0.650	0.000	2.00	5.354	3.48	37.3	0.0	211.4
56.00		1.00	1.12	9.807	10.79	166.27	0.650	0.000	2.00	5.276	3.43	37.0	0.0	208.3
58.00		1.00	1.13	9.880	10.87	164.40	0.650	0.000	2.00	5.198	3.38	36.7	0.0	205.2
60.00		1.00	1.14	9.951	10.95	162.49	0.650	0.000	2.00	5.119	3.33	36.4	0.0	202.1
62.00		1.00	1.14	10.020	11.02	160.54	0.650	0.000	2.00	5.041	3.28	36.1	0.0	199.0
64.00		1.00	1.15	10.087	11.10	158.56	0.650	0.000	2.00	4.963	3.23	35.8	0.0	195.8
66.00		1.00	1.16	10.153	11.17	156.55	0.650	0.000	2.00	4.885	3.18	35.5	0.0	192.7
68.00		1.00	1.17	10.217	11.24	154.51	0.650	0.000	2.00	4.807	3.12	35.1	0.0	189.6
70.00		1.00	1.17	10.279	11.31	152.44	0.650	0.000	2.00	4.729	3.07	34.8	0.0	186.5
72.00		1.00	1.18	10.340	11.37	150.34	0.650	0.000	2.00	4.650	3.02	34.4	0.0	183.4
74.00		1.00	1.19	10.400	11.44	148.22	0.650	0.000	2.00	4.572	2.97	34.0	0.0	180.3
75.00 Appurtenance(s)		1.00	1.19	10.430	11.47	147.15	0.650	0.000	1.00	2.257	1.47	16.8	0.0	89.0
76.00		1.00	1.19	10.459	11.50	146.08	0.650	0.000	1.00	2.237	1.45	16.7	0.0	88.2
78.00		1.00	1.20	10.516	11.57	143.91	0.650	0.000	2.00	4.416	2.87	33.2	0.0	174.0
80.00		1.00	1.21	10.572	11.63	141.71	0.650	0.000	2.00	4.338	2.82	32.8	0.0	170.9
81.00 Appurtenance(s)		1.00	1.21	10.600	11.66	140.61	0.650	0.000	1.00	2.140	1.39	16.2	0.0	84.3
82.00		1.00	1.21	10.627	11.69	139.50	0.650	0.000	1.00	2.120	1.38	16.1	0.0	83.5
84.00		1.00	1.22	10.681	11.75	137.26	0.650	0.000	2.00	4.181	2.72	31.9	0.0	164.7

Wind Loading - Shaft

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 43

85.00 Appurtenance(s)	1.00	1.22	10.708	11.78	136.14	0.650	0.000	1.00	2.061	1.34	15.8	0.0	81.2
86.00	1.00	1.23	10.734	11.81	135.01	0.650	0.000	1.00	2.042	1.33	15.7	0.0	80.4
88.00	1.00	1.23	10.787	11.87	132.73	0.650	0.000	2.00	4.025	2.62	31.0	0.0	158.4
90.00	1.00	1.24	10.838	11.92	130.44	0.650	0.000	2.00	3.947	2.57	30.6	0.0	155.3
91.00 Appurtenance(s)	1.00	1.24	10.863	11.95	129.28	0.650	0.000	1.00	1.944	1.26	15.1	0.0	76.5
91.29 Bot - Section 3	1.00	1.24	10.870	11.96	128.94	0.650	0.000	0.29	0.567	0.37	4.4	0.0	22.3
92.00	1.00	1.24	10.888	11.98	128.12	0.650	0.000	0.71	1.380	0.90	10.7	0.0	86.2
94.00	1.00	1.25	10.937	12.03	125.79	0.650	0.000	2.00	3.854	2.51	30.1	0.0	240.6
94.71 Top - Section 2	1.00	1.25	10.955	12.05	124.96	0.650	0.000	0.71	1.349	0.88	10.6	0.0	84.2
96.00	1.00	1.25	10.986	12.08	125.58	0.650	0.000	1.29	2.427	1.58	19.1	0.0	57.6
98.00 Appurtenance(s)	1.00	1.26	11.034	12.14	123.22	0.650	0.000	2.00	3.698	2.40	29.2	0.0	87.7
100.00	1.00	1.27	11.081	12.19	120.84	0.650	0.000	2.00	3.620	2.35	28.7	0.0	85.9
102.00	1.00	1.27	11.127	12.24	118.45	0.650	0.000	2.00	3.541	2.30	28.2	0.0	84.0
104.00	1.00	1.28	11.173	12.29	116.04	0.650	0.000	2.00	3.463	2.25	27.7	0.0	82.1
105.00 Appurtenance(s)	1.00	1.28	11.195	12.31	114.84	0.650	0.000	1.00	1.702	1.11	13.6	0.0	40.4
106.00	1.00	1.28	11.218	12.34	113.62	0.650	0.000	1.00	1.683	1.09	13.5	0.0	39.9
107.00 Appurtenance(s)	1.00	1.28	11.240	12.36	112.41	0.650	0.000	1.00	1.663	1.08	13.4	0.0	39.4
108.00	1.00	1.29	11.262	12.39	111.19	0.650	0.000	1.00	1.644	1.07	13.2	0.0	39.0
110.00	1.00	1.29	11.305	12.44	108.74	0.650	0.000	2.00	3.229	2.10	26.1	0.0	76.5
112.00	1.00	1.30	11.348	12.48	106.27	0.650	0.000	2.00	3.151	2.05	25.6	0.0	74.6
114.00	1.00	1.30	11.391	12.53	103.80	0.650	0.000	2.00	3.072	2.00	25.0	0.0	72.8
116.00	1.00	1.31	11.432	12.58	101.31	0.650	0.000	2.00	2.994	1.95	24.5	0.0	70.9
118.00 Appurtenance(s)	1.00	1.31	11.474	12.62	98.81	0.650	0.000	2.00	2.916	1.90	23.9	0.0	69.0
Totals:								118.00		2,010.1		13,161.4	

Discrete Appurtenance Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 44

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

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	118.00	DB844H90E-XY	9	11.490	12.639	1.00	1.00	27.45	126.00	0.000	0.800	346.94	0.00	277.55
2	118.00	ANT150D	1	11.503	12.653	1.00	1.00	1.00	6.00	0.000	1.420	12.65	0.00	17.97
3	118.00	DB222	1	11.710	12.881	1.00	1.00	2.25	16.00	0.000	12.000	28.98	0.00	347.79
4	118.00	Low Profile Platform	1	11.474	12.621	1.00	1.00	28.47	1800.00	0.000	0.000	359.32	0.00	0.00
5	107.00	800 MHz 2X50W RRH w/	3	11.240	12.364	0.54	0.80	3.86	192.00	0.000	0.000	47.71	0.00	0.00
6	107.00	Universal Ring Mount	1	11.240	12.364	1.00	1.00	5.00	350.00	0.000	0.000	61.82	0.00	0.00
7	107.00	1900 MHz 4X45 RRH	3	11.240	12.364	0.54	0.80	4.36	180.00	0.000	0.000	53.88	0.00	0.00
8	107.00	TD-RRH8x20-25	3	11.240	12.364	0.54	0.80	6.51	210.00	0.000	0.000	80.52	0.00	0.00
9	107.00	ACU-A20-N	4	11.240	12.364	0.54	0.80	0.30	4.00	0.000	0.000	3.71	0.00	0.00
10	107.00	ALU 800MHz External	3	11.240	12.364	0.54	0.80	1.25	26.40	0.000	0.000	15.51	0.00	0.00
11	105.00	APXVSPP18-C-A20	3	11.195	12.315	0.66	0.80	15.98	171.00	0.000	0.000	196.74	0.00	0.00
12	105.00	Low Profile Platform	1	11.195	12.315	1.00	1.00	27.33	2000.00	0.000	0.000	336.56	0.00	0.00
13	105.00	APXVTM14-C-120	3	11.195	12.315	0.63	0.80	12.02	168.00	0.000	0.000	148.03	0.00	0.00
14	98.00	Andrew DB846H80E-SX	4	11.034	12.137	0.90	0.80	17.96	64.00	0.000	0.000	217.93	0.00	0.00
15	98.00	Rfs Celwave	2	11.034	12.137	0.54	0.80	5.15	37.80	0.000	0.000	62.45	0.00	0.00
16	98.00	Alcatel-Lucent	3	11.034	12.137	0.54	0.80	3.02	138.00	0.000	0.000	36.69	0.00	0.00
17	98.00	Alcatel Lucent	3	11.034	12.137	0.54	0.80	4.08	170.40	0.000	0.000	49.57	0.00	0.00
18	98.00	Alcatel Lucent	3	11.034	12.137	0.54	0.80	5.63	180.00	0.000	0.000	68.31	0.00	0.00
19	98.00	Andrew SBNHH-1D85C	6	11.034	12.137	0.67	0.80	45.92	297.60	0.000	0.000	557.39	0.00	0.00
20	98.00	RFS APL868013	2	11.034	12.137	0.92	0.80	5.27	12.60	0.000	0.000	63.93	0.00	0.00
21	98.00	Low Profile Platform	1	11.034	12.137	1.00	1.00	23.10	2100.00	0.000	0.000	280.37	0.00	0.00
22	91.00	FD Series DC Surge	1	10.863	11.949	0.54	0.80	2.00	18.00	0.000	0.000	23.89	0.00	0.00
23	91.00	RRUS-11	6	10.863	11.949	0.54	0.80	14.21	330.00	0.000	0.000	169.85	0.00	0.00
24	91.00	LGP21401	6	10.863	11.949	0.54	0.80	4.15	84.60	0.000	0.000	49.57	0.00	0.00
25	91.00	P65-16-XLH-RR	3	10.863	11.949	0.60	0.80	14.69	159.00	0.000	0.000	175.51	0.00	0.00
26	91.00	7770.00	3	10.863	11.949	0.58	0.80	9.64	105.00	0.000	0.000	115.14	0.00	0.00
27	91.00	Low Profile Platform	1	10.863	11.949	1.00	1.00	17.46	1349.00	0.000	0.000	208.63	0.00	0.00
28	85.00	V-brace kit	1	10.708	11.779	1.00	1.00	12.00	421.10	0.000	0.000	141.35	0.00	0.00
29	81.00	Kathrein 782 11054	3	10.600	11.660	0.54	0.80	0.24	5.40	0.000	0.000	2.81	0.00	0.00
30	81.00	S20057A1	3	10.600	11.660	0.54	0.80	1.32	33.00	0.000	0.000	15.37	0.00	0.00
31	81.00	RFS ATMAA1412D-1A2	3	10.600	11.660	0.54	0.80	1.88	39.00	0.000	0.000	21.94	0.00	0.00
32	81.00	Commscope	3	10.600	11.660	0.64	0.80	22.02	149.40	0.000	0.000	256.78	0.00	0.00
33	81.00	RFS APXV18-209014	3	10.600	11.660	0.59	0.80	6.36	56.10	0.000	0.000	74.13	0.00	0.00
34	81.00	Platform w/ Handrail kit	1	10.600	11.660	1.00	1.00	37.16	1868.20	0.000	0.000	433.28	0.00	0.00
35	75.00	Standoff Mount	1	10.430	11.473	1.00	1.00	2.63	40.00	0.000	0.000	30.17	0.00	0.00
36	75.00	GPS	1	10.430	11.473	1.00	1.00	1.00	10.00	0.000	0.000	11.47	0.00	0.00
Totals:								12,917.60				4,758.92		

