

June 23, 2016

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

Re: **Notice of Exempt Modification – Facility Modification
71 Pleasant View Road, Derby, Connecticut**

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains three (3) wireless telecommunications antennas at the 107-foot level inside an existing 119-foot flagpole tower at 71 Pleasant View Road in Derby, Connecticut (the “Property”). The tower is owned by SBA. Cellco’s use of the tower was approved by the Council in 2007. Cellco now intends to modify its facility by replacing its existing antennas with three (3) model SBNHH-1D65B, 700/850/1900/2100 MHz antennas at the same 107-foot level inside the flagpole tower.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this notice is being sent to Anita Dugatto, Mayor of the City of Derby. A copy of this letter is also being sent to St. Jude Roman Catholic Church, the owner of the Property and SBA, the tower owner.

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

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco’s replacement antennas will be installed at the 107-foot level within the existing 119-foot flagpole tower.

Melanie A. Bachman

June 23, 2016

Page 2

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

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

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

Sincerely,



Kenneth C. Baldwin

Enclosures

Copy to:

Anita Dugatto, Derby Mayor
St. Jude Roman Catholic Church
SBA
Tim Parks

ATTACHMENT 1



SBNHH-1D65B

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

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

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.9	14.7	17.7	18.2	18.6	18.6
Beamwidth, Horizontal, degrees	68	66	69	66	63	58
Beamwidth, Vertical, degrees	12.1	10.7	5.6	5.2	5.0	4.5
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	14	13	15	15	15	13
Front-to-Back Ratio at 180°, dB	27	29	28	28	28	27
CPR at Boresight, dB	20	23	20	20	17	21
CPR at Sector, dB	14	10	12	10	9	1
Isolation, dB	25	25	25	25	25	25
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR Return Loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350	350	350	300
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm

Electrical Specifications, BASTA*

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

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

General Specifications

Antenna Brand	Andrew®
Antenna Type	DualPol® multiband with internal RET
Band	Multiband
Brand	DualPol®
Operating Frequency Band	1695 – 2360 MHz 698 – 896 MHz
Performance Note	Outdoor usage

SBNHH-1D65B

Mechanical Specifications

Color	Light gray
Lightning Protection	dc Ground
Radiator Material	Aluminum Low loss circuit board
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, total	6
Wind Loading, frontal	618.0 N @ 150 km/h 138.9 lbf @ 150 km/h
Wind Loading, lateral	197.0 N @ 150 km/h 44.3 lbf @ 150 km/h
Wind Loading, rear	728.0 N @ 150 km/h 163.7 lbf @ 150 km/h
Wind Speed, maximum	241 km/h 150 mph

Dimensions

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

Remote Electrical Tilt (RET) Information

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

Packed Dimensions

Depth	299.0 mm 11.8 in
Length	1970.0 mm 77.6 in
Width	409.0 mm 16.1 in
Shipping Weight	31.0 kg 68.3 lb

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

SBNHH-1D65B



Included Products

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

* Footnotes

Performance Note Severe environmental conditions may degrade optimum performance

ATTACHMENT 2

		General		Power		Density							
Site Name: Derby N Tower Height: 119Ft.		# OF CHAN.	WATTS ERP	HEIGHT	CALC. POWER DENS	FREQ.	MAX. PERMISS. EXP.	FRACTION MPE	Total				
*T-Mobile		8	110	120	1945	0.0244	1.0000	0.24%					
*T-Mobile		2	737	114	2100	0.0454	1.0000	0.45%					
*Clearwire		2	153	84	2496	0.0181	1.0000	0.18%					
*Clearwire		1	211	84	11 GHz	0.0125	1.0000	0.12%					
*Pocket (now MetroPCS)		3	631	97	2130	0.0822	1.0000	0.82%					
Verizon PCS		1	2280	107	0.0716	1970	1.0000	7.16%					
Verizon Cellular		9	309	107	0.0873	869	0.5793	15.08%					
Verizon AWS		1	2270	107	0.0713	2145	1.0000	7.13%					
Verizon 700		1	1031	107	0.0324	746	0.4973	6.51%					
										37.70%			
* Source: Siting Council													

ATTACHMENT 3



Tower Engineering Solutions

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

Structural Analysis Report

Existing 119 ft. PennSummit Monopole
Customer Name: SBA Communications Corp
Customer Site Number: CT13616-A
Customer Site Name: St. Judes
Carrier Name: Verizon
Carrier Site ID / Name: Derby North CT
Site Location: 71 Pleasantview Road
Derby, Connecticut
New Haven County
Latitude: 41.315042
Longitude: -73.064314

Analysis Result:

Max Structural Usage: 72.4% [Pass]
Max Foundation Usage: 23.0% [Pass]
Report Prepared By : Walter Velez



1/21/16

Introduction

The purpose of this report is to summarize the analysis results on the 119 ft. PennSummit Falg Pole 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	Monopole original structural design report prepared by PennSummit Tubular, LLC & Paul J. Ford and Company. Dated 08-17-2006. Design No 26805. Job No 29206-0266. Monopole original antenna concealment cylinder fabrication drawings prepared by Stealth Concealment Solutions, Inc. Dated 03-17-2003. Job No. FOUR-4C-100-40. Monopole previous structural report prepared by FDH Engineering, Inc. Dated 09-18-2012. Project No 12-08965E S1.
Foundation Drawing	Monopole original foundation design prepared by PennSummit Tubular, LLC & Paul J. Ford and Company. Dated 08-17-2006. Design No 26805. Job No 29206-0266.
Geotechnical Report	Monopole geotechnical report prepared by JGI Eastern, Inc. Dated 07-31-2006. Project No 06496G.
Modification Drawings	N/A

Analysis Criteria

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

Basic Wind Speed Used in the Analysis:	85.0 mph (Fastest Mile)
Basic Wind Speed with Ice:	74 mph (Fastest Mile) with 1/2" radial ice concurrent
Operational Wind Speed:	50 mph + 0" Radial ice
Standard/Codes:	ANSI/TIA-222-F, 2003 IBC & 2005 Connecticut State Building Code

Existing Antennas, Mounts and Transmission Lines

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

Items	Elevation (ft.)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
1	114.0	3	RFS V18-209014 - Panel	Inside 27" concealment canister	(6) 1 5/8"	T-Mobile
2		3	RFS Twin PCS TMAs			
3		3	RFS Twin AWS TMAs			
4	113.0	1	Flag (12'x18')	Direct	-	-
5	107.0	3	Andrew DBXNH-6565B-VTM - Panel	Inside 28" concealment canister	(12) 1 5/8"	Verizon
5	94.0	3	RFS APXV18-206517S-C - Panel	Inside 29" concealment canister	(6) 7/8"	Metro PCS
7	84.0	3	Argus LLPX310R - Panel	Inside 30" concealment canister	(2) 1/2"; (3) 5/8"; (3) 1/4"	Clearwire
8		1	Andrew FPA5250D06-N			
9		3	Redconnex AN-80i BTSs			

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
10	107.0	3	Andrew SBNHH-1D65B - Panel	Inside 28" concealment canister	(12) 1 5/8"	Verizon

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

Analysis Results

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

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	72.4%	22.4%	24.6%
Pass/Fail	Pass	Pass	Pass

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Original Design Reactions	1550.0	23.0	19.0
Analysis Reactions	508.2	8.0	14.3
% of Design Reactions	32.8%	34.8%	75.3%

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-222-F for the installed antennas. Maximum twist/sway at the elevation of the proposed equipment is 1.5539 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-222-F Standard, the 2003 IBC and the 2005 Connecticut State Building Code under the design basic wind speed as specified in the Analysis Criteria.

Standard Conditions

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

Usage Diagram - Max Stress 59.0% at 80.0ft

Structure: CT13616-A-SBA
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

1/21/2016



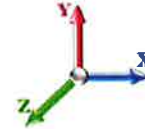
Page: 1

Dead Load Factor: 1.00
Wind Load Factor: 1.00

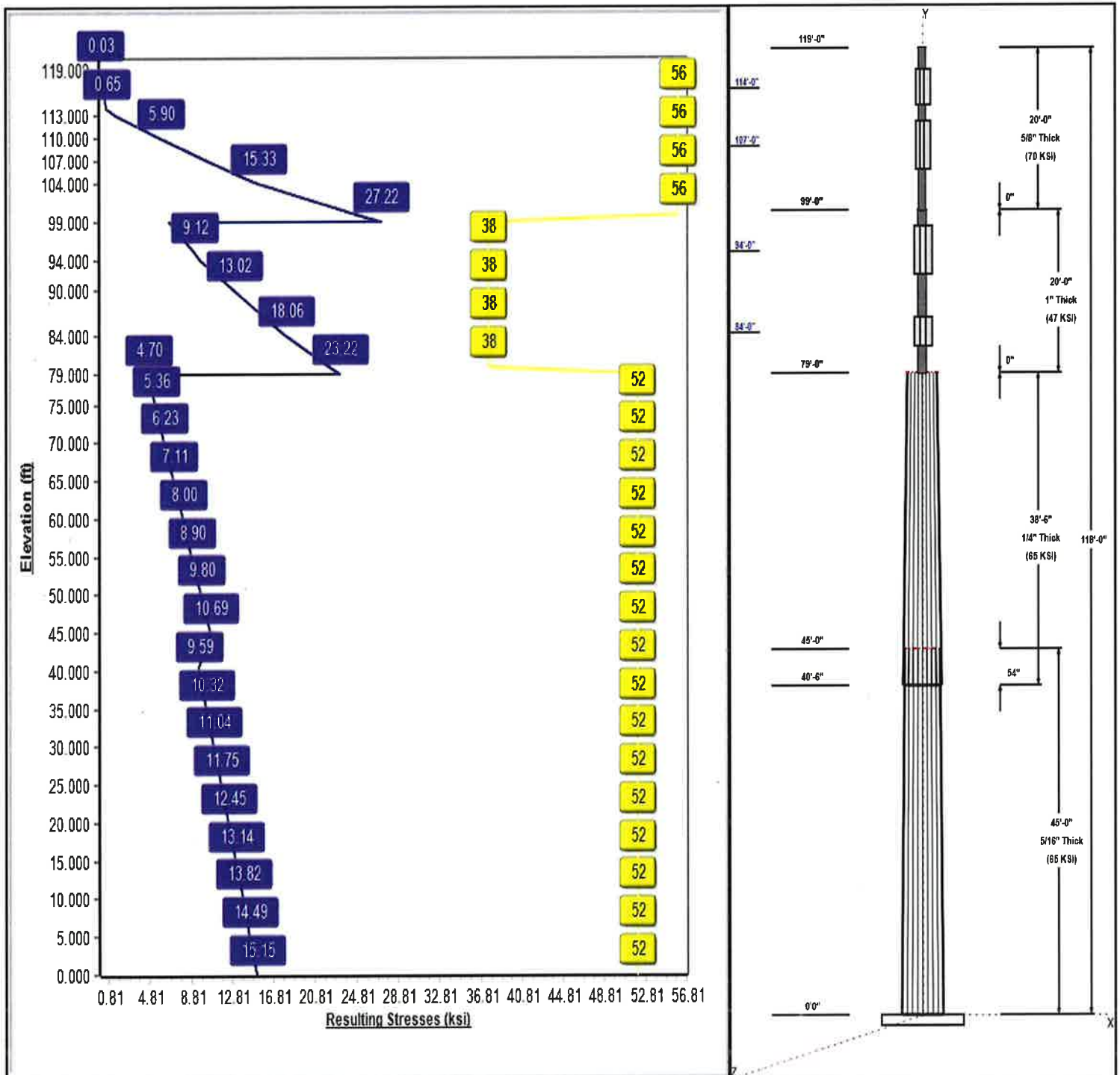
Iterations: 27

38 Allowable Stress
22 Resulting Stress

Load Case : 85 mph Wind with 0 in Ice



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



Structure: CT13616-A-SBA

Type: Custom
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.00000

1/21/2016

Page: 2



Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	45.00	34.60	41.35	0.313		0.15000	65
2	38.50	30.00	35.77	0.250	Slip	0.15000	65
3	20.00	8.00	8.00	1.000	Butt	0.00000	47
4	20.00	5.00	5.00	0.625	Butt	0.00000	70

