



October 23, 2019

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

Re: Notice of Exempt Modification – Antenna and RRU Add
Property Address: 193 Windham Center Road, Windham, CT 06280
Applicant: AT&T Mobility, LLC

Dear Ms. Bachman:

On behalf of AT&T, please accept this application 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).

AT&T currently maintains a wireless telecommunications facility consisting of nine (9) wireless telecommunication antennas at an antenna center line height of 147-feet on an existing 180-foot monopole, owned by SBA at 8051 Congress Ave, Boca Raton, FL 33487. AT&T now intends to remove three (3) 4' Kathrein 7770 Panel Antennas, each currently installed in position [4], and remove three (3) KMW AM-X-CD-17-65-00T-RET Panel Antennas, each currently installed in position [3]. Swap these for six (6) 8' CCI DMP65R-BU8DA Panel Antennas, each to be installed in position [3 + 4], all sectors. In addition, AT&T intends to remove (1) RRUS-11 and add one (1) RRUS-4478 B14, (1) RRUs-4449 B5/B12, and (1) RRUS-8843 B2/B66A in positions [3 + 4], all sectors, for a total of nine (9) new RRUs. AT&T is also proposing to add (2) Raycap Squid, as well as one (1) fiber line and (4) DC Power Cables, inside the (3) proposed 3" Conduits, to their equipment configuration. All the changes will take place on a new Platform Mount.

Attached is a summary of the planned modifications including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

Please accept this letter pursuant to Regulation 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., a copy of this letter is being sent to Joe Smith – Building Official, Town of Windham, CT at 979 Main Street, Willimantic, CT 06226 and James Rivers – Town Manager, Town of Windham, CT at 979 Main Street, Willimantic, CT 06226. A copy of this letter is being sent to the property owner, Town of Windham at 979 Main Street, Willimantic, CT 06226 and to the tower company, SBA at 8051 Congress Ave, Boca Raton, FL 33487.

The following is a list of subsequent decisions by the Connecticut Siting Council:

- **EM-CING-003-032-109-116-163-061103** - New Cingular Wireless PCS, LLC notice of intent to modify existing telecommunications facilities located at 36 Janoski Road, Ashford; 400 Riley Mountain Road, Coventry; Green Hollow Road, Plainfield; 154 Sayle Avenue, Putnam; and 193 Windham Center Road, Windham, Connecticut.
- **EM-AT&T-163-120907** – AT&T Mobility notice of intent to modify an existing telecommunications facility located at 193 Windham Center Road, Windham (Willimantic), Connecticut.

The planned modifications to AT&T's 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. AT&T's replacement antennas will be installed at the 105-foot level of the 147-foot self-support tower.



2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore, will not require an extension of the site boundary.
3. The proposed modifications will not increase the noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility 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 worst-case RF emissions calculation for AT&T's modified facility is provided in the RF Emissions Compliance Report, included in Tab 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 AT&T's proposed modifications. (See Structural Analysis Report included in Tab 3).

For the foregoing reasons, AT&T 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,

Kristina Cottone

CC w/enclosures:

Joe Smith – Building Official, Town of Windham, CT
James Rivers – Town Manager, Town of Windham, CT
Town of Windham – Property Owner
SBA – Tower Company

CURRENT OWNER		TOPO.	UTILITIES	STRT./ROAD	LOCATION	CURRENT ASSESSMENT			
WINDHAM TOWN OF WINDHAM CENTER CEMETERY 979 MAIN ST WILLIMANTIC, CT 06226 Additional Owners:		1 Level	5 Well	1 Paved		Description	Code	Appraised Value	Assessed Value
			6 Septic			EX COM LN	21	504,630	353,250
			0 None			EX COM BL	22	31,430	22,000
						EX CM OTB	25	3,700	2,590
SUPPLEMENTAL DATA									
Other ID: 6-9/240/29		LCI C							
Zoning M2		ParcelStatus							
Neighborhood 350-0		Cost Flag							
Living Units 0		Lot Number 0							
Census 8005		A_D							
District No 1		ASSOC PID#							
GIS ID:									
							Total	539,760	377,840

6163
WINDHAM, CT

VISION

RECORD OF OWNERSHIP		BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.	PREVIOUS ASSESSMENTS (HISTORY)								
WINDHAM TOWN OF		234/304	12/12/1972	U	I	0		Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
								2017	21	362,061	2016	21	362,061	2015	200	47,880
								2017	22	47,880	2016	22	47,880	2015	200	362,061
								2017	25	0	2016	25	0			
							Total:	409,940		Total:	409,940		Total:	409,940		