Total Applied Force Summary

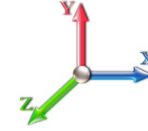
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 45

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
2.00		38.74	432.02	0.00	0.00
4.00		38.32	428.28	0.00	0.00
6.00		37.91	424.54	0.00	0.00
8.00		37.49	420.79	0.00	0.00
10.00		37.08	417.05	0.00	0.00
12.00		36.66	413.31	0.00	0.00
14.00		36.24	409.57	0.00	0.00
16.00		36.27	405.83	0.00	0.00
18.00		36.75	402.09	0.00	0.00
20.00		37.13	398.35	0.00	0.00
22.00		37.43	394.61	0.00	0.00
24.00		37.67	390.87	0.00	0.00
26.00		37.84	387.12	0.00	0.00
28.00		37.96	383.38	0.00	0.00
30.00		38.04	379.64	0.00	0.00
32.00		38.07	375.90	0.00	0.00
34.00		38.07	372.16	0.00	0.00
36.00		38.03	368.42	0.00	0.00
38.00		37.96	364.68	0.00	0.00
40.00		37.86	360.94	0.00	0.00
42.00		37.73	357.20	0.00	0.00
44.00		37.58	353.45	0.00	0.00
45.13		21.12	198.05	0.00	0.00
46.00		16.52	248.68	0.00	0.00
48.00		37.94	566.76	0.00	0.00
49.88		35.46	526.50	0.00	0.00
50.00		2.25	18.17	0.00	0.00
52.00		37.50	301.15	0.00	0.00
54.00		37.26	298.03	0.00	0.00
56.00		37.00	294.91	0.00	0.00
58.00		36.72	291.80	0.00	0.00
60.00		36.42	288.68	0.00	0.00
62.00		36.12	285.56	0.00	0.00
64.00		35.80	282.44	0.00	0.00
66.00		35.46	279.33	0.00	0.00
68.00		35.11	276.21	0.00	0.00
70.00		34.75	273.09	0.00	0.00
72.00		34.38	269.97	0.00	0.00
74.00		34.00	266.86	0.00	0.00
75.00	(2) attachments	58.47	182.26	0.00	0.00
76.00		16.73	131.32	0.00	0.00
78.00		33.20	260.30	0.00	0.00
80.00		32.79	257.18	0.00	0.00
81.00	(16) attachments	820.54	2278.52	0.00	0.00
82.00		16.11	114.16	0.00	0.00
84.00		31.93	225.99	0.00	0.00

Total Applied Force Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 46

85.00	(1) attachments	157.13	532.92	0.00	0.00
86.00		15.67	111.05	0.00	0.00
88.00		31.04	219.75	0.00	0.00
90.00		30.58	216.63	0.00	0.00
91.00	(20) attachments	757.70	2152.75	0.00	0.00
91.29		4.40	29.20	0.00	0.00
92.00		10.75	102.84	0.00	0.00
94.00		30.14	287.67	0.00	0.00
94.71		10.57	100.92	0.00	0.00
96.00		19.06	87.97	0.00	0.00
98.00	(24) attachments	1365.81	3135.25	0.00	0.00
100.00		28.68	103.62	0.00	0.00
102.00		28.18	101.75	0.00	0.00
104.00		27.67	99.88	0.00	0.00
105.00	(7) attachments	694.95	2388.24	0.00	0.00
106.00		13.50	48.77	0.00	0.00
107.00	(17) attachments	276.51	1010.70	0.00	0.00
108.00		13.24	45.20	0.00	0.00
110.00		26.10	88.99	0.00	0.00
112.00		25.56	87.12	0.00	0.00
114.00		25.02	85.25	0.00	0.00
116.00		24.48	83.38	0.00	0.00
118.00	(12) attachments	771.82	2029.51	0.00	643.31
	Totals:	6,768.97	30,205.46	0.00	643.31

Linear Appurtenance Segment Forces (Factored)

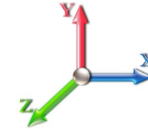
Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 47

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 25

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
2.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	7.442	0.00	0.32
4.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	7.442	0.00	0.32
6.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	7.442	0.00	0.32
8.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.015	0.000	7.442	0.00	0.32
10.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	7.442	0.00	0.32
12.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	7.442	0.00	0.32
14.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	7.442	0.00	0.32
16.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	7.534	0.00	0.32
18.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	7.723	0.00	0.32
20.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.016	0.000	7.896	0.00	0.32
22.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	8.056	0.00	0.32
24.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	8.205	0.00	0.32
26.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	8.345	0.00	0.32
28.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.017	0.000	8.476	0.00	0.32
30.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	8.600	0.00	0.32
32.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	8.717	0.00	0.32
34.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	8.829	0.00	0.32
36.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	8.936	0.00	0.32
38.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.018	0.000	9.039	0.00	0.32
40.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	9.137	0.00	0.32
42.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	9.231	0.00	0.32
44.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.019	0.000	9.322	0.00	0.32
45.13	1/2"	Yes	1.13	0.000	0.65	0.06	0.00	0.019	0.000	9.372	0.00	0.18
46.00	1/2"	Yes	0.87	0.000	0.65	0.05	0.00	0.020	0.000	9.410	0.00	0.14
48.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	9.494	0.00	0.32
49.88	1/2"	Yes	1.88	0.000	0.65	0.10	0.00	0.020	0.000	9.571	0.00	0.30
50.00	1/2"	Yes	0.12	0.000	0.65	0.01	0.00	0.020	0.000	9.576	0.00	0.02
52.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	9.656	0.00	0.32
54.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.020	0.000	9.733	0.00	0.32
56.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	9.807	0.00	0.32
58.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	9.880	0.00	0.32
60.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	9.951	0.00	0.32
62.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.021	0.000	10.020	0.00	0.32
64.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.022	0.000	10.087	0.00	0.32
66.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.022	0.000	10.153	0.00	0.32
68.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	10.217	0.00	0.32
70.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	10.279	0.00	0.32
72.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.023	0.000	10.340	0.00	0.32
74.00	1/2"	Yes	2.00	0.000	0.65	0.11	0.00	0.024	0.000	10.400	0.00	0.32
75.00	1/2"	Yes	1.00	0.000	0.65	0.05	0.00	0.024	0.000	10.430	0.00	0.16
Totals:											0.0	12.0

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



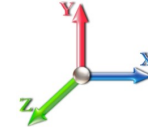
Page: 48

Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 25

Dead Load Factor 1.00

Wind Load Factor 1.00



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-30.20	-6.77	0.00	-605.04	0.00	605.04	3634.70	1817.35	6397.77	3203.64	0.00	0.000	0.000	0.197
2.00	-29.77	-6.75	0.00	-591.49	0.00	591.49	3607.15	1803.57	6280.28	3144.81	0.01	-0.029	0.000	0.196
4.00	-29.34	-6.73	0.00	-577.98	0.00	577.98	3579.34	1789.67	6163.42	3086.29	0.02	-0.058	0.000	0.195
6.00	-28.91	-6.70	0.00	-564.53	0.00	564.53	3551.29	1775.64	6047.19	3028.09	0.06	-0.087	0.000	0.195
8.00	-28.48	-6.68	0.00	-551.12	0.00	551.12	3522.98	1761.49	5931.61	2970.21	0.10	-0.117	0.000	0.194
10.00	-28.06	-6.66	0.00	-537.76	0.00	537.76	3494.42	1747.21	5816.69	2912.67	0.15	-0.146	0.000	0.193
12.00	-27.65	-6.63	0.00	-524.45	0.00	524.45	3465.61	1732.80	5702.44	2855.46	0.22	-0.176	0.000	0.192
14.00	-27.23	-6.61	0.00	-511.18	0.00	511.18	3436.54	1718.27	5588.89	2798.60	0.30	-0.207	0.000	0.191
16.00	-26.83	-6.59	0.00	-497.96	0.00	497.96	3407.22	1703.61	5476.05	2742.09	0.40	-0.238	0.000	0.189
18.00	-26.42	-6.56	0.00	-484.79	0.00	484.79	3377.65	1688.83	5363.92	2685.95	0.50	-0.268	0.000	0.188
20.00	-26.02	-6.54	0.00	-471.66	0.00	471.66	3347.83	1673.91	5252.53	2630.17	0.62	-0.300	0.000	0.187
22.00	-25.62	-6.51	0.00	-458.58	0.00	458.58	3317.75	1658.87	5141.89	2574.76	0.75	-0.331	0.000	0.186
24.00	-25.23	-6.49	0.00	-445.56	0.00	445.56	3287.42	1643.71	5032.01	2519.74	0.90	-0.363	0.000	0.185
26.00	-24.84	-6.46	0.00	-432.59	0.00	432.59	3256.84	1628.42	4922.91	2465.11	1.06	-0.395	0.000	0.183
28.00	-24.45	-6.43	0.00	-419.67	0.00	419.67	3219.51	1609.75	4804.91	2406.03	1.23	-0.427	0.000	0.182
30.00	-24.07	-6.41	0.00	-406.80	0.00	406.80	3178.67	1589.33	4683.16	2345.06	1.42	-0.459	0.000	0.181
32.00	-23.69	-6.38	0.00	-393.99	0.00	393.99	3137.83	1568.91	4562.98	2284.88	1.62	-0.492	0.000	0.180
34.00	-23.31	-6.35	0.00	-381.23	0.00	381.23	3096.99	1548.49	4444.36	2225.48	1.83	-0.525	0.000	0.179
36.00	-22.94	-6.32	0.00	-368.53	0.00	368.53	3056.15	1528.07	4327.30	2166.87	2.06	-0.558	0.000	0.178
38.00	-22.57	-6.29	0.00	-355.89	0.00	355.89	3015.30	1507.65	4211.81	2109.03	2.30	-0.591	0.000	0.176
40.00	-22.21	-6.26	0.00	-343.30	0.00	343.30	2974.46	1487.23	4097.87	2051.98	2.55	-0.624	0.000	0.175
42.00	-21.85	-6.24	0.00	-330.77	0.00	330.77	2933.62	1466.81	3985.50	1995.71	2.82	-0.658	0.000	0.173
44.00	-21.49	-6.20	0.00	-318.30	0.00	318.30	2892.78	1446.39	3874.69	1940.23	3.10	-0.691	0.000	0.172
45.13	-21.29	-6.19	0.00	-311.29	0.00	311.29	2869.71	1434.85	3812.78	1909.22	3.27	-0.711	0.000	0.170
46.00	-21.04	-6.18	0.00	-305.91	0.00	305.91	2851.94	1425.97	3765.45	1885.52	3.40	-0.725	0.000	0.170
48.00	-20.47	-6.14	0.00	-293.56	0.00	293.56	2811.10	1405.55	3657.76	1831.60	3.71	-0.759	0.000	0.168
49.88	-19.94	-6.11	0.00	-282.01	0.00	282.01	2333.69	1166.84	3066.96	1535.76	4.02	-0.791	0.000	0.192
50.00	-19.92	-6.11	0.00	-281.28	0.00	281.28	2332.20	1166.10	3062.32	1533.44	4.04	-0.793	0.000	0.192
52.00	-19.62	-6.08	0.00	-269.06	0.00	269.06	2307.18	1153.59	2985.35	1494.89	4.38	-0.831	0.000	0.189
54.00	-19.32	-6.05	0.00	-256.89	0.00	256.89	2281.92	1140.96	2909.02	1456.67	4.73	-0.869	0.000	0.185
56.00	-19.02	-6.02	0.00	-244.79	0.00	244.79	2256.40	1128.20	2833.34	1418.77	5.11	-0.907	0.000	0.181
58.00	-18.72	-5.99	0.00	-232.74	0.00	232.74	2223.07	1111.54	2748.96	1376.53	5.49	-0.945	0.000	0.178
60.00	-18.43	-5.97	0.00	-220.75	0.00	220.75	2189.04	1094.52	2665.01	1334.49	5.90	-0.982	0.000	0.174
62.00	-18.14	-5.94	0.00	-208.82	0.00	208.82	2155.00	1077.50	2582.36	1293.10	6.32	-1.020	0.000	0.170
64.00	-17.86	-5.91	0.00	-196.95	0.00	196.95	2120.97	1060.48	2501.02	1252.37	6.75	-1.056	0.000	0.166
66.00	-17.57	-5.88	0.00	-185.13	0.00	185.13	2086.94	1043.47	2420.97	1212.28	7.20	-1.093	0.000	0.161
68.00	-17.30	-5.85	0.00	-173.38	0.00	173.38	2052.90	1026.45	2342.23	1172.85	7.67	-1.129	0.000	0.156
70.00	-17.02	-5.82	0.00	-161.69	0.00	161.69	2018.87	1009.43	2264.79	1134.08	8.15	-1.164	0.000	0.151
72.00	-16.75	-5.79	0.00	-150.05	0.00	150.05	1984.83	992.42	2188.65	1095.95	8.64	-1.198	0.000	0.145
74.00	-16.48	-5.76	0.00	-138.48	0.00	138.48	1950.80	975.40	2113.81	1058.48	9.15	-1.232	0.000	0.139
75.00	-16.30	-5.70	0.00	-132.72	0.00	132.72	1933.78	966.89	2076.88	1039.98	9.41	-1.248	0.000	0.136
76.00	-16.16	-5.68	0.00	-127.02	0.00	127.02	1916.76	958.38	2040.27	1021.65	9.68	-1.265	0.000	0.133
78.00	-15.90	-5.65	0.00	-115.65	0.00	115.65	1882.73	941.37	1968.04	985.48	10.21	-1.296	0.000	0.126
80.00	-15.64	-5.62	0.00	-104.35	0.00	104.35	1848.70	924.35	1897.11	949.96	10.76	-1.326	0.000	0.118
81.00	-13.38	-4.75	0.00	-98.73	0.00	98.73	1831.68	915.84	1862.13	932.45	11.04	-1.341	0.000	0.113
82.00	-13.27	-4.74	0.00	-93.97	0.00	93.97	1814.66	907.33	1827.48	915.10	11.33	-1.355	0.000	0.110
84.00	-13.04	-4.70	0.00	-84.50	0.00	84.50	1780.63	890.31	1759.15	880.88	11.90	-1.382	0.000	0.103
85.00	-12.51	-4.54	0.00	-79.79	0.00	79.79	1763.61	881.81	1725.48	864.02	12.19	-1.395	0.000	0.099