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
114.00	114.00	1	27" Canister at 114.0'	
114.00	114.00	3	RFS Twin AWS TMAs	T-Mobile
114.00	114.00	3	RFS Twin PCS TMAs	T-Mobile
114.00	114.00	3	RFS V18-209014	T-Mobile
113.00	113.00	1	Flag (12'x18')	
107.00	107.00	3	Andrew SBNHH-1D65B	Verizon
104.00	104.00	1	28" Canister at 104.0'	
94.00	94.00	1	29" Canister at 94.0'	
94.00	94.00	3	RFS APXV18-206517S-C	Metro PCS
84.00	84.00	1	30" Canister at 84.0'	
84.00	84.00	1	Andrew FPA5250D06-N	Clearwire
84.00	84.00	3	Argus LLPX310R	Clearwire
84.00	84.00	3	Redconnex AN-80i BTSs	Clearwire

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
3.00	114.00	Inside	1 5/8" Coax	T-Mobile
3.00	107.00	Inside	1 5/8" Coax	Verizon
3.00	94.00	Inside	7/8" Coax	Metro PCS
3.00	84.00	Inside	1/2" Coax	Clearwire
3.00	84.00	Inside	1/4" Coax	Clearwire
3.00	84.00	Inside	5/8" Coax	Clearwire

Anchor Bolts

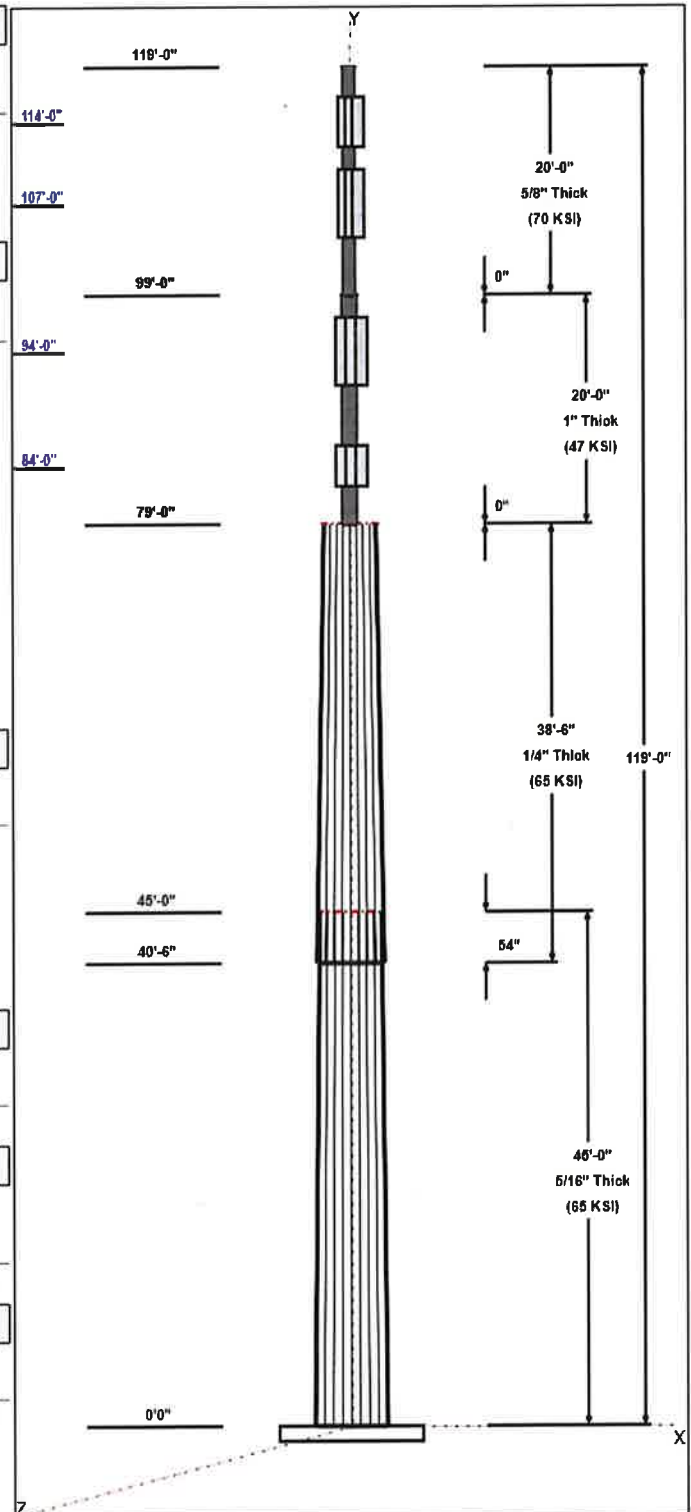
Qty	Specifications	Grade (ksi)	Arrangement
12	2.25" 18J	75.0	Cluster

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.7500	46.0	50.0	Clipped

Reactions

Load Case	Moment	Shear	Axial
85 mph Wind with 0" Ice	508.2	8.0	14.3
73.61 mph Wind with 0.5" Ice	406.3	6.3	16.6
50 mph Wind with 0" Ice	199.9	3.0	14.3

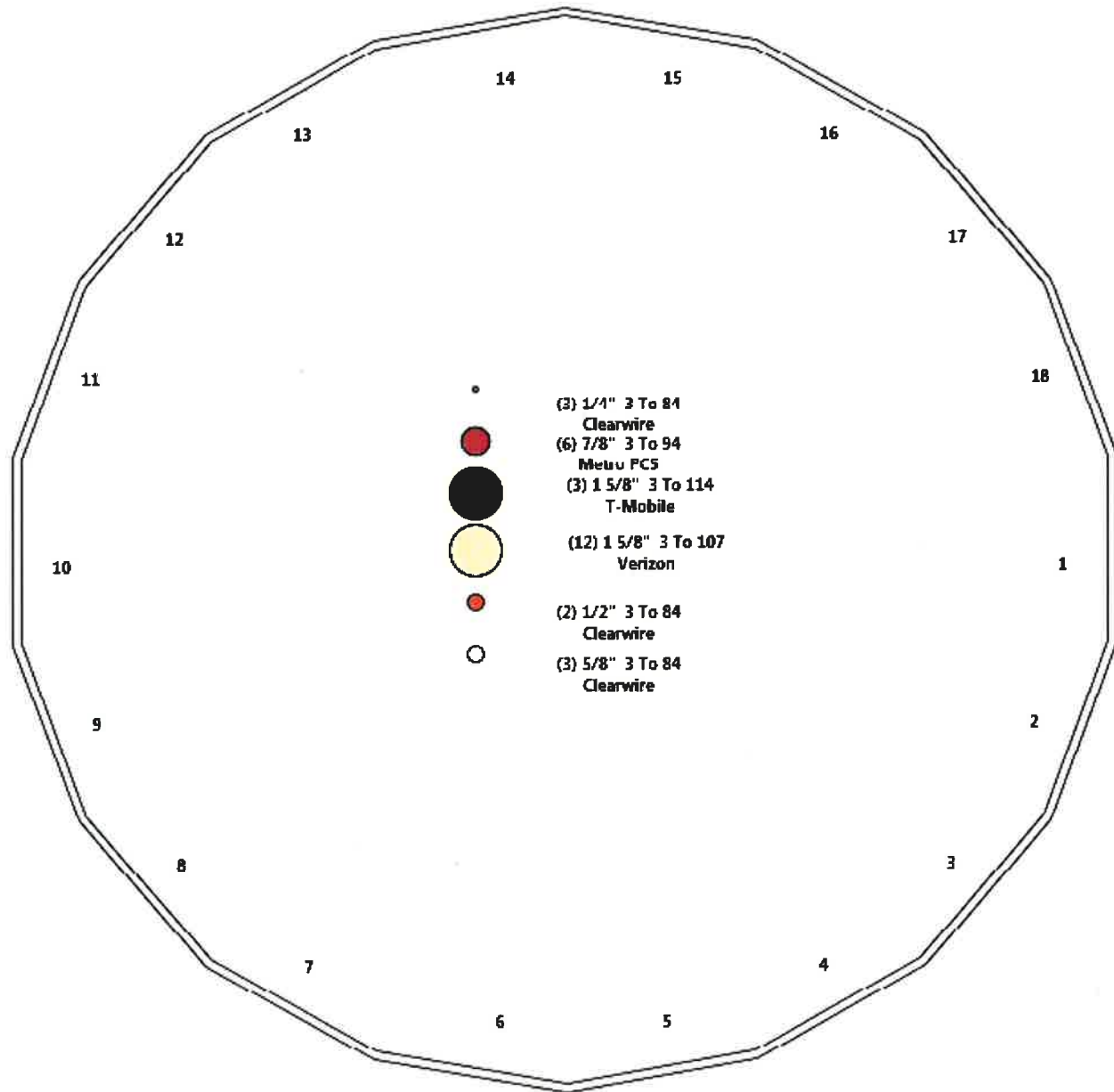


Structure: CT13616-A-SBA - Coax Line Placement

Type: Monopole
Site Name: St. Judes
Height: 119.00 (ft)

1/21/2016

Page: 3



Shaft Properties

Structure: CT13616-A-SBA
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

1/21/2016

Page: 4



Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	45.000	0.3125	65		0.00	5,720
2	18	38.500	0.2500	65	Slip	54.00	3,393
3	R	20.000	1.0000	47	Flange	0.00	1,497
4	R	20.000	0.6250	70	Flange	0.00	585
Total Shaft Weight:							11,194

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	41.35	0.00	40.70	8660.38	21.92	132.32	34.60	45.00	34.01	5051.28	18.11	110.72	0.150000
2	35.77	40.50	28.19	4494.55	23.82	143.10	30.00	79.00	23.61	2639.64	19.75	120.00	0.150000
3	8.00	79.00	21.99	134.80	0.00	8.00	8.00	99.00	21.99	134.80	0.00	8.00	0.000000
4	5.00	99.00	8.59	20.57	0.00	8.00	5.00	119.0	8.59	20.57	0.00	8.00	0.000000

Loading Summary

Structure: CT13616-A-SBA
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

1/21/2016

Page: 5



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	114.00	27" Canister at 114.0'	1	325.00	9.33	1.00	808.60	9.000	1.00	0.00	0.00
2	114.00	RFS Twin AWS TMAs	3	17.60	0.00	1.00	21.50	0.000	1.00	0.00	0.00
3	114.00	RFS Twin PCS TMAs	3	11.00	0.00	1.00	13.40	0.000	1.00	0.00	0.00
4	114.00	RFS V18-209014	3	18.70	0.00	1.00	0.00	0.000	1.00	0.00	0.00
5	113.00	Flag (12'x18')	1	100.00	7.92	1.00	100.00	7.920	1.00	0.00	0.00
6	107.00	Andrew SBNHH-1D65B	3	40.00	0.00	1.00	86.60	0.000	1.00	0.00	0.00
7	104.00	28" Canister at 104.0'	1	325.00	9.75	1.00	808.60	9.400	1.00	0.00	0.00
8	94.00	29" Canister at 94.0'	1	775.00	10.50	1.00	376.92	10.500	1.00	0.00	0.00
9	94.00	RFS APXV18-206517S-C	3	30.80	0.00	1.00	57.00	0.000	1.00	0.00	0.00
10	84.00	30" Canister at 84.0'	1	775.00	11.00	1.00	376.92	11.000	1.00	0.00	0.00
11	84.00	Andrew FPA5250D06-N	1	14.00	0.00	1.00	15.93	0.000	1.00	0.00	0.00
12	84.00	Argus LLPX310R	3	28.60	0.00	1.00	54.50	0.000	1.00	0.00	0.00
13	84.00	Redconnex AN-80i BTSs	3	4.50	0.00	1.00	9.20	0.000	1.00	0.00	0.00
Totals:			27	2,767.60			3,213.57				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	No Ice		Ice		Exposed
			Weight (lb/ft)	CaAa (sf/ft)	Weight (lb/ft)	CaAa (sf/ft)	
3.00	114.00	(6) 1 5/8" Coax	1.04	0.00	0.00	0.00	Inside
3.00	107.00	(12) 1 5/8" Coax	1.04	0.00	0.00	0.00	Inside
3.00	94.00	(6) 7/8" Coax	0.52	0.00	0.00	0.00	Inside
3.00	84.00	(2) 1/2" Coax	0.16	0.00	0.00	0.00	Inside
3.00	84.00	(3) 1/4" Coax	0.04	0.00	0.00	0.00	Inside
3.00	84.00	(3) 5/8" Coax	0.16	0.00	0.00	0.00	Inside
Totals:			300.48		0.00		