EXEMPTIONS				OTHER ASSESSMENTS			
Year	Type	Description	Amount	Code	Description	Number	Amount
			Total:				

This signature acknowledges a visit by a Data Collector or Assessor

ASSESSING NEIGHBORHOOD				
NBHD/SUB	NBHD Name	Street Index Name	Tracing	Batch
0001/A			900	E

APPRAISED VALUE SUMMARY	
Appraised Bldg. Value (Card)	12,570
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	3,700
Appraised Land Value (Bldg)	504,630
Special Land Value	0
Total Appraised Parcel Value	539,760
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	539,760

NOTES									

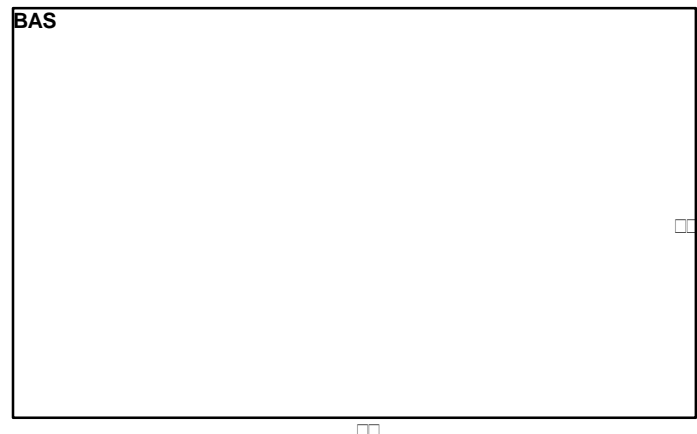
BUILDING PERMIT RECORD										VISIT/ CHANGE HISTORY					
Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments		Date	Type	IS	ID	Cd.	Purpose/Result
33979	12/12/2017	53	Cell Tower/Antennae	18,000		0				10/11/2010			AO	8	NO RESPONSE
29320	07/07/2014	BP		15,000		100		53		09/26/2003			BM	8	NO RESPONSE
27523	01/22/2013	BP		15,000		100		53							
27217	10/19/2012	BP		25,000	12/30/2013	100	12/30/2013	53-26							
26609	06/05/2012	BP		15,000		100		53							
18969	09/27/2006	BP		25,000		100		53							
17261	08/30/2005	BP		6,000		0		06							

LAND LINE VALUATION SECTION																			
B #	Use Code	Use Description	Zone	D	Front	Depth	Units	Unit Price	I. Factor	S.A.	Acre Disc	C. Factor	ST. Idx	Adj.	Notes-Adj	Special Pricing	S Adj Fact	Adj. Unit Price	Land Value
1	925	Exempt Comm	M2				0.92	AC	337,500.00	1.0000	0	1.0000	1.00	350	1.00			1.00	310,500
1	925	Exempt Comm					24.00	AC	7,920.00	1.0000	0	1.0000	1.00		0.00			1.00	190,080
1	925	Exempt Comm					6.00	AC	675.00	1.0000	0	1.0000	1.00		0.00			1.00	4,050
Total Card Land Units:							30.92	AC	Parcel Total Land Area:				30.92	AC	Total Land Value:				504,630

CONSTRUCTION DETAIL				CONSTRUCTION DETAIL (CONTINUED)			
Element	Cd.	Ch.	Description	Element	Cd.	Ch.	Description
Style	48		Warehouse				
Model	94		Commercial				
Grade	03		Average				
Stories	1.0						
Occupancy	1						
Exterior Wall 1	24		Reinforc Concr				
Level From	01		01				
Level To	01		01				
Uncov Parking	0						
Perimeter	64						
Identical Units	1						
Efficiency	0						
1 Bedroom	0						
2 Bedroom	0						
3 Bedroom	0						
AC Type	03		Central				
Structure Type	710		710				
Bldg Use	925		Exempt Comm				
Percent Finish	100						
Heating	08		Heat Pump				
Frame Type	06		Fireprf Steel				
Plumbing	00		None				
Local Modifier	2.75						
Partitions	02		Average				
Wall Height	9						
Size	240						

MIXED USE		
Code	Description	Percentage
925	Exempt Comm	100

COST/MARKET VALUATION	
Adj. Base Rate:	58.87
AYB	2003
Dep Code	A
Remodel Rating	
Year Remodeled	
Dep %	11
Functional Obslnc	
External Obslnc	
Cost Trend Factor	
Condition	
% Complete	
Overall % Cond	89
Apprais Val	12,570
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	



OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)												
Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value
PC30	PAVING CONC			L	576	6.81	2000				80	3,140
FN20	CHAIN LINK F			L	56	14.25	2000				70	560

BUILDING SUB-AREA SUMMARY SECTION				
Code	Description	Gross Area	Living Area	Eff. Area
BAS	First Floor	240	240	
Ttl. Gross Liv/Lease Area:		240	240	



CURRENT OWNER		TOPO.	UTILITIES	STRT./ROAD	LOCATION	CURRENT ASSESSMENT			
WINDHAM TOWN OF WINDHAM CENTER CEMETERY 979 MAIN ST		1 Level	5 Well	1 Paved		Description	Code	Appraised Value	Assessed Value
WILLIMANTIC, CT 06226 Additional Owners:			6 Septic			EX COM LN	21	504,630	353,250
			0 None			EX COM BL	22	31,430	22,000
						EX CM OTB	25	3,700	2,590
SUPPLEMENTAL DATA									
Other ID:	6- 9/240/ 29		LCI	C					
Zoning	M2		ParcelStatus						
Neighborhood	350 - 0		Cost Flag						
Living Units	0		Lot Number	0					
Census	8005		A_D						
District No	1		ASSOC PID#						
GIS ID:									
							Total	539,760	377,840

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										2017	21	362,061	2016	21	362,061	2015	200	47,880
										2017	22	47,880	2016	22	47,880	2015	200	362,061
										2017	25	0	2016	25	0			
										Total:		409,940	Total:		409,940	Total:		409,940

EXEMPTIONS				OTHER ASSESSMENTS			
Year	Type	Description	Amount	Code	Description	Number	Amount
Total:							

This signature acknowledges a visit by a Data Collector or Assessor

ASSESSING NEIGHBORHOOD				
NBHD/SUB	NBHD Name	Street Index Name	Tracing	Batch
0001/A			900	E

APPRAISED VALUE SUMMARY	
Appraised Bldg. Value (Card)	18,860
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	0
Appraised Land Value (Bldg)	0
Special Land Value	0
Total Appraised Parcel Value	539,760
Valuation Method:	C
Adjustment:	0
Net Total Appraised Parcel Value	539,760

NOTES									

BUILDING PERMIT RECORD									VISIT/ CHANGE HISTORY					
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									09/26/2003			BM	8	NO RESPONSE

LAND LINE VALUATION SECTION																					
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2	925	Exempt Comm					0.00	AC	0.00	1.0000	0	1.0000		1.00				.00	0		
Total Card Land Units:							0.00	AC	Parcel Total Land Area:				30.92 AC	Total Land Value:							0

CONSTRUCTION DETAIL				CONSTRUCTION DETAIL (CONTINUED)			
Element	Cd.	Ch.	Description	Element	Cd.	Ch.	Description
Style	48		Warehouse				
Model	94		Commercial				
Grade	03		Average				
Stories	1.0						
Occupancy	1						
Exterior Wall 1	24		Reinforc Concr				
Level From	01	01					
Level To	01	01					
Uncov Parking	0						
Perimeter	84						
Identical Units	1						
Efficiency	0						
1 Bedroom	0						
2 Bedroom	0						
3 Bedroom	0						
AC Type	03		Central				
Structure Type	710		710				
Bldg Use	925		Exempt Comm				
Percent Finish	100						
Heating	08		Heat Pump				
Frame Type	06		Fireprf Steel				
Plumbing	00		None				
Local Modifier	2.75						
Partitions	02		Average				
Wall Height	9						
Size	360						

MIXED USE		
Code	Description	Percentage
925	Exempt Comm	100

COST/MARKET VALUATION	
Adj. Base Rate:	58.87
AYB	2005
Dep Code	A
Remodel Rating	
Year Remodeled	
Dep %	11
Functional Obslnc	
External Obslnc	
Cost Trend Factor	
Condition	
% Complete	
Overall % Cond	89
Apprais Val	18,860
Dep % Ovr	0
Dep Ovr Comment	
Misc Imp Ovr	0
Misc Imp Ovr Comment	
Cost to Cure Ovr	0
Cost to Cure Ovr Comment	



OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value

No Photo On Record

BUILDING SUB-AREA SUMMARY SECTION

Code	Description	Gross Area	Living Area	Eff. Area
BAS	First Floor	360	360	
Ttl. Gross Liv/Lease Area:		360	360	