Calculated Forces

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 49
	Struct Class: II	



86.00	-12.40	-4.52	0.00	-75.26	0.00	75.26	1746.59	873.30	1692.13	847.32	12.48	-1.408	0.000	0.096
88.00	-12.18	-4.49	0.00	-66.21	0.00	66.21	1712.56	856.28	1626.40	814.41	13.08	-1.432	0.000	0.088
90.00	-11.96	-4.46	0.00	-57.23	0.00	57.23	1678.53	839.26	1561.98	782.15	13.68	-1.454	0.000	0.080
91.00	-9.83	-3.65	0.00	-52.77	0.00	52.77	1661.51	830.75	1530.26	766.27	13.99	-1.465	0.000	0.075
91.29	-9.80	-3.64	0.00	-51.70	0.00	51.70	1656.52	828.26	1521.01	761.64	14.08	-1.468	0.000	0.074
92.00	-9.69	-3.63	0.00	-49.12	0.00	49.12	1644.49	822.25	1498.86	750.54	14.30	-1.475	0.000	0.071
94.00	-9.41	-3.60	0.00	-41.86	0.00	41.86	1610.46	805.23	1437.04	719.59	14.92	-1.494	0.000	0.064
94.71	-9.30	-3.59	0.00	-39.30	0.00	39.30	930.70	465.35	848.15	424.70	15.14	-1.500	0.000	0.103
96.00	-9.22	-3.57	0.00	-34.68	0.00	34.68	922.07	461.04	828.91	415.07	15.55	-1.511	0.000	0.094
98.00	-6.12	-2.12	0.00	-27.54	0.00	27.54	908.49	454.24	799.32	400.25	16.19	-1.533	0.000	0.076
100.00	-6.01	-2.09	0.00	-23.30	0.00	23.30	894.64	447.32	770.03	385.59	16.83	-1.553	0.000	0.067
102.00	-5.91	-2.06	0.00	-19.12	0.00	19.12	880.55	440.27	741.05	371.08	17.49	-1.570	0.000	0.058
104.00	-5.81	-2.03	0.00	-15.00	0.00	15.00	866.20	433.10	712.41	356.74	18.15	-1.585	0.000	0.049
105.00	-3.44	-1.27	0.00	-12.96	0.00	12.96	858.93	429.47	698.22	349.63	18.48	-1.592	0.000	0.041
106.00	-3.40	-1.26	0.00	-11.69	0.00	11.69	851.60	425.80	684.12	342.57	18.82	-1.598	0.000	0.038
107.00	-2.39	-0.95	0.00	-10.43	0.00	10.43	844.21	422.10	670.11	335.55	19.15	-1.603	0.000	0.034
108.00	-2.35	-0.94	0.00	-9.48	0.00	9.48	836.75	418.38	656.18	328.58	19.49	-1.608	0.000	0.032
110.00	-2.26	-0.91	0.00	-7.60	0.00	7.60	821.65	410.82	628.62	314.78	20.16	-1.618	0.000	0.027
112.00	-2.17	-0.88	0.00	-5.78	0.00	5.78	804.60	402.30	600.19	300.54	20.84	-1.625	0.000	0.022
114.00	-2.09	-0.86	0.00	-4.01	0.00	4.01	784.18	392.09	569.96	285.40	21.52	-1.631	0.000	0.017
116.00	-2.01	-0.83	0.00	-2.30	0.00	2.30	763.76	381.88	540.51	270.66	22.21	-1.636	0.000	0.011
118.00	0.00	-0.77	0.00	-0.64	0.00	0.64	743.33	371.67	511.84	256.30	22.89	-1.638	0.000	0.003

Final Analysis Summary

Structure: CT46132-A-SBA	Code: EIA/TIA-222-G	1/18/2017
Site Name: Newtown-ferris Rd	Exposure: C	
Height: 118.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 50

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 97 mph Wind	28.3	0.00	36.22	0.00	0.00	2547.82
0.9D + 1.6W 97 mph Wind	28.3	0.00	27.15	0.00	0.00	2514.52
1.2D + 1.0Di + 1.0Wi 50 mph Wind	7.5	0.00	59.02	0.00	0.00	673.51
1.2D + 1.0E	1.5	0.00	36.25	0.00	0.00	149.90
0.9D + 1.0E	1.5	0.00	27.18	0.00	0.00	147.74
1.0D + 1.0W 60 mph Wind	6.8	0.00	30.20	0.00	0.00	605.04

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 97 mph Wind	-36.22	-28.35	0.00	-2547.8	0.00	-2547.8	3634.70	1817.3	6397.77	3203.64	0.00	0.805
0.9D + 1.6W 97 mph Wind	-27.15	-28.33	0.00	-2514.5	0.00	-2514.5	3634.70	1817.3	6397.77	3203.64	0.00	0.793
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-59.02	-7.46	0.00	-673.51	0.00	-673.51	3634.70	1817.3	6397.77	3203.64	0.00	0.226
1.2D + 1.0E	-24.03	-1.29	0.00	-78.47	0.00	-78.47	2333.69	1166.8	3066.96	1535.76	49.88	0.061
0.9D + 1.0E	-18.02	-1.26	0.00	-76.94	0.00	-76.94	2333.69	1166.8	3066.96	1535.76	49.88	0.058
1.0D + 1.0W 60 mph Wind	-30.20	-6.77	0.00	-605.04	0.00	-605.04	3634.70	1817.3	6397.77	3203.64	0.00	0.197



Monopole Mat Foundation Design

Date
1/18/2017

Customer Name:	T-Mobile	EIA/TIA Standard:	EIA-222-G
Site Name:		Structure Height (Ft.):	118
Site Number:	CT46132-A-SBA	Engineer Name:	F. Yazdani
Engr. Number:	29206	Engineer Login ID:	

Foundation Info Obtained from:

Drawings/Calculations
Monopole
Analysis

Structure Type:

Analysis or Design?

Base Reactions (Factored):

Axial Load (Kips):	36.2	Shear Force (Kips):	28.3
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2547.8

Allowable overstress %: 5.0%

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	6.0	Depth of Base BG (ft.):	5.5
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	2.00
Length of Pad (ft.):	23	Width of Pad (ft.):	23
Final Length of pad (ft)	23.0	Final width of pad (ft):	23.0
Control Value for Cell D18:	0	Control Value for Cell F18:	0

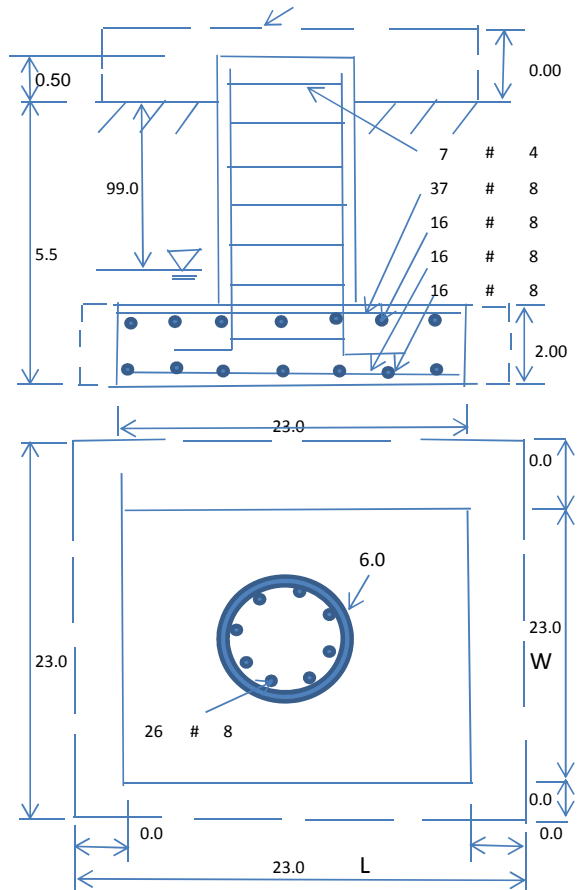
Material Properties and Rebar Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	4	
Qty. of Vertical Rebars:	26	Tie Spacing (in):	11.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	4	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	37	Qty. of Rebar in Pad (W):	37	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	16	Qty. of Rebar in Pad (W):	16	

Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

Soil Unit Weight (pcf):	155.0	Soil Buoyant Weight:	50.0	Pcf
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf
Ultimate Bearing Pressure (psf):	20000	Ultimate Skin Friction:	0	Psf
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	
Consider soil hori. force for O.T.M.:	No	Reduction factor on the maximum soil bearing pressure:	1.00	
		Angle from Top of Pad:	30	
		Angle from Bottm of Pad:	25	
		Angle from Bottm of Pad:	25	



Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	1752.54	Total Dry Soil Weight (Kips):	271.64
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	271.64	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1171.10	Total Dry Concrete Weight (Kips):	175.66
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	175.66	Total Vertical Load on Base (Kips):	483.53

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	2300	<	Allowable Factored Soil Bearing (psf):	15000	0.15	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	5046.2	>	Design Factored Momont (kips-ft):	2718	0.54	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.86					OK!