Shaft Section Properties

Structure: CT13616-A-SBA
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

1/21/2016

Page: 6



Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)
0.00		0.3125	41.350	40.703	8660.4	21.92	132.32	65	52	0.0
5.00		0.3125	40.600	39.959	8194.2	21.50	129.92	65	52	686.2
10.00		0.3125	39.850	39.215	7745.0	21.07	127.52	65	52	673.5
15.00		0.3125	39.100	38.471	7312.6	20.65	125.12	65	52	660.9
20.00		0.3125	38.350	37.727	6896.5	20.23	122.72	65	52	648.2
25.00		0.3125	37.600	36.983	6496.6	19.81	120.32	65	52	635.6
30.00		0.3125	36.850	36.239	6112.4	19.38	117.92	65	52	622.9
35.00		0.3125	36.100	35.495	5743.7	18.96	115.52	65	52	610.2
40.00		0.3125	35.350	34.752	5390.1	18.54	113.12	65	52	597.6
40.50	Bot - Section 2	0.3125	35.275	34.677	5355.5	18.49	112.88	65	52	59.1
45.00	Top - Section 1	0.2500	35.100	27.652	4243.2	23.35	140.40	65	52	953.4
50.00		0.2500	34.350	27.057	3975.1	22.82	137.40	65	52	465.4
55.00		0.2500	33.600	26.462	3718.5	22.29	134.40	65	52	455.3
60.00		0.2500	32.850	25.867	3473.3	21.76	131.40	65	52	445.2
65.00		0.2500	32.100	25.272	3239.0	21.23	128.40	65	52	435.0
70.00		0.2500	31.350	24.677	3015.5	20.70	125.40	65	52	424.9
75.00		0.2500	30.600	24.082	2802.6	20.17	122.40	65	52	414.8
79.00	Top - Section 2	0.0000	0.000	0.000	0.0	NAN	NAN	0	0	324.5
79.00	Bot - Section 3	0.2500	30.000	23.606	2639.6	19.75	120.00	65	52	
80.00		1.0000	8.000	21.991	134.8	0.00	8.00	47	38	74.8
84.00		1.0000	8.000	21.991	134.8	0.00	8.00	47	38	299.3
85.00		1.0000	8.000	21.991	134.8	0.00	8.00	47	38	74.8
90.00		1.0000	8.000	21.991	134.8	0.00	8.00	47	38	374.2
94.00		1.0000	8.000	21.991	134.8	0.00	8.00	47	38	299.3
95.00		1.0000	8.000	21.991	134.8	0.00	8.00	47	38	74.8
99.00	Top - Section 3	0.0000	0.000	0.000	0.0	NAN	NAN	0	0	299.3
99.00	Bot - Section 4	1.0000	8.000	21.991	134.8	0.00	8.00	47	38	
100.00		0.6250	5.000	8.590	20.6	0.00	8.00	70	56	29.2
104.00		0.6250	5.000	8.590	20.6	0.00	8.00	70	56	116.9
105.00		0.6250	5.000	8.590	20.6	0.00	8.00	70	56	29.2
107.00		0.6250	5.000	8.590	20.6	0.00	8.00	70	56	58.5
110.00		0.6250	5.000	8.590	20.6	0.00	8.00	70	56	87.7
113.00		0.6250	5.000	8.590	20.6	0.00	8.00	70	56	87.7
114.00		0.6250	5.000	8.590	20.6	0.00	8.00	70	56	29.2
115.00		0.6250	5.000	8.590	20.6	0.00	8.00	70	56	29.2
119.00		0.6250	5.000	8.590	20.6	0.00	8.00	70	56	116.9

11193.9

Wind Loading - Shaft

Structure: CT13616-A-SBA
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

1/21/2016

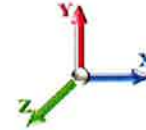
Page: 7



Load Case: 85 mph Wind with 0" Ice

Iterations: 27

Dead Load Factor 1.00
Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	18.496	31.26	292.90	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	18.496	31.26	287.58	0.650	0.000	5.00	17.073	11.10	346.9	0.0	686.2
10.00		0.00	1.00	18.496	31.26	282.27	0.650	0.000	5.00	16.760	10.89	340.5	0.0	673.5
15.00		0.00	1.00	18.496	31.26	276.96	0.650	0.000	5.00	16.448	10.69	334.2	0.0	660.9
20.00		0.00	1.00	18.496	31.26	271.65	0.650	0.000	5.00	16.135	10.49	327.8	0.0	648.2
25.00		0.00	1.00	18.496	31.26	266.33	0.650	0.000	5.00	15.823	10.28	321.5	0.0	635.6
30.00		0.00	1.00	18.496	31.26	261.02	0.650	0.000	5.00	15.510	10.08	315.1	0.0	622.9
35.00		0.00	1.02	18.810	31.79	257.87	0.650	0.000	5.00	15.198	9.88	314.0	0.0	610.2
40.00		0.00	1.06	19.541	33.02	257.37	0.650	0.000	5.00	14.885	9.68	319.5	0.0	597.6
40.50	Bot - Section 2	0.00	1.06	19.611	33.14	257.28	0.650	0.000	0.50	1.471	0.96	31.7	0.0	59.1
45.00	Top - Section 1	0.00	1.09	20.210	34.15	256.19	0.650	0.000	4.50	13.289	8.64	295.0	0.0	953.4
50.00		0.00	1.13	20.827	35.20	258.19	0.650	0.000	5.00	14.469	9.40	331.0	0.0	465.4
55.00		0.00	1.16	21.402	36.17	256.02	0.650	0.000	5.00	14.156	9.20	332.8	0.0	455.3
60.00		0.00	1.19	21.941	37.08	253.43	0.650	0.000	5.00	13.844	9.00	333.7	0.0	445.2
65.00		0.00	1.21	22.449	37.94	250.50	0.650	0.000	5.00	13.531	8.80	333.7	0.0	435.0
70.00		0.00	1.24	22.929	38.75	247.25	0.650	0.000	5.00	13.219	8.59	332.9	0.0	424.9
75.00		0.00	1.26	23.386	39.52	243.72	0.650	0.000	5.00	12.906	8.39	331.5	0.0	414.8
79.00	Top - Section 2	0.00	1.28	23.735	40.11	240.72	0.650	0.000	4.00	10.100	6.57	263.3	0.0	324.5
80.00		0.00	1.29	23.821	40.26	64.31	0.590	0.000	1.00	0.667	0.39	15.8	0.0	74.8
84.00	Appurtenance(s)	0.00	1.31	24.155	40.82	64.76	0.590	0.000	4.00	2.667	1.57	64.2	0.0	299.3
85.00		0.00	1.31	24.237	40.96	64.87	0.590	0.000	1.00	0.667	0.39	16.1	0.0	74.8
90.00		0.00	1.33	24.636	41.63	65.40	0.590	0.000	5.00	3.333	1.97	81.9	0.0	374.2
94.00	Appurtenance(s)	0.00	1.35	24.944	42.16	65.81	0.590	0.000	4.00	2.667	1.57	66.3	0.0	299.3
95.00		0.00	1.35	25.020	42.28	65.91	0.590	0.000	1.00	0.667	0.39	16.6	0.0	74.8
99.00	Top - Section 3	0.00	1.37	25.316	42.78	66.30	0.590	0.000	4.00	2.667	1.57	67.3	0.0	299.3
100.00		0.00	1.37	25.389	42.91	41.49	1.025	0.000	1.00	0.417	0.43	18.3	0.0	29.2
104.00	Appurtenance(s)	0.00	1.39	25.675	43.39	41.73	1.017	0.000	4.00	1.667	1.70	73.6	0.0	116.9
105.00		0.00	1.39	25.745	43.51	41.78	1.015	0.000	1.00	0.417	0.42	18.4	0.0	29.2
107.00	Appurtenance(s)	0.00	1.40	25.885	43.74	41.90	1.012	0.000	2.00	0.833	0.84	36.9	0.0	58.5
110.00		0.00	1.41	26.090	44.09	42.06	1.007	0.000	3.00	1.250	1.26	55.5	0.0	87.7
113.00	Appurtenance(s)	0.00	1.42	26.291	44.43	42.23	1.002	0.000	3.00	1.250	1.25	55.6	0.0	87.7
114.00	Appurtenance(s)	0.00	1.43	26.357	44.54	42.28	1.000	0.000	1.00	0.417	0.42	18.6	0.0	29.2
115.00		0.00	1.43	26.423	44.66	42.33	0.998	0.000	1.00	0.417	0.42	18.6	0.0	29.2
119.00		0.00	1.44	26.683	45.09	42.54	0.992	0.000	4.00	1.667	1.65	74.6	0.0	116.9
Totals:									119.00			5,903.7		11,193.9

Discrete Appurtenance Forces

Structure: CT13616-A-SB
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

1/21/2016

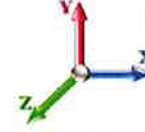
Page: 8



Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations: 27

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	114.00	RFS V18-209014	3	26.357	44.544	1.00	0.00	56.10	0.000	0.000	0.00	0.00	0.00
2	114.00	RFS Twin PCS TMAs	3	26.357	44.544	1.00	0.00	33.00	0.000	0.000	0.00	0.00	0.00
3	114.00	RFS Twin AWS TMAs	3	26.357	44.544	1.00	0.00	52.80	0.000	0.000	0.00	0.00	0.00
4	114.00	27" Canister at 114.0'	1	26.357	44.544	1.00	9.33	325.00	0.000	0.000	415.60	0.00	0.00
5	113.00	Flag (12'x18')	1	26.291	44.432	1.00	7.92	100.00	0.000	0.000	351.90	0.00	0.00
6	107.00	Andrew SBNHH-1D65B	3	25.885	43.745	1.00	0.00	120.00	0.000	0.000	0.00	0.00	0.00
7	104.00	28" Canister at 104.0'	1	25.675	43.391	1.00	9.75	325.00	0.000	0.000	423.06	0.00	0.00
8	94.00	RFS APXV18-206517S-C	3	24.944	42.155	1.00	0.00	92.40	0.000	0.000	0.00	0.00	0.00
9	94.00	29" Canister at 94.0'	1	24.944	42.155	1.00	10.50	775.00	0.000	0.000	442.63	0.00	0.00
10	84.00	Redconnex AN-80i BTSs	3	24.155	40.822	1.00	0.00	13.50	0.000	0.000	0.00	0.00	0.00
11	84.00	Argus LLPX310R	3	24.155	40.822	1.00	0.00	85.80	0.000	0.000	0.00	0.00	0.00
12	84.00	Andrew FPA5250D06-N	1	24.155	40.822	1.00	0.00	14.00	0.000	0.000	0.00	0.00	0.00
13	84.00	30" Canister at 84.0'	1	24.155	40.822	1.00	11.00	775.00	0.000	0.000	449.05	0.00	0.00
Totals:								2,767.60			2,082.24		

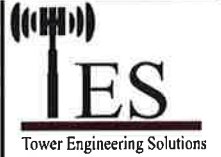
Total Applied Force Summary

Structure: CT13616-A-SB
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

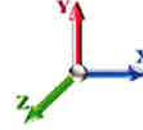
1/21/2016

Page: 9



Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



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
5.00		346.89	692.11	0.00	0.00
10.00		340.54	688.35	0.00	0.00
15.00		334.19	675.69	0.00	0.00
20.00		327.84	663.04	0.00	0.00
25.00		321.49	650.38	0.00	0.00
30.00		315.14	637.73	0.00	0.00
35.00		314.02	625.07	0.00	0.00
40.00		319.53	612.41	0.00	0.00
40.50		31.70	60.55	0.00	0.00
45.00		295.02	966.74	0.00	0.00
50.00		331.03	480.24	0.00	0.00
55.00		332.82	470.11	0.00	0.00
60.00		333.67	459.99	0.00	0.00
65.00		333.68	449.86	0.00	0.00
70.00		332.95	439.74	0.00	0.00
75.00		331.55	429.61	0.00	0.00
79.00		263.34	336.40	0.00	0.00
80.00		15.83	77.80	0.00	0.00
84.00	(8) appurtenances	513.27	1199.48	0.00	0.00
85.00		16.11	77.43	0.00	0.00
90.00		81.88	387.15	0.00	0.00
94.00	(4) appurtenances	508.96	1177.12	0.00	0.00
95.00		16.63	76.91	0.00	0.00
99.00		67.31	307.64	0.00	0.00
100.00		18.32	31.31	0.00	0.00
104.00	(1) appurtenances	496.62	450.24	0.00	0.00
105.00		18.41	31.31	0.00	0.00
107.00	(3) appurtenances	36.88	182.62	0.00	0.00
110.00		55.48	90.81	0.00	0.00
113.00	(1) appurtenances	407.53	190.81	0.00	0.00
114.00	(10) appurtenances	434.16	497.17	0.00	0.00
115.00		18.58	29.23	0.00	0.00
119.00		74.56	116.92	0.00	0.00
	Totals:	7,985.92	14,262.01	0.00	0.00