SBA Communications Corporation
8051 Congress Avenue
Boca Raton, FL 33487-1307

T + 561 995 7670
F + 561 995 7626

sbsite.com



Structural Analysis Report

Client: AT&T

Client Site ID / Name: CTL01064 / Windham Center Rd.
AppID: 123073, v3

SBA Site Name: South Windham
SBA Site ID: CT02721-S
180 ft Monopole
193 Windham Center Road
Windham, Connecticut 06280
Lat: 41.690055, Long: -72.162536

Project number: CT02721-ATT-101019

Analysis Results

Tower	74.9%	Pass
Foundation	66.5%	Pass

Client Mount modification / replacement

Change in tower stress due to mount Modification / replacement	1.8%
--	------

Prepared by:

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Reviewed by:

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October 14, 2019

Prepared in compliance with:

- ANSI/TIA/EIA 222-G Structural Standard for Antennas and Antenna Supporting Structures
- 2015 International Building Code (IBC)/2018 Connecticut State Building Code

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Executive Summary

The enclosed structural analysis was performed for AT&T on October 14, 2019 to verify the structural capacity of the 180 ft Monopole located at 193 Windham Center Road, Windham, Connecticut 06280 to support the proposed antenna, transmission lines and mounting equipment in addition to those currently installed. The following documents were used to determine the geotechnical characteristics, foundation data, tower geometry and member sizes/type:

Table 1 List of Documents Used

Item	Document
Tower design/drawings	Valmont, Project # 11872-00, dated 06/23/2000.
Foundation drawings	Valmont, Project # 10125-045, dated 06/16/2000.
Geotechnical report	FDH Project Number 1202237EG1 Revision 1, dated 08/16/2012.
Latest SA	TES, Project Number: 42161, dated 10/25/2017

The analysis was performed in accordance with the following requirements:

Table 2 Code Related Data

Jurisdiction (State/County/City)	Connecticut/Windham/Windham
Governing Codes	ANSI/TIA/EIA 222-G, 2015 IBC / 2018 CSBC
Basic Wind Speed	101 mph (Ultimate Wind Speed: 130 mph 3-sec gust)
Wind Speed with Ice	50 mph (3-Sec. Gust)
Ice Thickness	1.00"
Structural Class	II
Exposure Category	C
Topographic Category	1
Crest Height	0 ft

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

The SBA Communications Corporation verifies that the 180 ft Monopole located at 193 Windham Center Road, Windham, Connecticut 06280 is **Sufficient** to support the proposed loadings for AT&T in addition to those currently existing based on standards set forth in governing building codes and dependent on AT&T satisfying all Installation Requirements provided herein. The analysis performed assumes the site information provided is accurate and the tower/foundation has been properly designed, manufactured, installed and maintained. Additional details regarding the assumptions and limitations are provided within the Assumptions and Limitations section of this report.

Assumptions

This analysis was completed based on the following assumptions:

- Tower has been properly maintained
- Tower erection was in accordance to manufacturer drawings
- Leg flanges have been properly designed by manufacturer to not be a limiting reaction
- Welds have been properly designed and installed by manufacturer to not be a limiting reaction
- Foundation was constructed in accordance to manufacturer drawings
- Foundation does not have structural damage
- Bolts have been properly tightened according to manufacturer specifications
- Appurtenance, mount and transmission line sizes and weights are best estimates using the TES database and manufacturer information

Limitations

The computer generated analysis performed by the TES software is limited to theoretical capacities of the towers structural members and does not account for any missing or damaged members or connections. The tower and foundation are assumed to have been properly designed, fabricated, installed and maintained, barring any conflicting findings from the most recent inspection. All leg flanges, welds and bolts are assumed to be designed by the manufacturer in such a way that these are not limiting reactions.

SBA Communications Corporation has used its due diligence to verify the information provided to perform this analysis. It is unreasonable to perform a more detailed inspection of a tower and its components. This report is not a condition assessment of the tower or foundation.

Installation Requirements

This analysis was performed under the assumption that AT&T will place the proposed equipment and feed lines at a height of 147 ft and in accordance with the coax layout shown. RRUs are to be installed on existing mounts behind tenant's antennas unless otherwise noted. No equipment is to be installed directly in the climbing path. All equipment is to be installed per mount manufacturer specifications. In case site conditions do not allow for the required installation parameters to be met AT&T must notify SBA Communications Corporation engineers for approval of an alternative placement.

Appurtenance Loading

Existing Loading:

The existing antenna and feed line information was obtained from the Site Summary and/or previous Structural Analysis. SBA Communications Corporation uses due diligence to ensure reasonably accurate information has been recorded. The existing loadings are shown in Table 3.