Load/
Capacity
Ratio

Check the capacities of Reinforcing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75		
Strength reduction factor (Axial compression):	0.65	Wind Load Factor on Concrete Design:	1.00		
				Load/ Capacity Ratio	
<u>(1) Concrete Pier:</u>					
Vertical Steel Rebar Area (sq. in./each):	0.79	Tie / Stirrup Area (sq. in./each):	0.20		
Calculated Moment Capacity (Mn,Kips-Ft):	2994.3	> Design Factored Moment (Mu, Kips-Ft)	2661.0	0.89	OK!
Calculated Shear Capacity (Kips):	511.9	> Design Factored Shear (Kips):	28.3	0.06	OK!
Calculated Tension Capacity (Tn, Kips):	1109.2	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	7162.1	> Design Factored Axial Load (Pu Kips):	36.2	0.01	OK!
Moment & Axial Strength Combination:	0.89	OK! Check Tie Spacing (Design/Required):		0.9167	OK!
Pier Reinforcement Ratio:	0.005	Reinforcement Ratio is satisfied per ACI			
<u>(2) Concrete Pad:</u>					
One-Way Design Shear Capacity (L-Direction, Kips):	510.6	> One-Way Factored Shear (L-D. Kips):	186.5	0.37	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	510.6	> One-Way Factored Shear (W-D., Kips):	186.5	0.37	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	588.9	> One-Way Factored Shear (C-C, Kips):	268.9	0.46	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0054	OK! Lower Steel Pad Reinf. Ratio (W-Direct	0.0054		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	2442.0	> Moment at Bottom (L-Direct. K-Ft):	641.0	0.26	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	2442.0	> Moment at Bottom (W-Direct. K-Ft):	641.0	0.26	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	3414.2	> Moment at Bottom (C-C Dir. K-Ft):	906.5	0.27	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0023	OK! Upper Steel Reinf. Ratio (W-Direct.):	0.0023		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	1086.2	> Moment at the top (L-Dir Kips-Ft):	107.3	0.10	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	1086.2	> Moment at the top (W-Dir Kips-Ft):	107.3	0.10	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	1528.7	> Moment at the top (C-C Direc. K-Ft):	352.9	0.23	OK!

SITE NAME: CT805/NEXTELL NEWTOWN_MP

T-MOBILE E911 ADDRESS:
9 FERRIS ROAD
NEWTOWN, CT 06470
FAIRFIELD COUNTY

SBA BUSINESS ADDRESS:
8 FERRIS ROAD
NEWTOWN, CT 06470
NEWTOWN, CT 06470

SITE NUMBER: CT11805A

PROJECT: T-MOBILE L700

CONFIGURATION: 704G

T-MOBILE TECHNICIAN SITE SAFETY NOTES	
LOCATION	SPECIAL RESTRICTIONS
ANTENNA/TMA	
SECTOR A:	ACCESS NOT PERMITTED
SECTOR B:	ACCESS NOT PERMITTED
SECTOR C:	ACCESS NOT PERMITTED
GPS/LMU:	UNRESTRICTED*
	(*CAUTION: OSHA-APPROVED PORTABLE 8' STEP-LADDER REQUIRED)
RADIO CABINETS:	UNRESTRICTED
PPC DISCONNECT:	UNRESTRICTED
MAIN CIRCUIT D/C:	UNRESTRICTED
NIU/T DEMARC:	UNRESTRICTED
OTHER/SPECIAL:	NONE



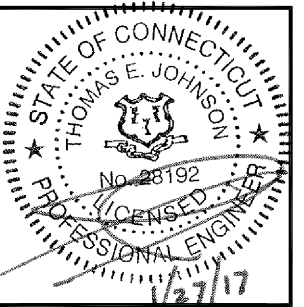
T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 648-1116



SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
WESTBOROUGH, MA 01581 TEL: (508) 251-0720



4 Bay Road, Building A
Suite 200
Hadley, MA 01035 Ph: (413) 320-4918



CHECKED BY: JMM/TEJ

APPROVED BY: JMM/TEJ

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
0	01/27/17	ISSUED FOR CONSTRUCTION	TBD

SITE NUMBER:
CT11805A
SITE NAME:
**CT805/NEXTELL
NEWTOWN_MP**
SITE ADDRESS:
8 FERRIS ROAD
NEWTOWN, CT 06470
FAIRFIELD COUNTY

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

GENERAL NOTES

- THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T-MOBILE NORTHEAST, LLC. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
- THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
- CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T-MOBILE NORTHEAST, LLC REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE WITH FOR SAME.

SPECIAL CONSTRUCTION NOTES

- TOWER OWNER SHALL PROVIDE GLOBAL STRUCTURAL STABILITY ANALYSIS OF EXISTING ANTENNA SUPPORT STRUCTURE. GENERAL CONTRACTOR SCOPE OF WORK SHALL INCLUDE ALL REQUIRED STRUCTURAL MODIFICATIONS, RE-BUNDLING OF COAXIAL CABLES OR OTHER SPECIAL MODIFICATIONS AS OUTLINED THEREIN.
- ENGINEER-OF-RECORD HAS MADE A VISUAL ASSESSMENT ONLY OF EXISTING ANTENNA MOUNT ASSEMBLIES, WITHOUT THE BENEFIT OF A RIGOROUS ANTENNA MOUNT STRUCTURAL ANALYSIS, AND RECOMMENDS THAT EXISTING AND PROPOSED TOWER TOP EQUIPMENT BE INSTALLED AS DEPICTED HEREIN. STRUCTURAL DETAILS AS DEPICTED HEREIN FOR MODIFICATION OF EXISTING ANTENNA MOUNT ASSEMBLIES ARE PRELIMINARY ONLY AND THAT FINAL CONSTRUCTION DETAILS MAY BE SUBJECT TO CHANGE PENDING THE COMPLETION OF A SEPARATE SUPPLEMENTAL ANTENNA MOUNT STRUCTURAL ASSESSMENT, SUPPLEMENTAL STRUCTURAL MAPPING/CONDITIONS ASSESSMENT REPORT AND/OR SUPPLEMENTAL RIGOROUS ANTENNA MOUNT STRUCTURAL ANALYSIS.
- PROTERRA DESIGN GROUP ASSUMES THAT THE TOWER IS PROPERLY CONSTRUCTED AND MAINTAINED. ALL STRUCTURAL MEMBERS AND THEIR CONNECTION ARE ASSUMED TO BE IN GOOD CONDITION AND ARE FREE FROM DEFECTS WITH NO DETERIORATION TO ITS MEMBER CAPACITIES



PROJECT INFORMATION

SCOPE OF WORK: UNMANNED TELECOMMUNICATIONS FACILITY T-MOBILE EQUIPMENT MODERNIZATION

ZONING JURISDICTION: SPECIAL ZONING NOTE (ELIGIBLE FACILITY REQUEST): BASED ON INFORMATION PROVIDED BY T-MOBILE REGULATORY COMPLIANCE PROFESSIONALS AND LEGAL COUNSEL, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS CONSIDERED AN ELIGIBLE FACILITY UNDER THE MIDDLE CLASS TAX RELIEF AND JOB CREATION ACT OF 2012, 47 USC 1455(A), SECTION 6409(A), AND IS SUBJECT TO AN ELIGIBLE FACILITY REQUEST, EXPEDITED REVIEW AND LIMITED/PARTIAL ZONING PRE-EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW OR ADMINISTRATIVE REVIEW).

T-MOBILE E911 ADDRESS: 9 FERRIS ROAD
NEWTOWN, CT 06470

SBA BUSINESS ADDRESS: 8 FERRIS ROAD
NEWTOWN, CT 06470

LATITUDE: 41.389750 (FROM T-MOBILE RFDS)

LONGITUDE: -73.338167 (FROM T-MOBILE RFDS)

JURISDICTION: TOWN OF NEWTOWN

CURRENT USE: TELECOMMUNICATIONS FACILITY

PROPOSED USE: TELECOMMUNICATIONS FACILITY

TOWER OWNER: SBA 2012 TC ASSETS, LLC

SBA SITE ID: CT46132-A

SBA SITE NAME: NEWTOWN-FERRIS RD

SBA REGIONAL SITE MANAGER: STEPHEN ROTH
(860) 539-4920

APPROVALS

APPROVALS	DATE
PROJECT MANAGER	DATE
CONSTRUCTION	DATE
RF ENGINEERING	DATE
ZONING / SITE ACQ.	DATE
OPERATIONS	DATE
TOWER OWNER	DATE

DIG SAFE SYSTEM
(MA, ME, NH, RI, VT):
1-888-344-7233

CALL BEFORE YOU DIG
(CT): 1-800-922-4455

UNDERGROUND SERVICE ALERT

DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	0
GN-1	GENERAL NOTES	0
A-1	COMPOUND & ELEVATION PLAN	0
A-2	EXISTING & PROPOSED ANTENNA PLAN	0
A-3	DETAILS	0
A-4	DETAILS	0
E-1	ONE-LINE DIAGRAM & GROUNDING DETAILS	0

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTNING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER SURCIRTS TO BTS EQUIPMENT.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

CONTRACTOR – SBA COMMUNICATIONS CORP.
SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
OWNER – T-MOBILE
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
14. ANY NEW CONCRETE NEEDED FOR CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (FY = 36 KSI) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (FY = 35 KSI). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH UMS SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF T-MOBILE SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. APPLICABLE BUILDING CODES:
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE: 2016 CONNECTICUT STATE BUILDING CODE WITH AMENDMENTS

ELECTRICAL CODE: 2014 NATIONAL ELECTRICAL CODE AND AMENDMENTS

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BTCW	BARE TINNED SOLID COPPER WIRE	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BGR	BURIED GROUND RING	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BTS	BASE TRANSCEIVER STATION	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
EXISTING	EXISTING OR (E)	PROPOSED	NEW OR (P)	TYP	TYPICAL
EGB	EQUIPMENT GROUND BAR	N.T.S.	NOT TO SCALE	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	RAD	RADIATION CENTERLINE (ANTENNA)		
		REF	REFERENCE		

T-Mobile

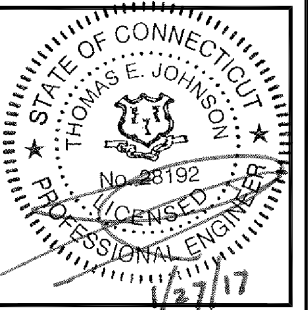
T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 648-1116



SBA COMMUNICATIONS CORP.
134 FLANDERS ROAD, SUITE 125
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TEL: (508) 251-0720