Resulting Forces and Deflections

Structure: CT13616-A-SB
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

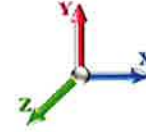
1/21/2016

Page: 10



Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	Deflect X (in)	Deflect Z (in)	Deflect Resultant (in)	Rotation Sway (deg)	Rotation Twist (deg)
0.00	-7.996	-14.256	0.000	0.000	0.000	-508.199	0.000	0.000	0.000	0.000	0.000
5.00	-7.667	-13.554	0.000	0.000	0.000	-468.220	-0.043	0.000	0.043	-0.080	0.000
10.00	-7.342	-12.856	0.000	0.000	0.000	-429.884	-0.170	0.000	0.170	-0.158	0.000
15.00	-7.022	-12.173	0.000	0.000	0.000	-393.172	-0.376	0.000	0.376	-0.234	0.000
20.00	-6.705	-11.503	0.000	0.000	0.000	-358.064	-0.660	0.000	0.660	-0.307	0.000
25.00	-6.393	-10.847	0.000	0.000	0.000	-324.538	-1.020	0.000	1.020	-0.377	0.000
30.00	-6.085	-10.204	0.000	0.000	0.000	-292.574	-1.452	0.000	1.452	-0.445	0.000
35.00	-5.776	-9.575	0.000	0.000	0.000	-262.150	-1.952	0.000	1.952	-0.509	0.000
40.00	-5.466	-8.963	0.000	0.000	0.000	-233.269	-2.519	0.000	2.519	-0.571	0.000
40.50	-5.428	-8.900	0.000	0.000	0.000	-230.541	-2.579	0.000	2.579	-0.577	0.000
45.00	-5.131	-7.932	0.000	0.000	0.000	-206.113	-3.149	0.000	3.149	-0.629	0.000
50.00	-4.802	-7.450	0.000	0.000	0.000	-180.461	-3.837	0.000	3.837	-0.683	0.000
55.00	-4.470	-6.980	0.000	0.000	0.000	-156.453	-4.586	0.000	4.586	-0.744	0.000
60.00	-4.136	-6.521	0.000	0.000	0.000	-134.103	-5.395	0.000	5.395	-0.799	0.000
65.00	-3.801	-6.072	0.000	0.000	0.000	-113.423	-6.260	0.000	6.260	-0.850	0.000
70.00	-3.466	-5.635	0.000	0.000	0.000	-94.417	-7.175	0.000	7.175	-0.896	0.000
75.00	-3.131	-5.209	0.000	0.000	0.000	-77.089	-8.135	0.000	8.135	-0.936	0.000
79.00	-2.863	-4.876	0.000	0.000	0.000	-64.567	-8.932	0.000	8.932	-0.965	0.000
80.00	-2.867	-4.786	0.000	0.000	0.000	-61.704	-9.135	0.000	9.135	-0.972	0.000
84.00	-2.346	-3.587	0.000	0.000	0.000	-50.237	-10.154	0.000	10.154	-1.444	0.000
85.00	-2.345	-3.498	0.000	0.000	0.000	-47.891	-10.468	0.000	10.468	-1.548	0.000
90.00	-2.270	-3.100	0.000	0.000	0.000	-36.167	-12.332	0.000	12.332	-1.991	0.000
94.00	-1.723	-1.938	0.000	0.000	0.000	-27.087	-14.117	0.000	14.117	-2.258	0.000
95.00	-1.707	-1.858	0.000	0.000	0.000	-25.364	-14.596	0.000	14.596	-2.314	0.000
99.00	-1.630	-1.550	0.000	0.000	0.000	-18.535	-16.615	0.000	16.615	-2.499	0.000
100.00	-1.622	-1.508	0.000	0.000	0.000	-16.905	-17.142	0.000	17.142	-2.536	0.000
104.00	-1.110	-1.076	0.000	0.000	0.000	-10.418	-19.608	0.000	19.608	-3.292	0.000
105.00	-1.094	-1.042	0.000	0.000	0.000	-9.308	-20.312	0.000	20.312	-3.429	0.000
107.00	-1.049	-0.858	0.000	0.000	0.000	-7.121	-21.797	0.000	21.797	-3.656	0.000
110.00	-0.990	-0.768	0.000	0.000	0.000	-3.974	-24.172	0.000	24.172	-3.886	0.000
113.00	-0.571	-0.605	0.000	0.000	0.000	-1.004	-26.651	0.000	26.651	-3.989	0.000
114.00	-0.103	-0.139	0.000	0.000	0.000	-0.433	-27.487	0.000	27.487	-3.999	0.000
115.00	-0.083	-0.111	0.000	0.000	0.000	-0.330	-28.324	0.000	28.324	-4.004	0.000
119.00	-0.075	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31.681	-4.014	0.000

Resulting Stresses

Structure: CT13616-A-SBA
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

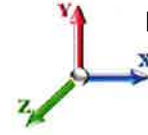
1/21/2016

Page: 11



Load Case: 85 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

Applied Stresses

Elev (ft)	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvT Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	fb Combined (ksi)	Fb Allow Stress (ksi)	f/Fb Stress Ratio	
0.00	0.35	0.40	0.00	0.00	0.00	14.78	15.15	52.0	0.291	
5.00	0.34	0.39	0.00	0.00	0.00	14.13	14.49	52.0	0.279	
10.00	0.33	0.38	0.00	0.00	0.00	13.48	13.82	52.0	0.266	
15.00	0.32	0.37	0.00	0.00	0.00	12.81	13.14	52.0	0.253	
20.00	0.30	0.36	0.00	0.00	0.00	12.13	12.45	52.0	0.240	
25.00	0.29	0.35	0.00	0.00	0.00	11.44	11.75	52.0	0.226	
30.00	0.28	0.34	0.00	0.00	0.00	10.75	11.04	52.0	0.212	
35.00	0.27	0.33	0.00	0.00	0.00	10.04	10.32	52.0	0.199	
40.00	0.26	0.32	0.00	0.00	0.00	9.32	9.59	52.0	0.185	
40.50	0.26	0.32	0.00	0.00	0.00	9.25	9.52	52.0	0.183	
45.00	0.29	0.37	0.00	0.00	0.00	10.39	10.69	52.0	0.206	
50.00	0.28	0.36	0.00	0.00	0.00	9.50	9.80	52.0	0.188	
55.00	0.26	0.34	0.00	0.00	0.00	8.61	8.90	52.0	0.171	
60.00	0.25	0.32	0.00	0.00	0.00	7.73	8.00	52.0	0.154	
65.00	0.24	0.30	0.00	0.00	0.00	6.85	7.11	52.0	0.137	
70.00	0.23	0.28	0.00	0.00	0.00	5.98	6.23	52.0	0.120	
75.00	0.22	0.26	0.00	0.00	0.00	5.13	5.36	52.0	0.103	
79.00	0.21	0.24	0.00	0.00	0.00	4.47	4.70	52.0	0.090	
79.00	0.21	0.24	0.00	0.00	0.00	4.47	4.70	52.0	0.447	
80.00	0.22	0.26	0.00	0.00	0.00	21.97	22.19	37.6	37.6	0.590
84.00	0.16	0.21	0.00	0.00	0.00	17.89	18.06	37.6	37.6	0.480
85.00	0.16	0.21	0.00	0.00	0.00	17.05	17.22	37.6	37.6	0.458
90.00	0.14	0.21	0.00	0.00	0.00	12.88	13.02	37.6	37.6	0.346
94.00	0.09	0.16	0.00	0.00	0.00	9.65	9.74	37.6	37.6	0.259
95.00	0.08	0.16	0.00	0.00	0.00	9.03	9.12	37.6	37.6	0.243
99.00	0.07	0.15	0.00	0.00	0.00	6.60	6.68	37.6	37.6	0.178
99.00	0.07	0.15	0.00	0.00	0.00	6.60	6.68	37.6	37.6	0.724
100.00	0.18	0.38	0.00	0.00	0.00	24.66	24.84	56.0	56.0	0.444
104.00	0.13	0.26	0.00	0.00	0.00	15.20	15.33	56.0	56.0	0.274
105.00	0.12	0.25	0.00	0.00	0.00	13.58	13.70	56.0	56.0	0.245
107.00	0.10	0.24	0.00	0.00	0.00	10.39	10.49	56.0	56.0	0.187
110.00	0.09	0.23	0.00	0.00	0.00	5.80	5.90	56.0	56.0	0.105
113.00	0.07	0.13	0.00	0.00	0.00	1.46	1.55	56.0	56.0	0.028
114.00	0.02	0.02	0.00	0.00	0.00	0.63	0.65	56.0	56.0	0.012
115.00	0.01	0.02	0.00	0.00	0.00	0.48	0.50	56.0	56.0	0.009
119.00	0.00	0.02	0.00	0.00	0.00	0.00	0.03	56.0	56.0	0.001