ProTerra
DESIGN GROUP, LLC

4 Bay Road, Building A
Suite 200
Hadley, MA 01035 Ph: (413) 320-4918



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APPROVED BY: JMM/TEJ

SUBMITTALS

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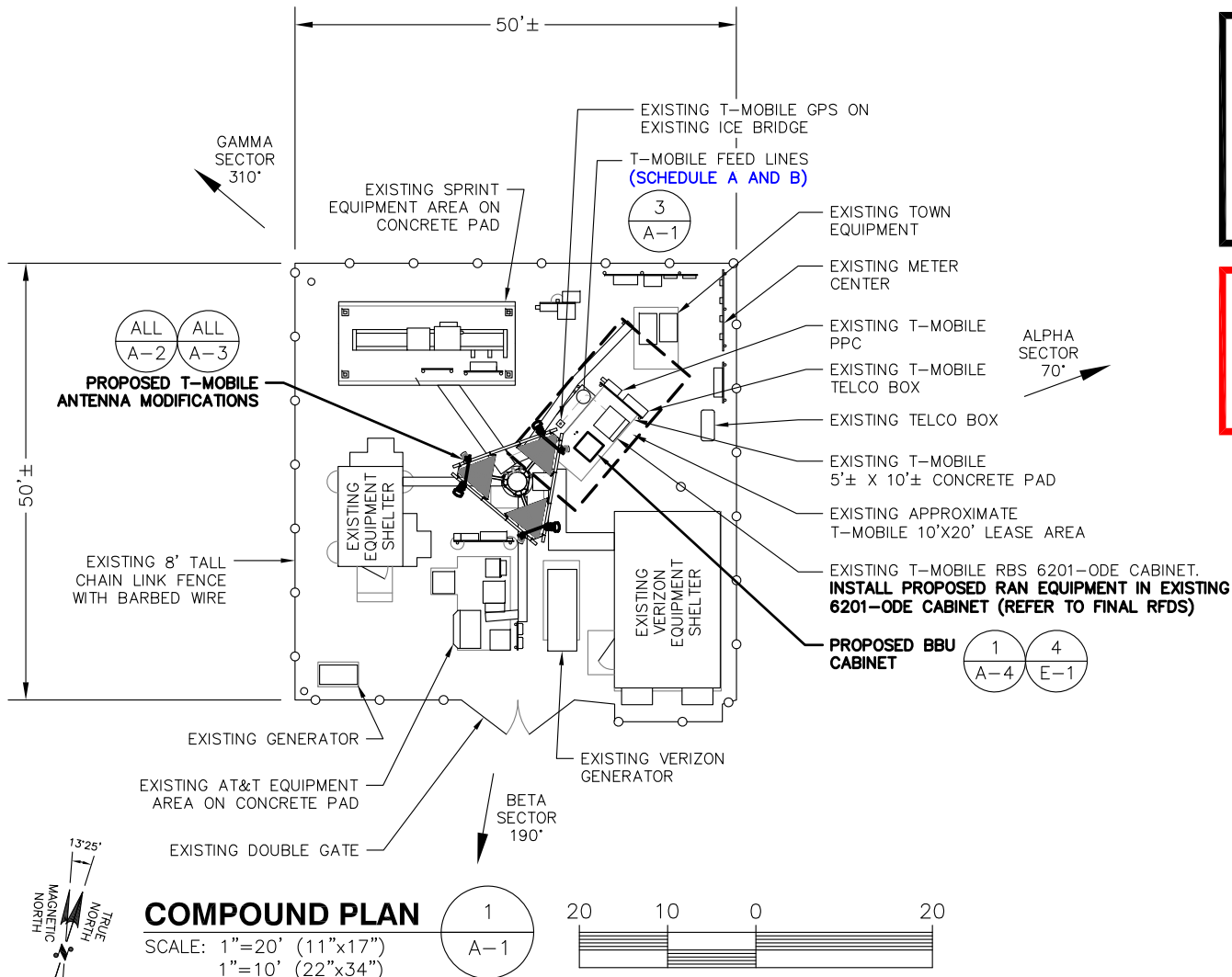
8 FERRIS ROAD
NEWTOWN, CT 06470
FAIRFIELD COUNTY

SHEET TITLE

GENERAL NOTES

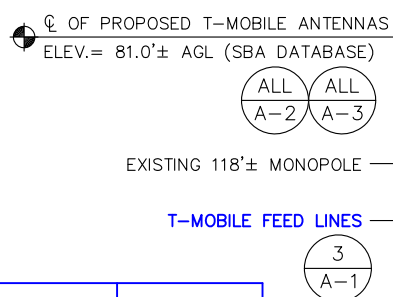
SHEET NUMBER

GN-1



ANTENNA MOUNT STRUCTURAL DESIGN NOTE:
 ENGINEER-OF-RECORD HAS MADE A VISUAL ASSESSMENT ONLY OF EXISTING ANTENNA MOUNT ASSEMBLIES, WITHOUT THE BENEFIT OF A RIGOROUS ANTENNA MOUNT STRUCTURAL ANALYSIS, AND RECOMMENDS THAT EXISTING AND PROPOSED TOWER TOP EQUIPMENT BE INSTALLED AS DEPICTED HEREIN. STRUCTURAL DETAILS AS DEPICTED HEREIN FOR MODIFICATION OF EXISTING ANTENNA MOUNT ASSEMBLIES ARE PRELIMINARY ONLY AND THAT FINAL CONSTRUCTION DETAILS MAY BE SUBJECT TO CHANGE PENDING THE COMPLETION OF A SEPARATE SUPPLEMENTAL ANTENNA MOUNT STRUCTURAL ASSESSMENT, SUPPLEMENTAL STRUCTURAL MAPPING/CONDITIONS ASSESSMENT REPORT AND/OR SUPPLEMENTAL RIGOROUS ANTENNA MOUNT STRUCTURAL ANALYSIS.

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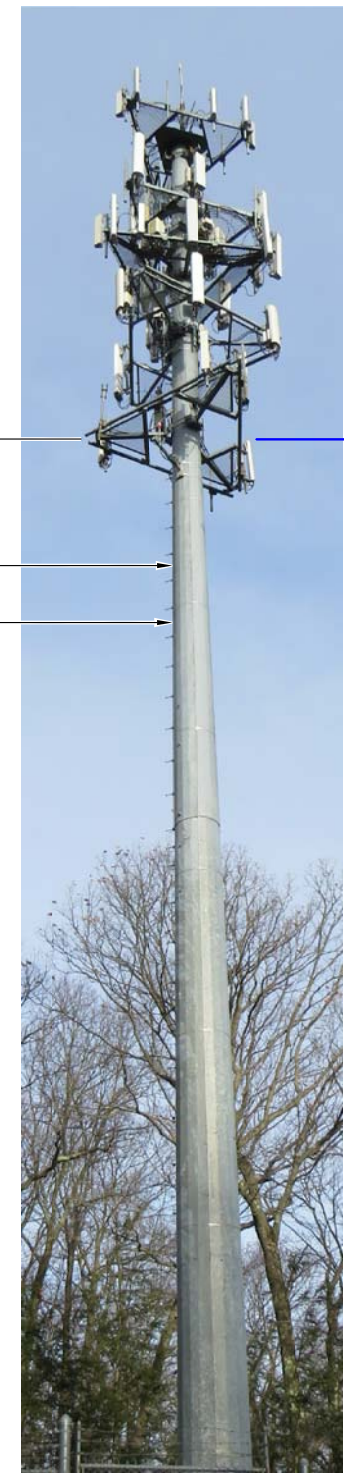
FEEDLINE SCHEDULE	FEEDLINE DESCRIPTION	LOCATION
A	EXISTING: TO REMAIN: (6) 1 1/2" COAX TO 81.0' RAD	UP INSIDE MONOPOLE TO RAD
B	PROPOSED: (6) 1 1/2" COAX TO 81.0' RAD	UP INSIDE MONOPOLE TO RAD

NOTE: EXISTING T-MOBILE EQUIPMENT FEEDLINE INVENTORY BASED ON OBSERVED FIELD CONDITIONS. RFDS AND FEEDLINE LEASING ENTITLEMENTS MAY DIFFER

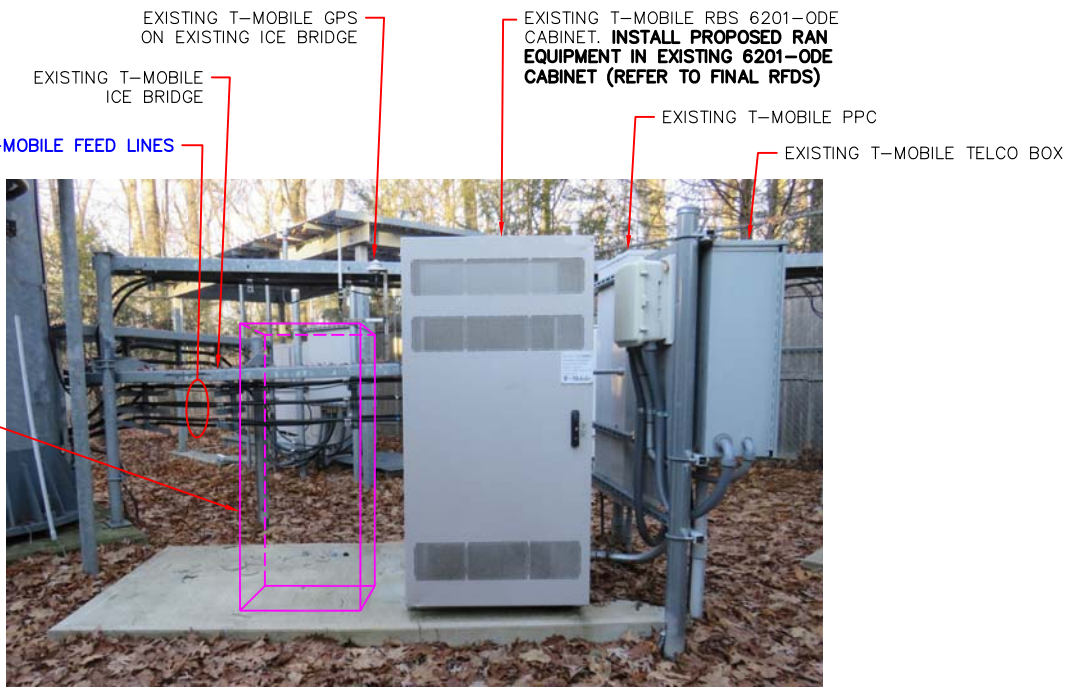
T-MOBILE FEED LINES (REFER TO SBA-PROVIDED STRUCTURAL ANALYSIS FOR SPECIAL FEEDLINE INSTALLATION REQUIREMENTS, STACKING, BUNDLING, SHIELDING, MOUNTING AND RELOCATION OF EXISTING OR PROPOSED FEEDLINES)



FEEDLINE PHOTO DETAIL AT TOWER BASE
 SCALE: N.T.S.



PARTIAL ELEVATION PHOTO DETAIL
 SCALE: N.T.S.



EQUIPMENT PHOTO DETAIL
 SCALE: N.T.S.

T-Mobile
T-MOBILE NORTHEAST LLC
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SBA
 SBA COMMUNICATIONS CORP.
 134 FLANDERS ROAD, SUITE 125
 WESTBOROUGH, MA 01581
 TEL: (508) 251-0720

ProTerra
 DESIGN GROUP, LLC
 4 Bay Road, Building A
 Suite 200
 Hadley, MA 01035 Ph: (413)320-4918

STATE OF CONNECTICUT
 THOMAS E. JOHNSON
 No. 28192
 LICENSED PROFESSIONAL ENGINEER
 1/27/17

CHECKED BY: JMM/TEJ
 APPROVED BY: JMM/TEJ

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**CT805/NEXTELL
 NEWTOWN_MP**
 SITE ADDRESS:
 8 FERRIS ROAD
 NEWTOWN, CT 06470
 FAIRFIELD COUNTY

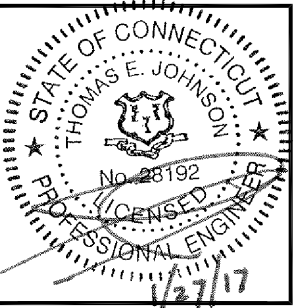
SHEET TITLE
**COMPOUND &
 ELEVATION PLAN**

SHEET NUMBER
A-1



SBA COMMUNICATIONS CORP.
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SITE ADDRESS:

8 FERRIS ROAD
 NEWTOWN, CT 06470
 FAIRFIELD COUNTY

SHEET TITLE

EXISTING & PROPOSED
 ANTENNA PLAN

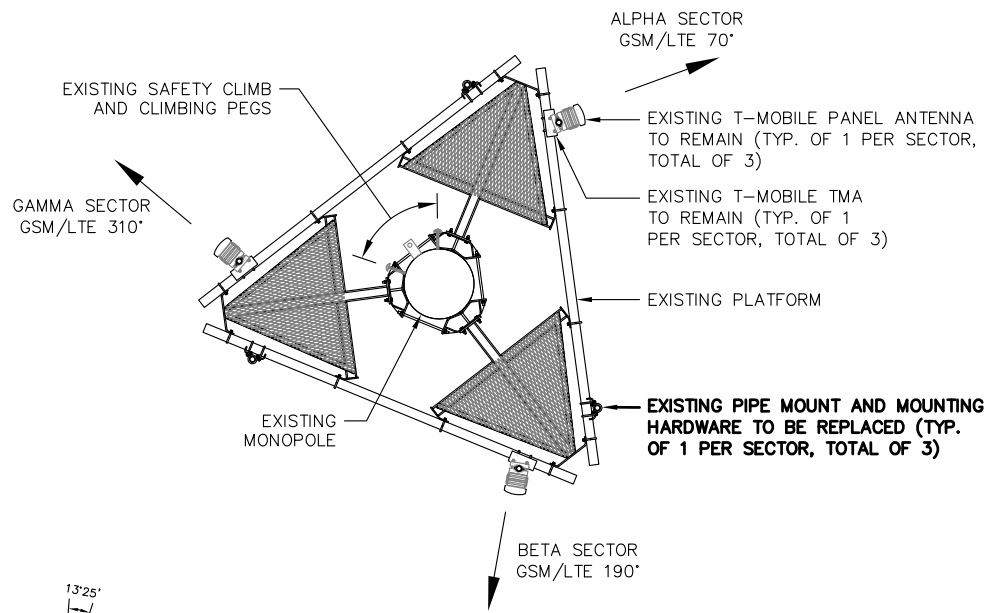
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A-2

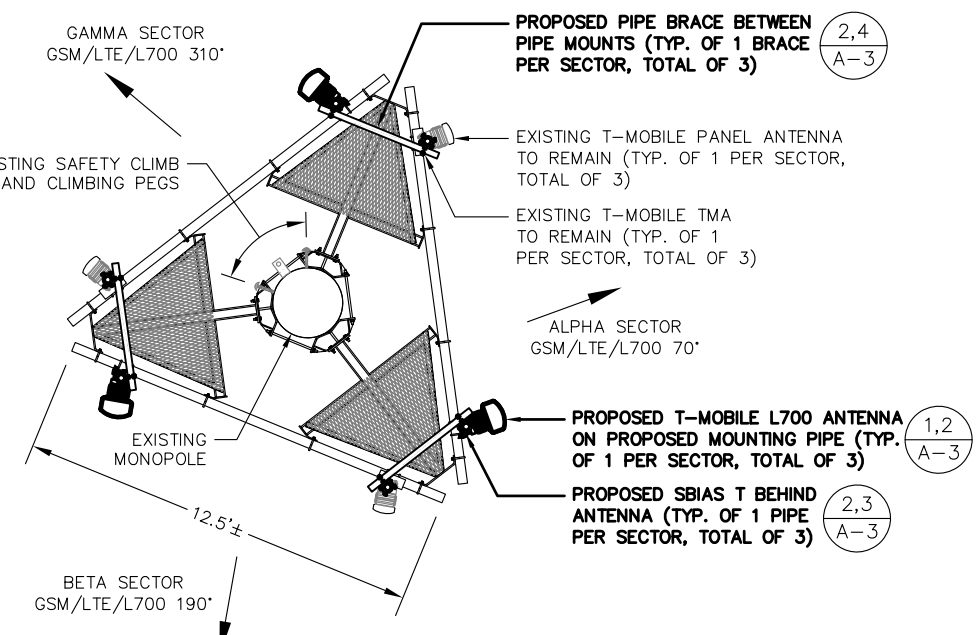
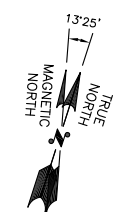
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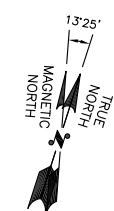
NOTE:
 REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



EXISTING ANTENNA PLAN
 SCALE: N.T.S. (1/A-2)



PROPOSED ANTENNA PLAN
 SCALE: N.T.S. (2/A-2)



(1,2/A-3) PROPOSED T-MOBILE L700 ANTENNA ON PROPOSED MOUNTING PIPE (TYP. OF 1 PER SECTOR, TOTAL OF 3)

(2,4/A-3) PROPOSED PIPE BRACE BETWEEN PIPE MOUNTS (TYP. OF 1 BRACE PER SECTOR, TOTAL OF 3)

EXISTING T-MOBILE PANEL ANTENNA TO REMAIN (TYP. OF 1 PER SECTOR, TOTAL OF 3)

EXISTING T-MOBILE TMA TO REMAIN (TYP. OF 1 PER SECTOR, TOTAL OF 3)

⊙ OF PROPOSED T-MOBILE ANTENNAS
 ELEV. = 81.0'± AGL (SBA DATABASE)

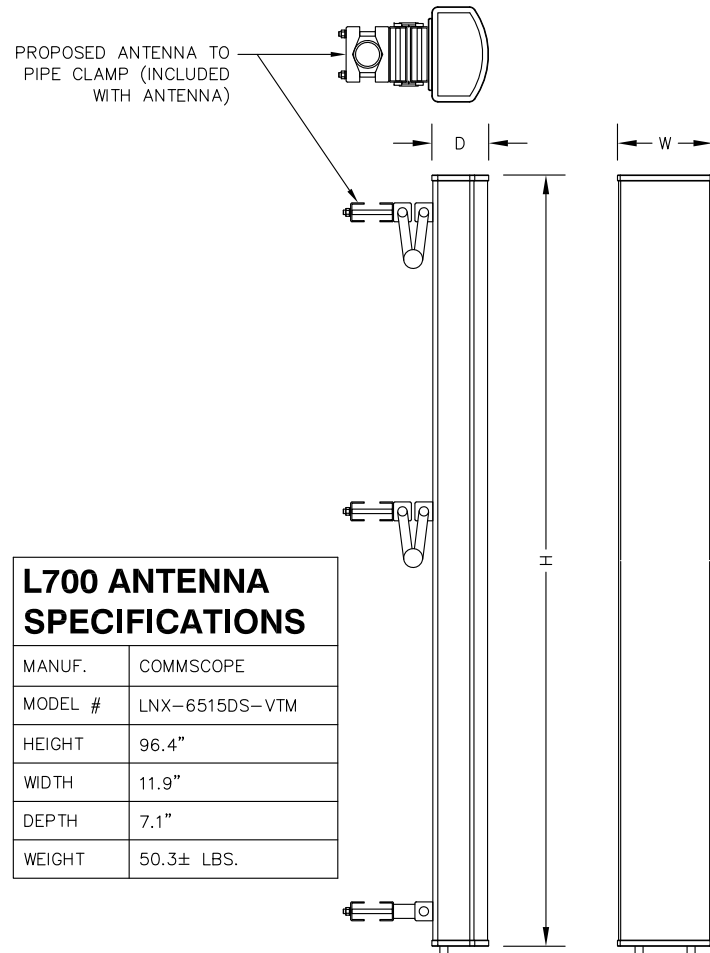
(1,2/A-2) (ALL/A-3)

(2,3/A-3) PROPOSED SBIA S T BEHIND ANTENNA (TYP. OF 1 PIPE PER SECTOR, TOTAL OF 3)



IMAGE SOURCE: PROTERRA 01/20/17
 NOTE: ONE SECTOR SHOWN FOR CLARITY

ANTENNA PHOTO DETAIL
 SCALE: N.T.S. (3/A-2)

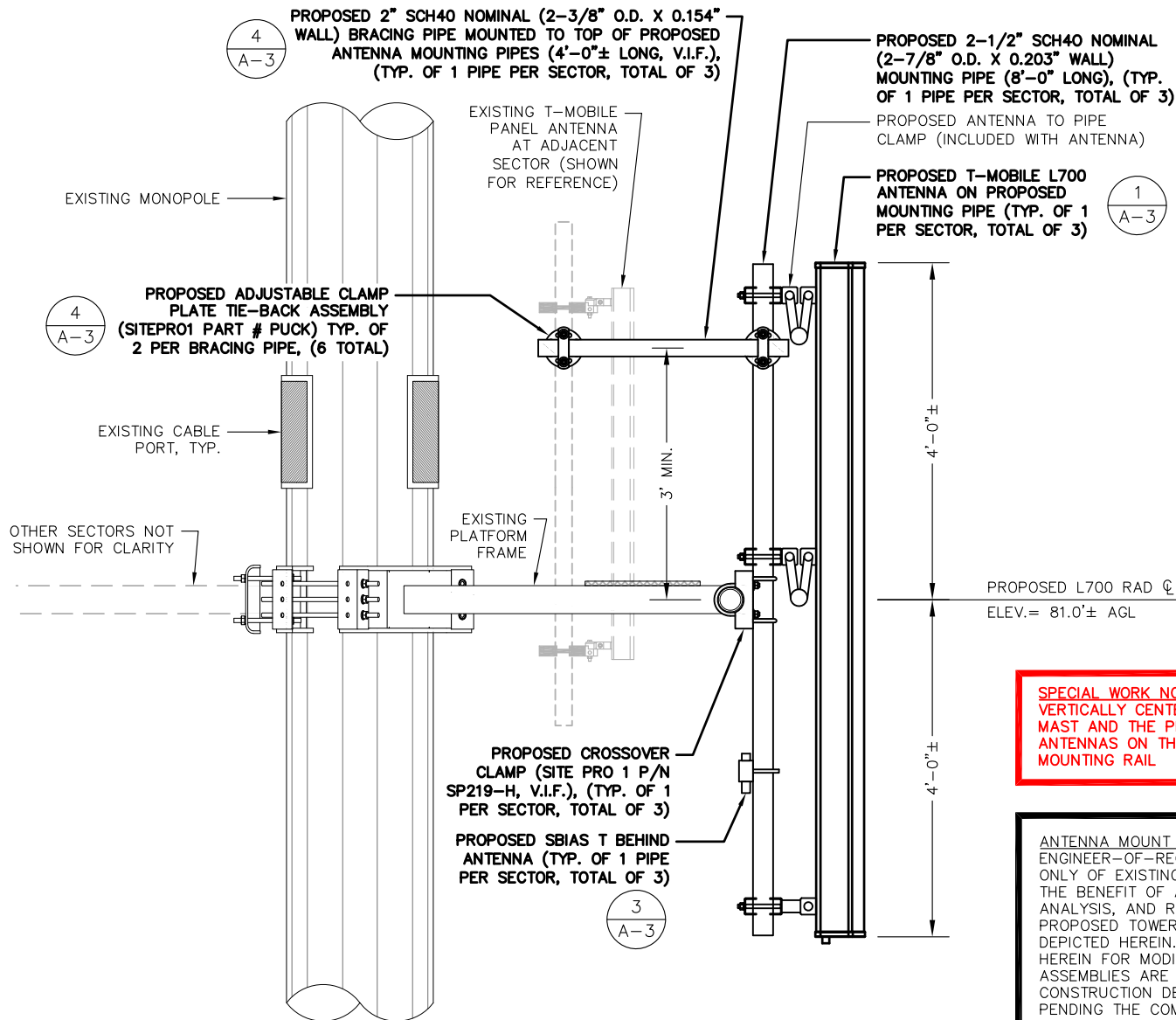


L700 ANTENNA SPECIFICATIONS

MANUF.	COMMSCOPE
MODEL #	LNx-6515DS-VTM
HEIGHT	96.4"
WIDTH	11.9"
DEPTH	7.1"
WEIGHT	50.3± LBS.