Wind Loading - Shaft

Structure: CT13616-A-SBA
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

1/21/2016

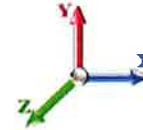
Page: 12



Load Case: 73.61 mph Wind with 0.5" Ice

Iterations: 27

Dead Load Factor 1.00
Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	13.871	23.44	253.65	0.650	0.500	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	13.871	23.44	249.05	0.650	0.500	5.00	17.490	11.37	266.5	125.5	811.7
10.00		0.00	1.00	13.871	23.44	244.45	0.650	0.500	5.00	17.177	11.17	261.7	123.2	796.8
15.00		0.00	1.00	13.871	23.44	239.85	0.650	0.500	5.00	16.865	10.96	257.0	121.0	781.8
20.00		0.00	1.00	13.871	23.44	235.25	0.650	0.500	5.00	16.552	10.76	252.2	118.7	766.9
25.00		0.00	1.00	13.871	23.44	230.64	0.650	0.500	5.00	16.240	10.56	247.5	116.4	751.9
30.00		0.00	1.00	13.871	23.44	226.04	0.650	0.500	5.00	15.927	10.35	242.7	114.1	737.0
35.00		0.00	1.02	14.106	23.84	223.31	0.650	0.500	5.00	15.615	10.15	242.0	111.8	722.0
40.00		0.00	1.06	14.655	24.77	222.88	0.650	0.500	5.00	15.302	9.95	246.3	109.5	707.1
40.50	Bot - Section 2	0.00	1.06	14.707	24.85	222.81	0.650	0.500	0.50	1.513	0.98	24.4	10.9	70.0
45.00	Top - Section 1	0.00	1.09	15.156	25.61	221.86	0.650	0.500	4.50	13.664	8.88	227.5	97.9	1051.3
50.00		0.00	1.13	15.620	26.40	223.59	0.650	0.500	5.00	14.885	9.68	255.4	106.4	571.9
55.00		0.00	1.16	16.051	27.13	221.71	0.650	0.500	5.00	14.573	9.47	256.9	104.2	559.4
60.00		0.00	1.19	16.455	27.81	219.47	0.650	0.500	5.00	14.260	9.27	257.8	101.9	547.0
65.00		0.00	1.21	16.836	28.45	216.93	0.650	0.500	5.00	13.948	9.07	258.0	99.6	534.6
70.00		0.00	1.24	17.196	29.06	214.12	0.650	0.500	5.00	13.635	8.86	257.6	97.3	522.2
75.00		0.00	1.26	17.538	29.64	211.06	0.650	0.500	5.00	13.323	8.66	256.7	95.0	509.8
79.00	Top - Section 2	0.00	1.28	17.800	30.08	208.47	0.650	0.500	4.00	10.433	6.78	204.0	74.5	399.1
80.00		0.00	1.29	17.865	30.19	55.69	0.699	0.500	1.00	0.750	0.52	15.8	5.2	80.0
84.00	Appurtenance(s)	0.00	1.31	18.115	30.61	56.08	0.693	0.500	4.00	3.000	2.08	63.6	20.8	320.1
85.00		0.00	1.31	18.177	30.72	56.18	0.691	0.500	1.00	0.750	0.52	15.9	5.2	80.0
90.00		0.00	1.33	18.476	31.22	56.64	0.684	0.500	5.00	3.750	2.56	80.1	26.0	400.1
94.00	Appurtenance(s)	0.00	1.35	18.707	31.61	56.99	0.678	0.500	4.00	3.000	2.03	64.3	20.8	320.1
95.00		0.00	1.35	18.764	31.71	57.08	0.677	0.500	1.00	0.750	0.51	16.1	5.2	80.0
99.00	Top - Section 3	0.00	1.37	18.986	32.09	57.41	0.672	0.500	4.00	3.000	2.02	64.7	20.8	320.1
100.00		0.00	1.37	19.041	32.18	35.93	1.235	0.500	1.00	0.500	0.62	19.9	3.4	32.6
104.00	Appurtenance(s)	0.00	1.39	19.255	32.54	36.14	1.226	0.500	4.00	2.000	2.45	79.8	13.4	130.4
105.00		0.00	1.39	19.308	32.63	36.19	1.224	0.500	1.00	0.500	0.61	20.0	3.4	32.6
107.00	Appurtenance(s)	0.00	1.40	19.412	32.81	36.28	1.220	0.500	2.00	1.000	1.22	40.0	6.7	65.2
110.00		0.00	1.41	19.566	33.07	36.43	1.214	0.500	3.00	1.500	1.82	60.2	10.1	97.8
113.00	Appurtenance(s)	0.00	1.42	19.717	33.32	36.57	1.208	0.500	3.00	1.500	1.81	60.4	10.1	97.8
114.00	Appurtenance(s)	0.00	1.43	19.767	33.41	36.61	1.206	0.500	1.00	0.500	0.60	20.1	3.4	32.6
115.00		0.00	1.43	19.816	33.49	36.66	1.204	0.500	1.00	0.500	0.60	20.2	3.4	32.6
119.00		0.00	1.44	20.011	33.82	36.84	1.196	0.500	4.00	2.000	2.39	80.9	13.4	130.4
Totals:									119.00			4,736.1		13,092.7

Discrete Appurtenance Forces

Structure: CT13616-A-SB
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

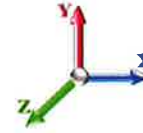
1/21/2016

Page: 13



Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	114.00	RFS V18-209014	3	19.767	33.406	1.00	0.00	0.00	0.000	0.000	0.00	0.00	0.00
2	114.00	RFS Twin PCS TMAs	3	19.767	33.406	1.00	0.00	40.20	0.000	0.000	0.00	0.00	0.00
3	114.00	RFS Twin AWS TMAs	3	19.767	33.406	1.00	0.00	64.50	0.000	0.000	0.00	0.00	0.00
4	114.00	27" Canister at 114.0'	1	19.767	33.406	1.00	9.00	808.60	0.000	0.000	300.66	0.00	0.00
5	113.00	Flag (12'x18')	1	19.717	33.322	1.00	7.92	100.00	0.000	0.000	263.91	0.00	0.00
6	107.00	Andrew SBNHH-1D65B	3	19.412	32.807	1.00	0.00	259.80	0.000	0.000	0.00	0.00	0.00
7	104.00	28" Canister at 104.0'	1	19.255	32.541	1.00	9.40	808.60	0.000	0.000	305.89	0.00	0.00
8	94.00	RFS APXV18-206517S-C	3	18.707	31.615	1.00	0.00	171.00	0.000	0.000	0.00	0.00	0.00
9	94.00	29" Canister at 94.0'	1	18.707	31.615	1.00	10.50	376.92	0.000	0.000	331.96	0.00	0.00
10	84.00	Redconnex AN-80i BTSs	3	18.115	30.615	1.00	0.00	27.60	0.000	0.000	0.00	0.00	0.00
11	84.00	Argus LLPX310R	3	18.115	30.615	1.00	0.00	163.50	0.000	0.000	0.00	0.00	0.00
12	84.00	Andrew FPA5250D06-N	1	18.115	30.615	1.00	0.00	15.93	0.000	0.000	0.00	0.00	0.00
13	84.00	30" Canister at 84.0'	1	18.115	30.615	1.00	11.00	376.92	0.000	0.000	336.76	0.00	0.00
Totals:								3,213.57			1,539.17		

Total Applied Force Summary

Structure: CT13616-A-SB
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

1/21/2016

Page: 14

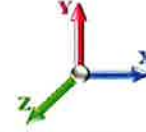


Load Case: 73.61 mph Wind with 0.5" Ice

Iterations: 27

Dead Load Factor 1.00

Wind Load Factor 1.00



Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		266.50	817.64	0.00	0.00
10.00		261.74	811.59	0.00	0.00
15.00		256.97	796.65	0.00	0.00
20.00		252.21	781.70	0.00	0.00
25.00		247.45	766.75	0.00	0.00
30.00		242.69	751.80	0.00	0.00
35.00		241.96	736.86	0.00	0.00
40.00		246.34	721.91	0.00	0.00
40.50		24.44	71.47	0.00	0.00
45.00		227.50	1064.60	0.00	0.00
50.00		255.41	586.68	0.00	0.00
55.00		256.95	574.27	0.00	0.00
60.00		257.77	561.85	0.00	0.00
65.00		257.95	549.43	0.00	0.00
70.00		257.57	537.02	0.00	0.00
75.00		256.68	524.60	0.00	0.00
79.00		204.01	410.93	0.00	0.00
80.00		15.83	82.99	0.00	0.00
84.00	(8) appurtenances	400.38	915.90	0.00	0.00
85.00		15.92	82.62	0.00	0.00
90.00		80.07	413.12	0.00	0.00
94.00	(4) appurtenances	396.29	878.41	0.00	0.00
95.00		16.10	82.10	0.00	0.00
99.00		64.67	328.41	0.00	0.00
100.00		19.88	34.67	0.00	0.00
104.00	(1) appurtenances	385.70	947.28	0.00	0.00
105.00		19.97	34.67	0.00	0.00
107.00	(3) appurtenances	40.02	329.14	0.00	0.00
110.00		60.20	100.89	0.00	0.00
113.00	(1) appurtenances	324.27	200.89	0.00	0.00
114.00	(10) appurtenances	320.79	946.93	0.00	0.00
115.00		20.16	32.59	0.00	0.00
119.00		80.90	130.36	0.00	0.00
	Totals:	6,275.26	16,606.75	0.00	0.00

Resulting Forces and Deflections

Structure: CT13616-A-SB
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

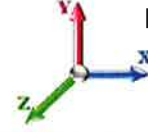
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

1/21/2016
 Page: 15



Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	Deflect X (in)	Deflect Z (in)	Deflect Resultant (in)	Rotation Sway (deg)	Rotation Twist (deg)
0.00	-6.285	-16.603	0.000	0.000	0.000	-406.302	0.000	0.000	0.000	0.000	0.000
5.00	-6.035	-15.779	0.000	0.000	0.000	-374.879	-0.035	0.000	0.035	-0.064	0.000
10.00	-5.788	-14.962	0.000	0.000	0.000	-344.704	-0.136	0.000	0.136	-0.127	0.000
15.00	-5.544	-14.160	0.000	0.000	0.000	-315.764	-0.301	0.000	0.301	-0.187	0.000
20.00	-5.302	-13.374	0.000	0.000	0.000	-288.046	-0.529	0.000	0.529	-0.246	0.000
25.00	-5.063	-12.603	0.000	0.000	0.000	-261.537	-0.817	0.000	0.817	-0.303	0.000
30.00	-4.827	-11.848	0.000	0.000	0.000	-236.222	-1.164	0.000	1.164	-0.357	0.000
35.00	-4.590	-11.109	0.000	0.000	0.000	-212.087	-1.566	0.000	1.566	-0.409	0.000
40.00	-4.343	-10.387	0.000	0.000	0.000	-189.138	-2.022	0.000	2.022	-0.459	0.000
40.50	-4.322	-10.314	0.000	0.000	0.000	-186.966	-2.070	0.000	2.070	-0.464	0.000
45.00	-4.093	-9.248	0.000	0.000	0.000	-167.516	-2.528	0.000	2.528	-0.506	0.000
50.00	-3.839	-8.661	0.000	0.000	0.000	-147.052	-3.083	0.000	3.083	-0.551	0.000
55.00	-3.583	-8.086	0.000	0.000	0.000	-127.856	-3.686	0.000	3.686	-0.600	0.000
60.00	-3.325	-7.525	0.000	0.000	0.000	-109.941	-4.340	0.000	4.340	-0.645	0.000
65.00	-3.065	-6.976	0.000	0.000	0.000	-93.316	-5.038	0.000	5.038	-0.687	0.000
70.00	-2.805	-6.441	0.000	0.000	0.000	-77.989	-5.778	0.000	5.778	-0.725	0.000
75.00	-2.545	-5.918	0.000	0.000	0.000	-63.963	-6.556	0.000	6.556	-0.758	0.000
79.00	-2.337	-5.509	0.000	0.000	0.000	-53.784	-7.201	0.000	7.201	-0.782	0.000
80.00	-2.339	-5.418	0.000	0.000	0.000	-51.447	-7.366	0.000	7.366	-0.788	0.000
84.00	-1.942	-4.502	0.000	0.000	0.000	-42.090	-8.197	0.000	8.197	-1.182	0.000
85.00	-1.942	-4.411	0.000	0.000	0.000	-40.149	-8.454	0.000	8.454	-1.269	0.000
90.00	-1.872	-3.991	0.000	0.000	0.000	-30.438	-9.987	0.000	9.987	-1.642	0.000
94.00	-1.456	-3.122	0.000	0.000	0.000	-22.950	-11.461	0.000	11.461	-1.867	0.000
95.00	-1.443	-3.037	0.000	0.000	0.000	-21.493	-11.857	0.000	11.857	-1.914	0.000
99.00	-1.371	-2.709	0.000	0.000	0.000	-15.721	-13.530	0.000	13.530	-2.071	0.000
100.00	-1.367	-2.667	0.000	0.000	0.000	-14.350	-13.967	0.000	13.967	-2.103	0.000
104.00	-0.952	-1.731	0.000	0.000	0.000	-8.881	-16.019	0.000	16.019	-2.745	0.000
105.00	-0.935	-1.695	0.000	0.000	0.000	-7.929	-16.606	0.000	16.606	-2.862	0.000
107.00	-0.883	-1.365	0.000	0.000	0.000	-6.059	-17.847	0.000	17.847	-3.055	0.000
110.00	-0.820	-1.266	0.000	0.000	0.000	-3.411	-19.833	0.000	19.833	-3.252	0.000
113.00	-0.486	-1.083	0.000	0.000	0.000	-0.950	-21.909	0.000	21.909	-3.342	0.000
114.00	-0.110	-0.157	0.000	0.000	0.000	-0.464	-22.610	0.000	22.610	-3.352	0.000
115.00	-0.088	-0.125	0.000	0.000	0.000	-0.354	-23.312	0.000	23.312	-3.358	0.000
119.00	-0.081	0.000	0.000	0.000	0.000	0.000	0.000	0.000	26.129	-3.367	0.000

Resulting Stresses

Structure: CT13616-A-SBA
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

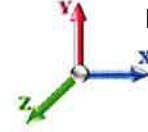
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

1/21/2016
 Page: 16



Load Case: 73.61 mph Wind with 0.5" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 27