L700 ANTENNA DETAIL
SCALE: N.T.S.

1
A-3



PROPOSED ANTENNA MOUNTING DETAIL
SCALE: N.T.S.

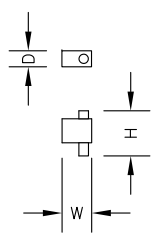
2
A-3

SPECIAL WORK NOTE:
VERTICALLY CENTER THE PIPE MAST AND THE PROPOSED ANTENNAS ON THE EXISTING MOUNTING RAIL

ANTENNA MOUNT STRUCTURAL DESIGN NOTE:
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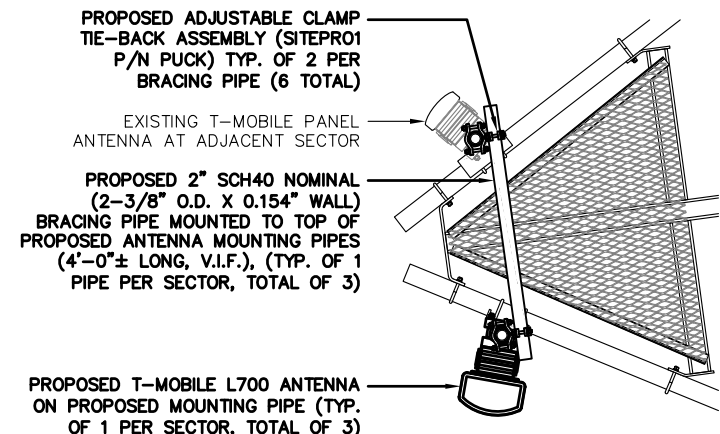
SBT SPECIFICATIONS

MANUF.	COMMSCOPE
MODEL #	ATSBT-TOP-FM-4G
HEIGHT	5.63"
WIDTH	3.7"
DEPTH	2.0"
WEIGHT	1.8 LBS.



SMART BIAS TEE (SBT)
SCALE: N.T.S.

3
A-3



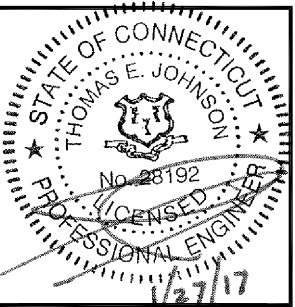
PROPOSED ANTENNA PIPE BRACE DETAIL
SCALE: N.T.S.

4
A-3

T-Mobile
T-MOBILE NORTHEAST LLC
35 GRIFFIN ROAD SOUTH
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FAIRFIELD COUNTY

SHEET TITLE
DETAILS

SHEET NUMBER
A-3



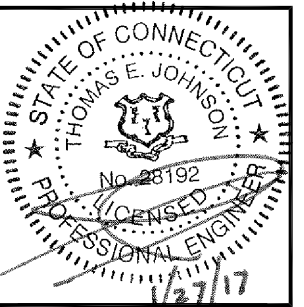
T-MOBILE NORTHEAST LLC
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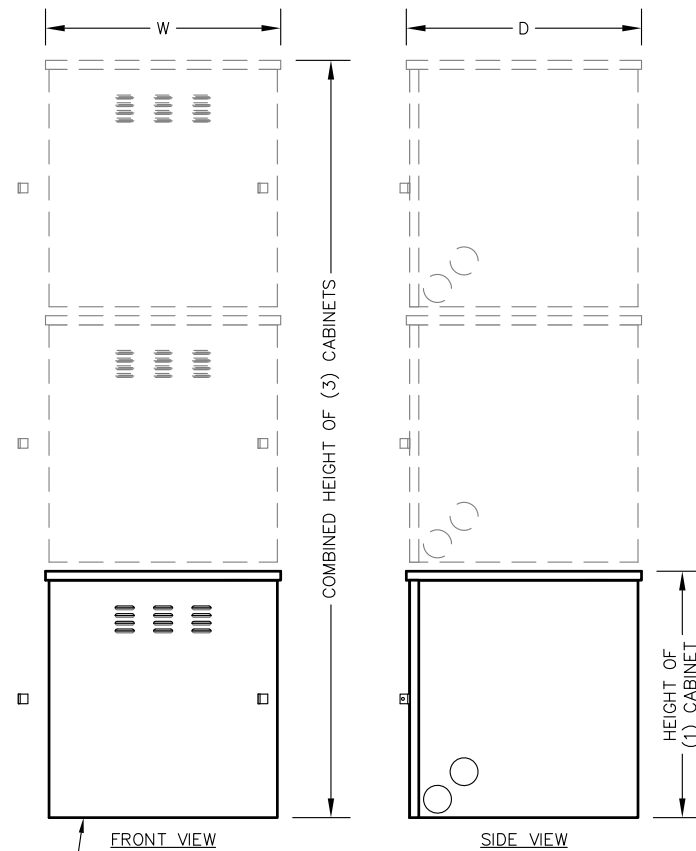
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CT11805A
 SITE NAME:
**CT805/NEXTELL
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 FAIRFIELD COUNTY

SHEET TITLE
DETAILS

SHEET NUMBER
A-4

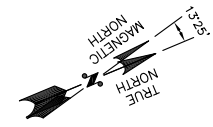
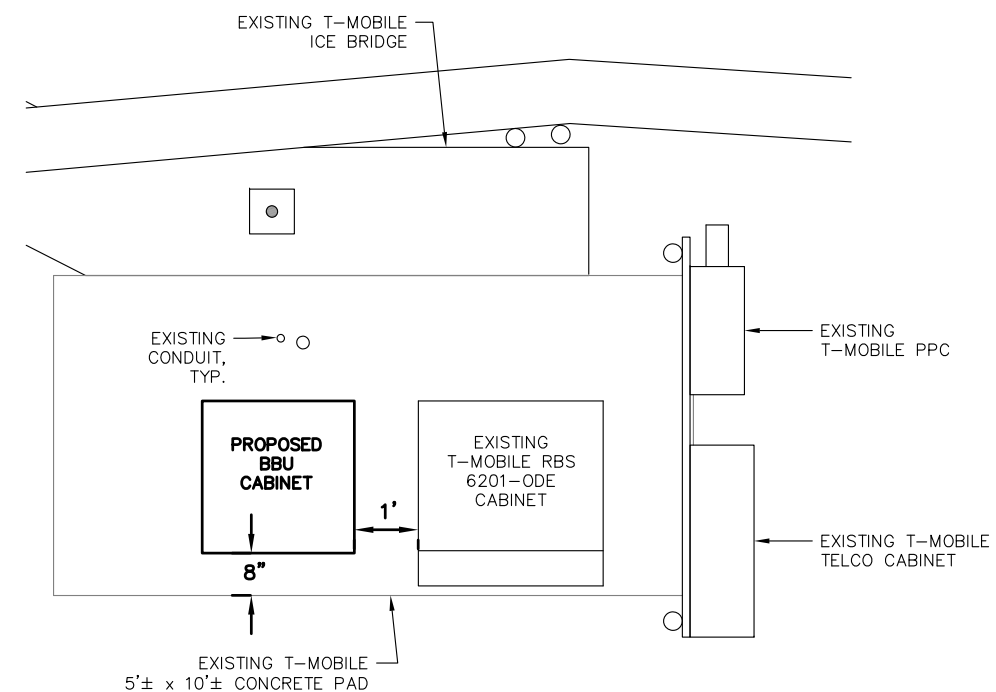
BBU SPECIFICATIONS

MANUF.	MFS DATA SERVICES
MODEL #	DUBBM-2ALM
HEIGHT (1) CABINET	29.67"
HEIGHT (3) CABINETS	89.01"
WIDTH	28.54"
DEPTH	28.54"



HILTI HDI 1/2" x 2" MINIMUM DEPTH SS 303 DROP-IN ANCHORS, (TYP. OF 4 MINIMUM IN SEISMIC ZONES 1-3)

NOTE:
 MFS DATA SERVICES BBU CABINET, MODEL DUBBM-2ALM (STACKABLE - 3 TOTAL PROPOSED)



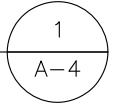
PLAN VIEW

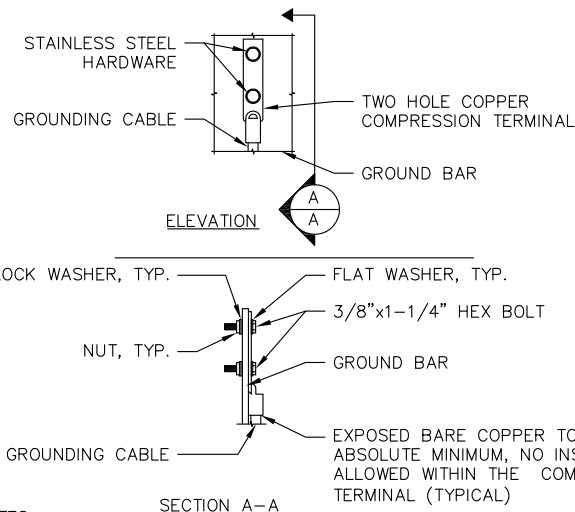
**SPECIAL WORK NOTE:
 DO NOT BLOCK CABINET DOOR SWING WITH PROPOSED BBU CABINET.**

**SPECIAL WORK NOTE:
 MAINTAIN MINIMUM NEC-COMPLIANT WORKSPACE CLEARANCE 30" WIDE, 36" DEEP, 6'-6" HEIGHT**

PROPOSED BBU CABINET DETAIL

SCALE: N.T.S.



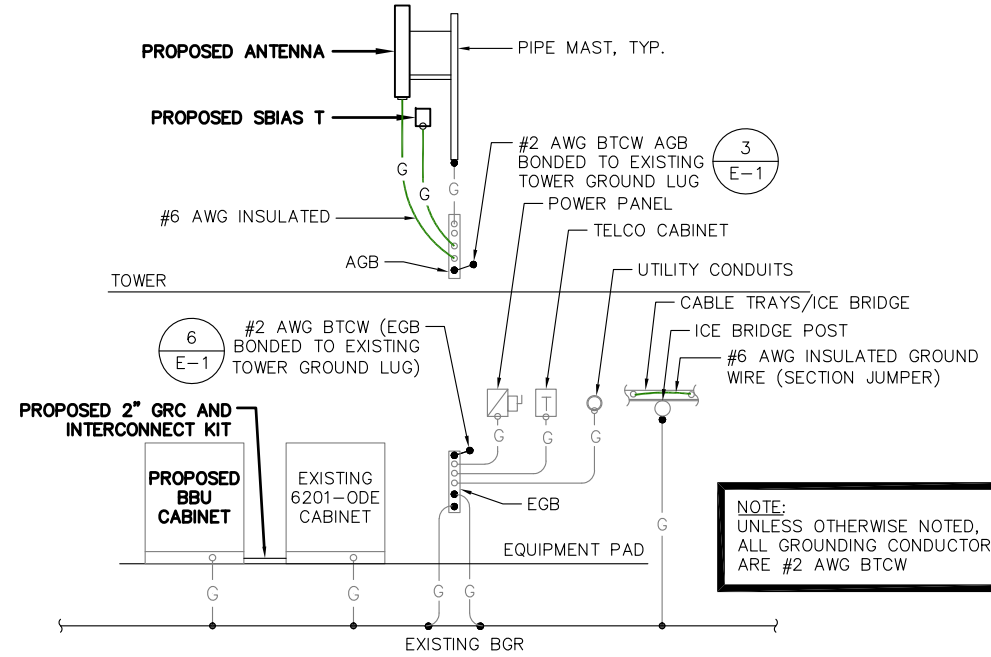


- NOTES:**
- "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
 - OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
 - CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.

TYPICAL GROUND BAR CONNECTION DETAIL

SCALE: N.T.S.

1
E-1

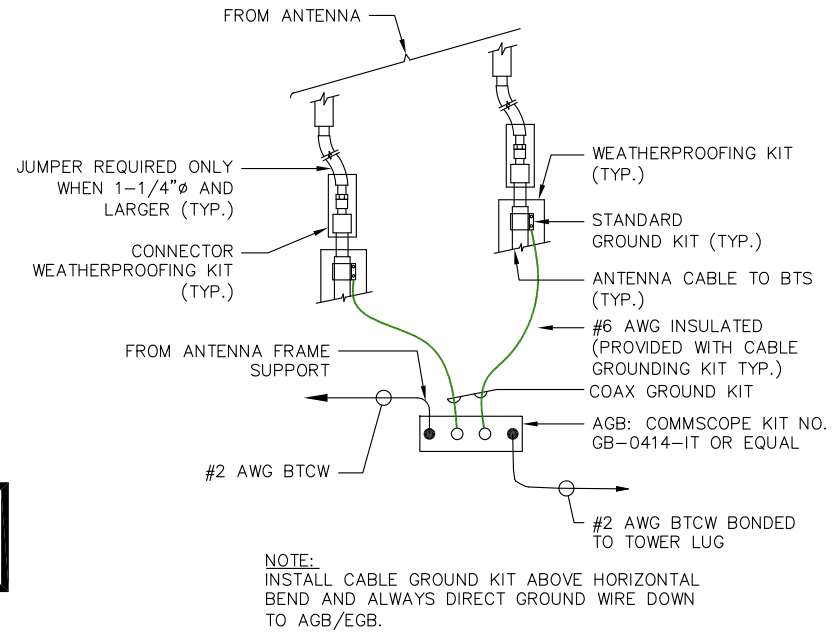


NOTE:
UNLESS OTHERWISE NOTED, ALL GROUNDING CONDUCTORS ARE #2 AWG BTCW

TYPICAL GROUNDING RISER DIAGRAM

SCALE: N.T.S.

2
E-1

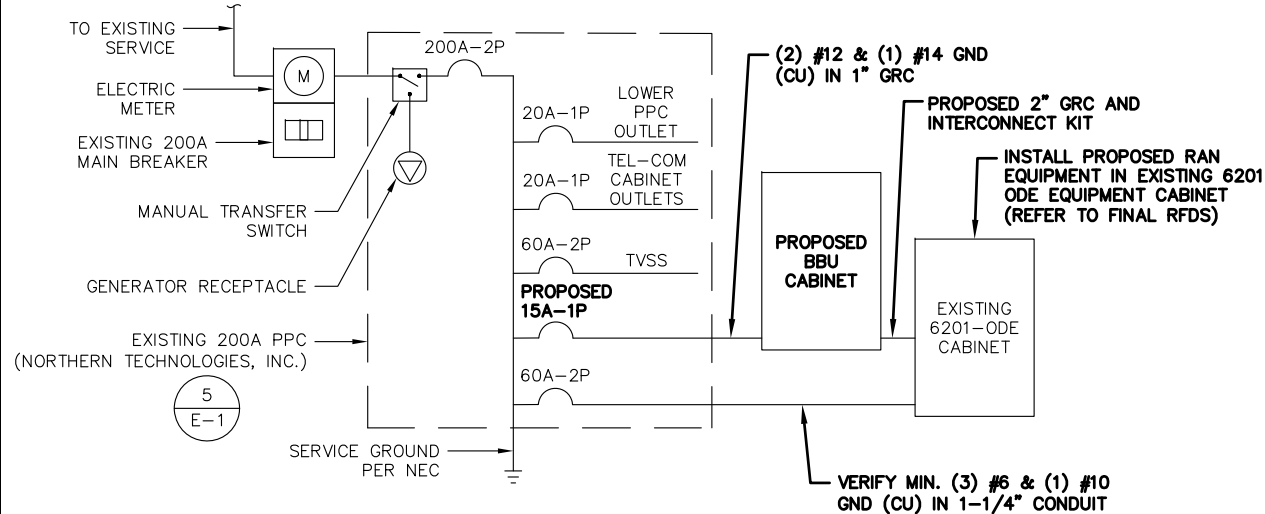


NOTE:
INSTALL CABLE GROUND KIT ABOVE HORIZONTAL BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO AGB/EGB.

TOWER TOP CABLE GROUNDING DETAIL

SCALE: N.T.S.

3
E-1



ONE LINE POWER SCHEMATIC

SCALE: N.T.S.

4
E-1



IMAGE SOURCE: PROTERRA 01/20/17

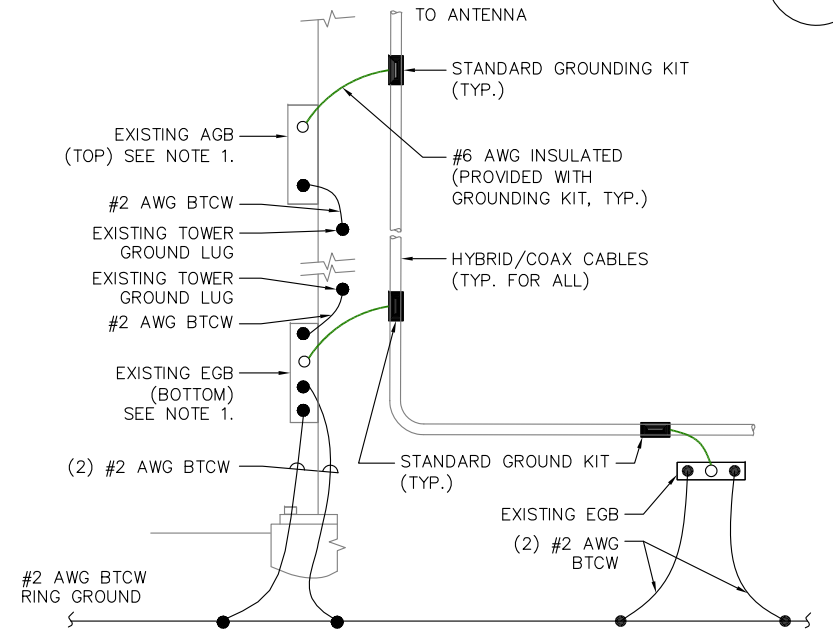


IMAGE SOURCE: PROTERRA 01/20/17

PHOTO DETAIL: PPC PANEL

SCALE: N.T.S.

5
E-1



- NOTE:**
- NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION, AND CONNECTION ORIENTATION. PROVIDE ADDITIONAL AGB/EGB AS REQUIRED.
 - A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED

TOWER BOTTOM CABLE GROUNDING DETAIL

SCALE: N.T.S.

6
E-1

ELECTRICAL LEGEND

A	AMPERE	MECHANICAL CONNECTION
V	VOLT	CADWELD CONNECTION
KWH	KILOWATT - HOUR	
C	CONDUIT	
GRC	GALVANIZED RIGID CONDUIT	
BTCW	BARE TINNED (SOLID) COPPER WIRE (#2 AWG, UNLESS NOTES OTHERWISE)	
G	GROUND	
MGB	MASTER GROUND BAR	
AGB/EGB	EQUIPMENT GROUND BAR/ANTENNA GROUND BAR	
	GROUND COPPER WIRE, SIZE AS NOTED	
	EXPOSED WIRING	
	INSULATED GROUNDING CONDUCTOR (#6 AWG STRANDED, UNLESS NOTED OTHERWISE)	
	5/8"x10" COPPER CLAD STAINLESS STEEL GROUND ROD	
	EXOTHERMIC (CAD WELD) OR MECHANICAL (COMPRESSION TYPE) CONNECTION	
PPC	POWER PROTECTION CABINET	
	OMNI-DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALL	

CONTRACTOR NOTE:
G.C. TO VERIFY THAT THE EXISTING CONDUITS AND WIRE SIZES ARE ADEQUATE FOR THE PROPOSED LOADING IN ACCORDANCE WITH NEC AND INCLUDE ELECTRICAL UPGRADES IN THE SCOPE OF WORK AS REQUIRED.

ELECTRICAL & GROUNDING NOTES:

- ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) 2014 AS WELL AS APPLICABLE STATE AND LOCAL CODES.
- ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATIONS INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
- GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
- ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
- RIGID STEEL CONDUITS SHALL BE GROUNDED AT BOTH ENDS.
- ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHN INSULATION AS REQUIRED BY NEC.
- RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL ROOM AND PROPOSED CELL SITE POWER PEDESTAL AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
- RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROPOSED CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON DRAWING A-1. PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
- ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
- GROUNDING SHALL COMPLY WITH NEC ART. 250.
- GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
- USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
- ALL GROUND CONNECTIONS TO BE BURNDY HYDROGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
- CONNECTIONS TO MGB SHALL BE ARRANGED IN THREE MAIN GROUPS: SURGE PRODUCERS (COAXIAL CABLE GROUND KITS, TELCO AND POWER PANEL GROUND); (GROUNDING ELECTRODE RING OR BUILDING STEEL); NON-SURGING OBJECTS (EGB GROUND IN BTS UNIT).
- CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LYGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
- BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
- BOND ANTENNA EGB'S AND MGB TO WATER MAIN/GROUND RING.
- TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION.
- BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
- VERIFY PROPOSED SERVICE UPGRADE WITH LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.

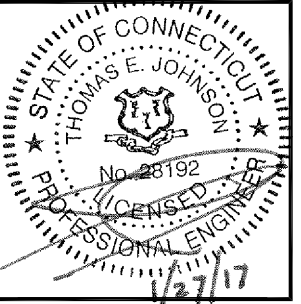
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CHECKED BY: JMM/TEJ

APPROVED BY: JMM/TEJ

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
0	01/27/17	ISSUED FOR CONSTRUCTION	TBD

SITE NUMBER:
CT11805A
SITE NAME:
**CT805/NEXTELL
NEWTOWN_MP**
SITE ADDRESS:
8 FERRIS ROAD
NEWTOWN, CT 06470
FAIRFIELD COUNTY

SHEET TITLE
**ONE-LINE DIAGRAM &
GROUNDING DETAILS**

SHEET NUMBER
E-1