Applied Stresses

Elev (ft)	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvT Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	fb Combined (ksi)	Fb Allow Stress (ksi)	f/Fb Stress Ratio	
0.00	0.41	0.31	0.00	0.00	0.00	11.82	12.24	52.0	0.235	
5.00	0.39	0.30	0.00	0.00	0.00	11.32	11.72	52.0	0.226	
10.00	0.38	0.30	0.00	0.00	0.00	10.81	11.20	52.0	0.215	
15.00	0.37	0.29	0.00	0.00	0.00	10.29	10.67	52.0	0.205	
20.00	0.35	0.28	0.00	0.00	0.00	9.76	10.13	52.0	0.195	
25.00	0.34	0.28	0.00	0.00	0.00	9.22	9.57	52.0	0.184	
30.00	0.33	0.27	0.00	0.00	0.00	8.68	9.02	52.0	0.173	
35.00	0.31	0.26	0.00	0.00	0.00	8.12	8.45	52.0	0.162	
40.00	0.30	0.25	0.00	0.00	0.00	7.56	7.87	52.0	0.151	
40.50	0.30	0.25	0.00	0.00	0.00	7.50	7.81	52.0	0.150	
45.00	0.33	0.30	0.00	0.00	0.00	8.44	8.79	52.0	0.169	
50.00	0.32	0.29	0.00	0.00	0.00	7.74	8.08	52.0	0.155	
55.00	0.31	0.27	0.00	0.00	0.00	7.04	7.36	52.0	0.142	
60.00	0.29	0.26	0.00	0.00	0.00	6.34	6.64	52.0	0.128	
65.00	0.28	0.24	0.00	0.00	0.00	5.63	5.93	52.0	0.114	
70.00	0.26	0.23	0.00	0.00	0.00	4.94	5.22	52.0	0.100	
75.00	0.25	0.21	0.00	0.00	0.00	4.25	4.52	52.0	0.087	
79.00	0.23	0.20	0.00	0.00	0.00	3.72	3.97	52.0	0.076	
79.00	0.23	0.20	0.00	0.00	0.00	3.72	3.97	52.0	0.373	
80.00	0.25	0.21	0.00	0.00	0.00	18.32	18.57	37.6	37.6	0.494
84.00	0.20	0.18	0.00	0.00	0.00	14.99	15.20	37.6	37.6	0.404
85.00	0.20	0.18	0.00	0.00	0.00	14.30	14.50	37.6	37.6	0.386
90.00	0.18	0.17	0.00	0.00	0.00	10.84	11.02	37.6	37.6	0.293
94.00	0.14	0.13	0.00	0.00	0.00	8.17	8.32	37.6	37.6	0.221
95.00	0.14	0.13	0.00	0.00	0.00	7.65	7.79	37.6	37.6	0.207
99.00	0.12	0.12	0.00	0.00	0.00	5.60	5.73	37.6	37.6	0.152
99.00	0.12	0.12	0.00	0.00	0.00	5.60	5.73	37.6	37.6	0.618
100.00	0.31	0.32	0.00	0.00	0.00	20.93	21.25	56.0	56.0	0.379
104.00	0.20	0.22	0.00	0.00	0.00	12.95	13.16	56.0	56.0	0.235
105.00	0.20	0.22	0.00	0.00	0.00	11.57	11.77	56.0	56.0	0.210
107.00	0.16	0.21	0.00	0.00	0.00	8.84	9.00	56.0	56.0	0.161
110.00	0.15	0.19	0.00	0.00	0.00	4.97	5.13	56.0	56.0	0.092
113.00	0.13	0.11	0.00	0.00	0.00	1.39	1.52	56.0	56.0	0.027
114.00	0.02	0.03	0.00	0.00	0.00	0.68	0.70	56.0	56.0	0.012
115.00	0.01	0.02	0.00	0.00	0.00	0.52	0.53	56.0	56.0	0.009
119.00	0.00	0.02	0.00	0.00	0.00	0.00	0.03	56.0	56.0	0.001

Wind Loading - Shaft

Structure: CT13616-A-SBA
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

1/21/2016
 Page: 17



Load Case: 50 mph Wind with 0" Ice

Iterations: 26

Dead Load Factor 1.00
Wind Load Factor 1.00



Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	6.400	10.82	172.29	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	6.400	10.82	169.17	0.650	0.000	5.00	17.073	11.10	120.0	0.0	686.2
10.00		0.00	1.00	6.400	10.82	166.04	0.650	0.000	5.00	16.760	10.89	117.8	0.0	673.5
15.00		0.00	1.00	6.400	10.82	162.92	0.650	0.000	5.00	16.448	10.69	115.6	0.0	660.9
20.00		0.00	1.00	6.400	10.82	159.79	0.650	0.000	5.00	16.135	10.49	113.4	0.0	648.2
25.00		0.00	1.00	6.400	10.82	156.67	0.650	0.000	5.00	15.823	10.28	111.2	0.0	635.6
30.00		0.00	1.00	6.400	10.82	153.54	0.650	0.000	5.00	15.510	10.08	109.0	0.0	622.9
35.00		0.00	1.02	6.509	11.00	151.69	0.650	0.000	5.00	15.198	9.88	108.7	0.0	610.2
40.00		0.00	1.06	6.762	11.43	151.40	0.650	0.000	5.00	14.885	9.68	110.6	0.0	597.6
40.50	Bot - Section 2	0.00	1.06	6.786	11.47	151.34	0.650	0.000	0.50	1.471	0.96	11.0	0.0	59.1
45.00	Top - Section 1	0.00	1.09	6.993	11.82	150.70	0.650	0.000	4.50	13.289	8.64	102.1	0.0	953.4
50.00		0.00	1.13	7.207	12.18	151.88	0.650	0.000	5.00	14.469	9.40	114.5	0.0	465.4
55.00		0.00	1.16	7.406	12.52	150.60	0.650	0.000	5.00	14.156	9.20	115.2	0.0	455.3
60.00		0.00	1.19	7.592	12.83	149.08	0.650	0.000	5.00	13.844	9.00	115.5	0.0	445.2
65.00		0.00	1.21	7.768	13.13	147.35	0.650	0.000	5.00	13.531	8.80	115.5	0.0	435.0
70.00		0.00	1.24	7.934	13.41	145.44	0.650	0.000	5.00	13.219	8.59	115.2	0.0	424.9
75.00		0.00	1.26	8.092	13.68	143.37	0.650	0.000	5.00	12.906	8.39	114.7	0.0	414.8
79.00	Top - Section 2	0.00	1.28	8.213	13.88	141.60	0.650	0.000	4.00	10.100	6.57	91.1	0.0	324.5
80.00		0.00	1.29	8.242	13.93	37.83	1.156	0.000	1.00	0.667	0.77	10.7	0.0	74.8
84.00	Appurtenance(s)	0.00	1.31	8.358	14.13	38.09	1.145	0.000	4.00	2.667	3.05	43.1	0.0	299.3
85.00		0.00	1.31	8.387	14.17	38.16	1.143	0.000	1.00	0.667	0.76	10.8	0.0	74.8
90.00		0.00	1.33	8.525	14.41	38.47	1.131	0.000	5.00	3.333	3.77	54.3	0.0	374.2
94.00	Appurtenance(s)	0.00	1.35	8.631	14.59	38.71	1.121	0.000	4.00	2.667	2.99	43.6	0.0	299.3
95.00		0.00	1.35	8.657	14.63	38.77	1.119	0.000	1.00	0.667	0.75	10.9	0.0	74.8
99.00	Top - Section 3	0.00	1.37	8.760	14.80	39.00	1.111	0.000	4.00	2.667	2.96	43.8	0.0	299.3
100.00		0.00	1.37	8.785	14.85	24.41	2.042	0.000	1.00	0.417	0.85	12.6	0.0	29.2
104.00	Appurtenance(s)	0.00	1.39	8.884	15.01	24.55	2.028	0.000	4.00	1.667	3.38	50.7	0.0	116.9
105.00		0.00	1.39	8.908	15.06	24.58	2.024	0.000	1.00	0.417	0.84	12.7	0.0	29.2
107.00	Appurtenance(s)	0.00	1.40	8.957	15.14	24.65	2.017	0.000	2.00	0.833	1.68	25.4	0.0	58.5
110.00		0.00	1.41	9.028	15.26	24.74	2.007	0.000	3.00	1.250	2.51	38.3	0.0	87.7
113.00	Appurtenance(s)	0.00	1.42	9.097	15.37	24.84	1.997	0.000	3.00	1.250	2.50	38.4	0.0	87.7
114.00	Appurtenance(s)	0.00	1.43	9.120	15.41	24.87	1.993	0.000	1.00	0.417	0.83	12.8	0.0	29.2
115.00		0.00	1.43	9.143	15.45	24.90	1.990	0.000	1.00	0.417	0.83	12.8	0.0	29.2
119.00		0.00	1.44	9.233	15.60	25.02	1.977	0.000	4.00	1.667	3.30	51.4	0.0	116.9
Totals:									119.00			2,273.7		11,193.9

Discrete Appurtenance Forces

Structure: CT13616-A-SB
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

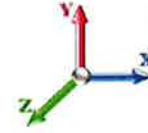
1/21/2016

Page: 18



Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 26

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	114.00	RFS V18-209014	3	9.120	15.413	1.00	0.00	56.10	0.000	0.000	0.00	0.00	0.00
2	114.00	RFS Twin PCS TMAs	3	9.120	15.413	1.00	0.00	33.00	0.000	0.000	0.00	0.00	0.00
3	114.00	RFS Twin AWS TMAs	3	9.120	15.413	1.00	0.00	52.80	0.000	0.000	0.00	0.00	0.00
4	114.00	27" Canister at 114.0'	1	9.120	15.413	1.00	9.33	325.00	0.000	0.000	143.81	0.00	0.00
5	113.00	Flag (12'x18')	1	9.097	15.374	1.00	7.92	100.00	0.000	0.000	121.77	0.00	0.00
6	107.00	Andrew SBNHH-1D65B	3	8.957	15.137	1.00	0.00	120.00	0.000	0.000	0.00	0.00	0.00
7	104.00	28" Canister at 104.0'	1	8.884	15.014	1.00	9.75	325.00	0.000	0.000	146.39	0.00	0.00
8	94.00	RFS APXV18-206517S-C	3	8.631	14.587	1.00	0.00	92.40	0.000	0.000	0.00	0.00	0.00
9	94.00	29" Canister at 94.0'	1	8.631	14.587	1.00	10.50	775.00	0.000	0.000	153.16	0.00	0.00
10	84.00	Redconnex AN-80i BTSs	3	8.358	14.125	1.00	0.00	13.50	0.000	0.000	0.00	0.00	0.00
11	84.00	Argus LLPX310R	3	8.358	14.125	1.00	0.00	85.80	0.000	0.000	0.00	0.00	0.00
12	84.00	Andrew FPA5250D06-N	1	8.358	14.125	1.00	0.00	14.00	0.000	0.000	0.00	0.00	0.00
13	84.00	30" Canister at 84.0'	1	8.358	14.125	1.00	11.00	775.00	0.000	0.000	155.38	0.00	0.00
Totals:								2,767.60			720.50		

Total Applied Force Summary

Structure: CT13616-A-SB
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

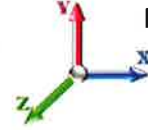
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

1/21/2016
 Page: 19



Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
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
5.00		120.03	692.11	0.00	0.00
10.00		117.83	688.35	0.00	0.00
15.00		115.64	675.69	0.00	0.00
20.00		113.44	663.04	0.00	0.00
25.00		111.24	650.38	0.00	0.00
30.00		109.04	637.73	0.00	0.00
35.00		108.66	625.07	0.00	0.00
40.00		110.56	612.41	0.00	0.00
40.50		10.97	60.55	0.00	0.00
45.00		102.08	966.74	0.00	0.00
50.00		114.54	480.24	0.00	0.00
55.00		115.16	470.11	0.00	0.00
60.00		115.46	459.99	0.00	0.00
65.00		115.46	449.86	0.00	0.00
70.00		115.21	439.74	0.00	0.00
75.00		114.72	429.61	0.00	0.00
79.00		91.12	336.40	0.00	0.00
80.00		10.73	77.80	0.00	0.00
84.00	(8) appurtenances	198.51	1199.48	0.00	0.00
85.00		10.80	77.43	0.00	0.00
90.00		54.29	387.15	0.00	0.00
94.00	(4) appurtenances	196.78	1177.12	0.00	0.00
95.00		10.92	76.91	0.00	0.00
99.00		43.85	307.64	0.00	0.00
100.00		12.63	31.31	0.00	0.00
104.00	(1) appurtenances	197.12	450.24	0.00	0.00
105.00		12.70	31.31	0.00	0.00
107.00	(3) appurtenances	25.44	182.62	0.00	0.00
110.00		38.27	90.81	0.00	0.00
113.00	(1) appurtenances	160.14	190.81	0.00	0.00
114.00	(10) appurtenances	156.61	497.17	0.00	0.00
115.00		12.81	29.23	0.00	0.00
119.00		51.43	116.92	0.00	0.00
	Totals:	2,994.19	14,262.01	0.00	0.00

Resulting Forces and Deflections

Structure: CT13616-A-SB
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

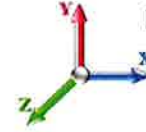
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

1/21/2016
 Page: 20



Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 26

Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	Deflect X (in)	Deflect Z (in)	Deflect Resultant (in)	Rotation Sway (deg)	Rotation Twist (deg)
0.00	-2.998	-14.261	0.000	0.000	0.000	-199.876	0.000	0.000	0.000	0.000	0.000
5.00	-2.885	-13.567	0.000	0.000	0.000	-184.886	-0.017	0.000	0.017	-0.032	0.000
10.00	-2.774	-12.878	0.000	0.000	0.000	-170.461	-0.067	0.000	0.067	-0.062	0.000
15.00	-2.663	-12.201	0.000	0.000	0.000	-156.594	-0.148	0.000	0.148	-0.092	0.000
20.00	-2.554	-11.537	0.000	0.000	0.000	-143.278	-0.261	0.000	0.261	-0.122	0.000
25.00	-2.447	-10.885	0.000	0.000	0.000	-130.506	-0.404	0.000	0.404	-0.150	0.000
30.00	-2.341	-10.247	0.000	0.000	0.000	-118.272	-0.575	0.000	0.575	-0.177	0.000
35.00	-2.234	-9.621	0.000	0.000	0.000	-106.569	-0.775	0.000	0.775	-0.203	0.000
40.00	-2.124	-9.009	0.000	0.000	0.000	-95.397	-1.002	0.000	1.002	-0.228	0.000
40.50	-2.114	-8.948	0.000	0.000	0.000	-94.335	-1.026	0.000	1.026	-0.231	0.000
45.00	-2.011	-7.981	0.000	0.000	0.000	-84.821	-1.254	0.000	1.254	-0.252	0.000
50.00	-1.898	-7.500	0.000	0.000	0.000	-74.766	-1.530	0.000	1.530	-0.275	0.000
55.00	-1.783	-7.030	0.000	0.000	0.000	-65.278	-1.831	0.000	1.831	-0.300	0.000
60.00	-1.668	-6.570	0.000	0.000	0.000	-56.363	-2.158	0.000	2.158	-0.323	0.000
65.00	-1.552	-6.120	0.000	0.000	0.000	-48.026	-2.508	0.000	2.508	-0.344	0.000
70.00	-1.436	-5.681	0.000	0.000	0.000	-40.267	-2.879	0.000	2.879	-0.364	0.000
75.00	-1.319	-5.252	0.000	0.000	0.000	-33.089	-3.270	0.000	3.270	-0.381	0.000
79.00	-1.227	-4.916	0.000	0.000	0.000	-27.812	-3.595	0.000	3.595	-0.393	0.000
80.00	-1.224	-4.836	0.000	0.000	0.000	-26.585	-3.677	0.000	3.677	-0.396	0.000
84.00	-1.023	-3.636	0.000	0.000	0.000	-21.688	-4.098	0.000	4.098	-0.600	0.000
85.00	-1.019	-3.556	0.000	0.000	0.000	-20.665	-4.228	0.000	4.228	-0.645	0.000
90.00	-0.968	-3.167	0.000	0.000	0.000	-15.569	-5.009	0.000	5.009	-0.836	0.000
94.00	-0.755	-1.993	0.000	0.000	0.000	-11.697	-5.760	0.000	5.760	-0.951	0.000
95.00	-0.745	-1.915	0.000	0.000	0.000	-10.942	-5.961	0.000	5.961	-0.975	0.000
99.00	-0.697	-1.608	0.000	0.000	0.000	-7.962	-6.813	0.000	6.813	-1.055	0.000
100.00	-0.689	-1.574	0.000	0.000	0.000	-7.265	-7.036	0.000	7.036	-1.071	0.000
104.00	-0.485	-1.127	0.000	0.000	0.000	-4.510	-8.080	0.000	8.080	-1.397	0.000
105.00	-0.474	-1.095	0.000	0.000	0.000	-4.025	-8.379	0.000	8.379	-1.456	0.000
107.00	-0.445	-0.913	0.000	0.000	0.000	-3.078	-9.010	0.000	9.010	-1.554	0.000
110.00	-0.405	-0.823	0.000	0.000	0.000	-1.743	-10.021	0.000	10.021	-1.654	0.000
113.00	-0.240	-0.636	0.000	0.000	0.000	-0.528	-11.078	0.000	11.078	-1.701	0.000
114.00	-0.069	-0.144	0.000	0.000	0.000	-0.288	-11.435	0.000	11.435	-1.707	0.000
115.00	-0.055	-0.115	0.000	0.000	0.000	-0.219	-11.792	0.000	11.792	-1.710	0.000
119.00	-0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	13.228	-1.716	0.000

Resulting Stresses

Structure: CT13616-A-SBA
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

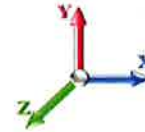
Code: EIA/TIA-222-F
Exposure: C
Gh: 1.69
Struct Class: II

1/21/2016
 Page: 21



Load Case: 50 mph Wind with 0" Ice

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations: 26

Applied Stresses

Elev (ft)	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvT Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	fb Combined (ksi)	Fb Allow Stress (ksi)	f/Fb Stress Ratio	
0.00	0.35	0.15	0.00	0.00	0.00	5.81	6.17	52.0	0.119	
5.00	0.34	0.15	0.00	0.00	0.00	5.58	5.93	52.0	0.114	
10.00	0.33	0.14	0.00	0.00	0.00	5.34	5.68	52.0	0.109	
15.00	0.32	0.14	0.00	0.00	0.00	5.10	5.42	52.0	0.104	
20.00	0.31	0.14	0.00	0.00	0.00	4.85	5.17	52.0	0.099	
25.00	0.29	0.13	0.00	0.00	0.00	4.60	4.90	52.0	0.094	
30.00	0.28	0.13	0.00	0.00	0.00	4.34	4.63	52.0	0.089	
35.00	0.27	0.13	0.00	0.00	0.00	4.08	4.36	52.0	0.084	
40.00	0.26	0.12	0.00	0.00	0.00	3.81	4.08	52.0	0.078	
40.50	0.26	0.12	0.00	0.00	0.00	3.79	4.05	52.0	0.078	
45.00	0.29	0.15	0.00	0.00	0.00	4.27	4.57	52.0	0.088	
50.00	0.28	0.14	0.00	0.00	0.00	3.94	4.22	52.0	0.081	
55.00	0.27	0.14	0.00	0.00	0.00	3.59	3.87	52.0	0.074	
60.00	0.25	0.13	0.00	0.00	0.00	3.25	3.51	52.0	0.068	
65.00	0.24	0.12	0.00	0.00	0.00	2.90	3.15	52.0	0.061	
70.00	0.23	0.12	0.00	0.00	0.00	2.55	2.79	52.0	0.054	
75.00	0.22	0.11	0.00	0.00	0.00	2.20	2.43	52.0	0.047	
79.00	0.21	0.10	0.00	0.00	0.00	1.93	2.14	52.0	0.041	
79.00	0.21	0.10	0.00	0.00	0.00	1.93	2.14	52.0	0.195	
80.00	0.22	0.11	0.00	0.00	0.00	9.47	9.69	37.6	37.6	0.258
84.00	0.17	0.09	0.00	0.00	0.00	7.72	7.89	37.6	37.6	0.210
85.00	0.16	0.09	0.00	0.00	0.00	7.36	7.52	37.6	37.6	0.200
90.00	0.14	0.09	0.00	0.00	0.00	5.54	5.69	37.6	37.6	0.151
94.00	0.09	0.07	0.00	0.00	0.00	4.17	4.26	37.6	37.6	0.113
95.00	0.09	0.07	0.00	0.00	0.00	3.90	3.98	37.6	37.6	0.106
99.00	0.07	0.06	0.00	0.00	0.00	2.84	2.91	37.6	37.6	0.077
99.00	0.07	0.06	0.00	0.00	0.00	2.84	2.91	37.6	37.6	0.314
100.00	0.18	0.16	0.00	0.00	0.00	10.60	10.78	56.0	56.0	0.193
104.00	0.13	0.11	0.00	0.00	0.00	6.58	6.71	56.0	56.0	0.120
105.00	0.13	0.11	0.00	0.00	0.00	5.87	6.00	56.0	56.0	0.107
107.00	0.11	0.10	0.00	0.00	0.00	4.49	4.60	56.0	56.0	0.082
110.00	0.10	0.09	0.00	0.00	0.00	2.54	2.64	56.0	56.0	0.047
113.00	0.07	0.06	0.00	0.00	0.00	0.77	0.85	56.0	56.0	0.015
114.00	0.02	0.02	0.00	0.00	0.00	0.42	0.44	56.0	56.0	0.008
115.00	0.01	0.01	0.00	0.00	0.00	0.32	0.33	56.0	56.0	0.006
119.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	56.0	56.0	0.000

Final Analysis Summary

Structure: CT13616-A-SBA
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

1/21/2016
 Page: 22



Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
85 mph Wind with 0" Ice	8.0	0.00	14.26	0.00	0.00	508.20
73.61 mph Wind with 0.5" Ice	6.3	0.00	16.60	0.00	0.00	406.30
50 mph Wind with 0" Ice	3.0	0.00	14.26	0.00	0.00	199.88

Max Stresses

Load Case	fa Axial (Y) (ksi)	fvx Shear (X) (ksi)	fvz Shear (Z) (ksi)	fvT Torsion (ksi)	fbx Bending (X) (ksi)	fbz Bending (Z) (ksi)	Combined Stress (ksi)	Allowable Stress (ksi)	Elev (ft)	Stress Ratio
85 mph Wind with 0" Ice	0.07	0.15	0.00	0.00	0.00	6.60	27.22	37.6	99.00	0.724
73.61 mph Wind with 0.5" Ice	0.12	0.12	0.00	0.00	0.00	5.60	23.25	37.6	99.00	0.618
50 mph Wind with 0" Ice	0.07	0.06	0.00	0.00	0.00	2.84	11.80	37.6	99.00	0.314

Base Plate Summary

Structure: CT13616-A-SB
Site Name: St. Judes
Height: 119.00 (ft)
Base Elev: 0.000 (ft)

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

1/21/2016

Page: 23



Reactions		Base Plate		Anchor Bolts	
Original Design		Yield (ksi):	50.00	Bolt Circle:	48.00
Moment (kip-ft):	1550.00	Width (in):	46.00	Number Bolts:	12.00
Axial (kip):	19.00	Style:	Clipped	Bolt Type:	2.25" 18J
Shear (kip):	23.00	Polygon Sides:	0.00	Bolt Diameter (in):	2.25
Analysis		Clip Length (in):	6.00	Yield (ksi):	75.00
Moment (kip-ft):	508.20	Effective Len (in):	9.38	Ultimate (ksi):	100.00
Axial (kip):	16.60	Moment (kip-in):	145.41	Arrangement:	Clustered
Shear (kip):	8.00	Allow Stress (ksi):	50.00	Cluster Dist (in):	6.00
Moment Design %:	32.79	Applied Stress (ksi):	12.30	Start Angle (deg):	45.00
		Stress Ratio:	0.25	Compression	
				Force (kip):	43.73
				Allowable (kip):	195.00
				Ratio:	0.22
				Tension	
				Force (kip):	40.97
				Allowable (kip):	195.00
				Ratio:	0.21



Monopole Mat Foundation Design

Date

1/21/2016

Customer Name:	Verizon	EIA/TIA Standard:	EIA-222-F
Site Name:	St. Judes	Structure Height (Ft.):	119
Site Number:	CT13616-A-SBA	Engineer Name:	W. Velez
Engr. Number:	20131	Engineer Login ID:	TES

Foundation Info Obtained from:

Drawings/Calculations

Structure Type:

Monopole

Analysis or Design?

Analysis

Base Reactions (Unfactored)

Axial Load (Kips):	14.3	Shear Force (Kips):	8.0
Uplift Force (Kips):	0.0	Moment (Kips-ft):	508.2

Foundation Geometries:

		Mods required -Yes/No ?:	No
Diameter of Pier (ft.):	6.0	Depth of Base BG (ft.):	6.0
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft.):	3.00
Length of Pad (ft.):	20	Width of Pad (ft.):	20
Final Length of pad (ft)	20.0	Final width of pad (ft):	20.0
Control Value for Cell D18:	0	Control Value for Cell F18:	0

Material Properties and Reabr Info:

Concrete Strength (psi):	3000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	40	
Vertical Rebar Size #:	8	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	34	Tie Spacing (in):	6.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	8	
Concrete Cover (in.):	3	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	20	Qty. of Rebar in Pad (W):	20	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	20	Qty. of Rebar in Pad (W):	20	

Soil Design Parameters:

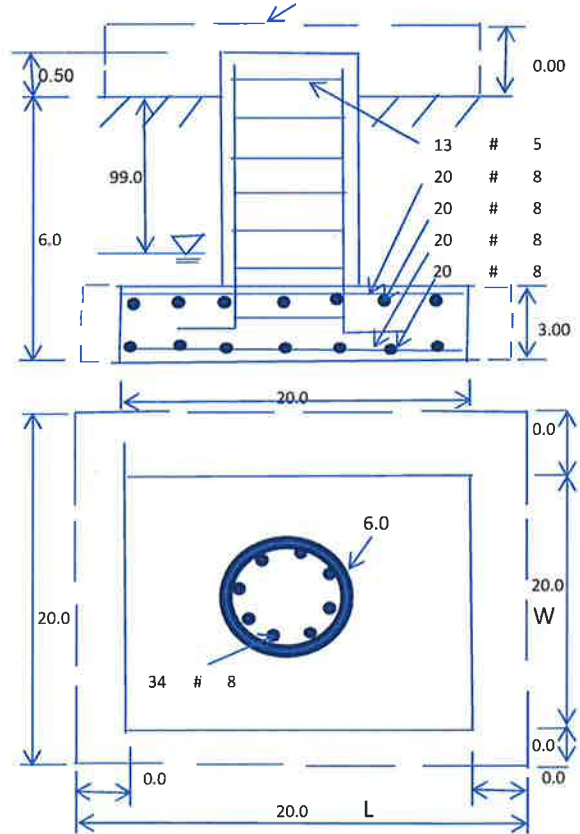
Soil Unit Weight (pcf):	120.0	Soil Buoyant Weight:	47.6	Pcf
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:	62.4	pcf
Allowable Net Soil Bearing (psf):	6000	Allowable Skin Friction:	0	Psf
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	No	
Consider soil hori. force for O.T.M.:	Yes	Reduction factor on the maximum soil bearing pressure:	1.00	
		Angle from Top of Pad:	30	
		Angle from Bottm of Pad:	25	
		Angle from Bottm of Pad:	25	

Foundation Analysis and Design:

Total Dry Soil Volume (cu. Ft.):	1115.18	Total Dry Soil Weight (Kips):	133.82
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	133.82	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1298.96	Total Dry Concrete Weight (Kips):	194.84
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	194.84	Total Vertical Load on Base (Kips):	342.93

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	652	<	Allowable Soil Bearing (psf):	6000	0.11	OK!
Allowable Foundation Overturning Resistance (SF=1.5, kips-ft.):	2286.2	>	Applied Momont (kips-ft):	523	0.23	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	6.56					OK!



Check the capacities of Reinforcing Concrete:

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

Capacity
Ratio

(1) Concrete Pier:

Vertical Steel Rebar Area (sq. in./each):	0.79	Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	3716.1	> Design Factored Moment (Mu, Kips-Ft)	536.2	0.14	OK!
Calculated Shear Capacity (Kips):	572.6	> Design Factored Shear (Kips):	10.4	0.02	OK!
Calculated Tension Capacity (Tn, Kips):	1450.4	> Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	5363.2	> Design Factored Axial Load (Pu Kips):	18.5	0.00	OK!
Moment & Axial Strength Combination:	0.14	OK! Check Tie Spacing (Design/Required):		0.5	OK!
Pier Reinforcement Ratio:	0.007	Reinforcement Ratio is satisfied per ACI			

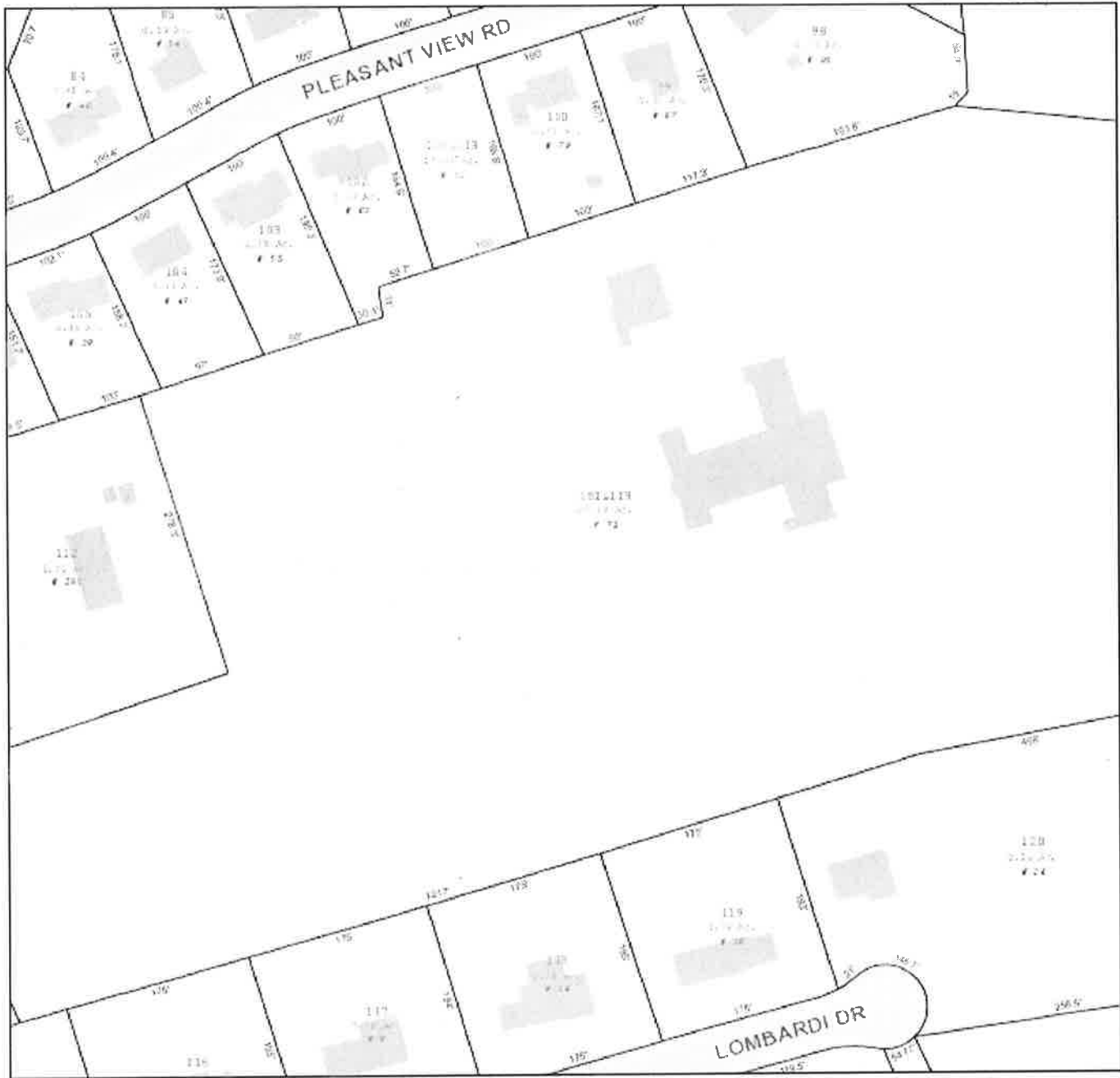
(2).Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	640.8	> One-Way Factored Shear (L-D. Kips):	43.5	0.07	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	640.8	> One-Way Factored Shear (W-D., Kips)	43.5	0.07	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	714.0	> One-Way Factored Shear (C-C, Kips):	73.5	0.10	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK! Lower Steel Pad Reinf. Ratio (W-Direct	0.0020		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	2255.7	> Moment at Bottom (L-Direct. K-Ft):	71.8	0.03	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	2255.7	> Moment at Bottom (W-Direct. K-Ft):	71.8	0.03	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	3169.0	> Moment at Bottom (C-C Dir. K-Ft):	101.5	0.03	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0020	OK! Upper Steel Reinf. Ratio (W-Direct.):	0.0020		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	2255.7	> Moment at the top (L-Dir Kips-Ft):	56.0	0.02	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	2255.7	> Moment at the top (W-Dir Kips-Ft):	56.0	0.02	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	3169.0	> Moment at the top (C-C Direc. K-Ft):	111.0	0.04	OK!

ATTACHMENT 4

City of Derby

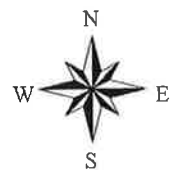
Geographic Information System (GIS)



MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The City of Derby and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 150 feet



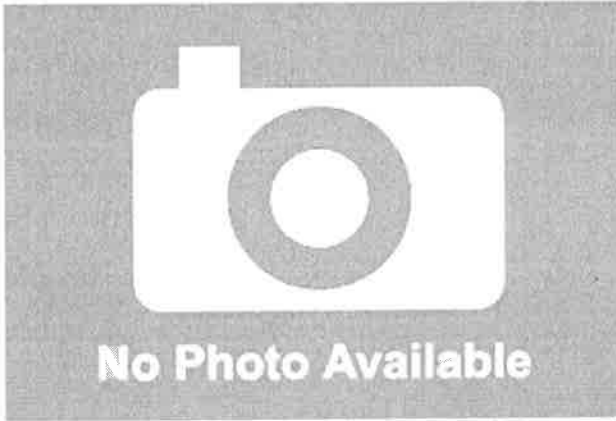


Property Information

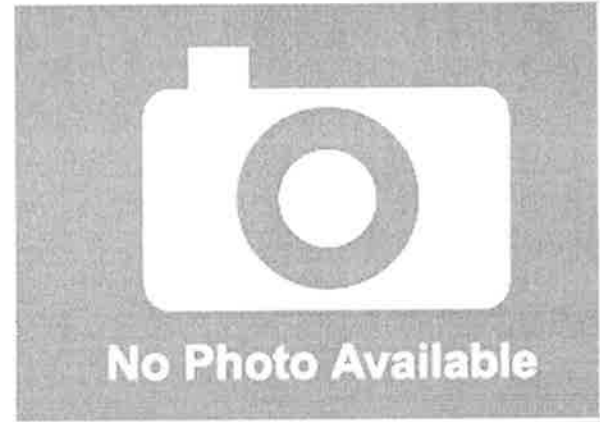
Owner	ST JUDES RC PARISH CHURCH
Address	71 PLEASANT VIEW RD
Mailing Address	71 PLEASANT VIEW RD DERBY CT 06418-0000
Land Use	
Land Class	E E

Neighborhood	103
Zoning	P
Acreage	15.88
Utilities	ALL PUBLIC ALL PUBLIC
Lot Description	ROLLING
Census Tract	1201

Photo



Sketch



Construction Details

Year Built	
Stories	
Building Style	
Building Condition	
Total Rooms	
Bedrooms	
Bathrooms	
Roof Style	
Primary Ext. Wall	
Heating Type	
Heating System	
Heating Fuel	
First Floor Area	
Total Living Area	

Parcel Valuations

(Assessed value = 70% of Appraised Value)

	Appraised	Assessed
Buildings	2623510	
Land	923500	
Total	3547010	2482910

Sales History:

Sale Date	0
Sale Price	0
Book/ Page	143 222