Table 3 Existing Appurtenances

Mount Elev. (ft)	CL Elev. (ft)	Carrier	Type	Qty	Manufacturer	Model	Qty	Feed Line Size	Mount Type Qty
177	177	Verizon	Panel	3	Antel	BXA-70063-6CF	12	1-5/8"	(1) Low Profile Platform
			Panel	6	Antel	LPA-80080-4CF			
			Panel	3	Antel	BXA-171085-8BF			
			Diplexer	6	RFS	FD9R6004-2C-3L			
167	167	Sprint Nextel	Panel	3	RFS	APXVTM14-C-I20	4	1-1/4" Hybrid	(1) Low Profile Platform
			Panel	3	RFS	APXVSP18-C-A20			
			RET	4	RFS	ACU-A20-N RET			
			RRU	3	Alcatel Lucent	TD-RRH8x20-25			
			RRU	3	Alcatel Lucent	1900 MHz RRH			
			RRU	3	Alcatel Lucent	800 MHz RRH			
			Filter	3	Alcatel Lucent	800 MHz Filter			
147	147	AT&T	Panel	6	Powerwave	7770	12	1-5/8" 1/2" Fiber 3/4" DC	(1) Low Profile Platform
			Panel	2	KMW	AM-X-CD-17-65-00T-RET			
			Panel	1	Powerwave	P65-17-XLH-RR			
			TMA	6	Cci	DTMABP7819VG12A			
			Diplexer	6	Powerwave	LGP21903			
			RRU	6	Ericsson	RRUS 11			
			Other	1	Raycap	DC6-48-60-18-8F			
			Other	1	LMU	Nokia CS72188.01			
122	122		Other	1	LMU	Nokia CS72188.01	-	-	Direct Mount

Proposed Loading:

Information pertaining to proposed antennas and transmission lines were based upon the APP ID 123073, v3 from AT&T and is listed in Table 4.

Table 4 Proposed Appurtenances

Mount Elev. (ft)	CL Elev. (ft)	Carrier	Type	Qty	Manufacturer	Model	Qty	Feed Line Size	Mount Type Qty
147	147	AT&T	Panel	3	Powerwave	7770	12	1-5/8" 3" conduit housing (2) 3/4" DC & (1) 1/2" Fiber	(1) Platform w/ Rail Site Pro 1: RMQP-496-HK
			Panel	6	Cci	DMP65R-BU8DA			
			TMA	3	Cci	DTMABP7819VG12A			
			TMA	3	Powerwave	TT08-19DB111-001 TMA			
			RRU	3	Ericsson	RRUS 4478 B14			
			RRU	3	Ericsson	RRUS 8843 B2 B66A			
			RRU	3	Ericsson	RRUS 4449 B5/B12			
			Other	3	Raycap	DC6-48-60-18-8F			
122	122		Other	1	LMU	Nokia CS72188.01	-	-	Direct Mount

Note: AT&T loading includes FirstNET equipment



Results

Tower

The results of the structural analysis performed with the TES software are shown below. Table 5 shows the most critical member elements and the percentage of the force in the member with respect to the member capacity. Capacities of up to 105% are considered acceptable. The foundation reactions obtained from TES are shown in Table 6. Table 7 displays the twist and sway at service wind speeds. These reactions are used for the analysis of the foundation systems. Additional information for the tower analysis is provided within the Appendix.

Table 5 Tower Analysis Summary

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:	74.9%	70.1%	51.9%
Pass/Fail	Pass	Pass	Pass

Table 6 Tower Base Reactions

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Analysis Reactions	4961.9	41.3	55.0

Table 7 Client mount modification / replacement

Tower stress with mount Modification / replacement	Tower stress without mount Modification / replacement	Difference
74.9%	73.1%	1.8%

Foundation System

The results of the foundation based on the geotechnical report and foundation mapping or design drawings are shown below in Table 8. Additional information for the foundation analysis is provided within the Appendix.

Table 8 Foundation Analysis Summary

Structural Component	% capacity	Analysis Result
Foundation	66.5%	Pass

Appendix



Usage Diagram - Max Ratio 74.92% at 0.0ft

Structure: CT02721-S
Site Name: South Windham
Height: 180.00 (ft)
Base Elev: 0.000 (ft)

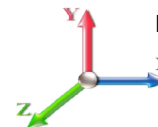
Code: EIA/TIA-222-G
Exposure: C
Gh: 1.1
10/10/2019



Page: 1

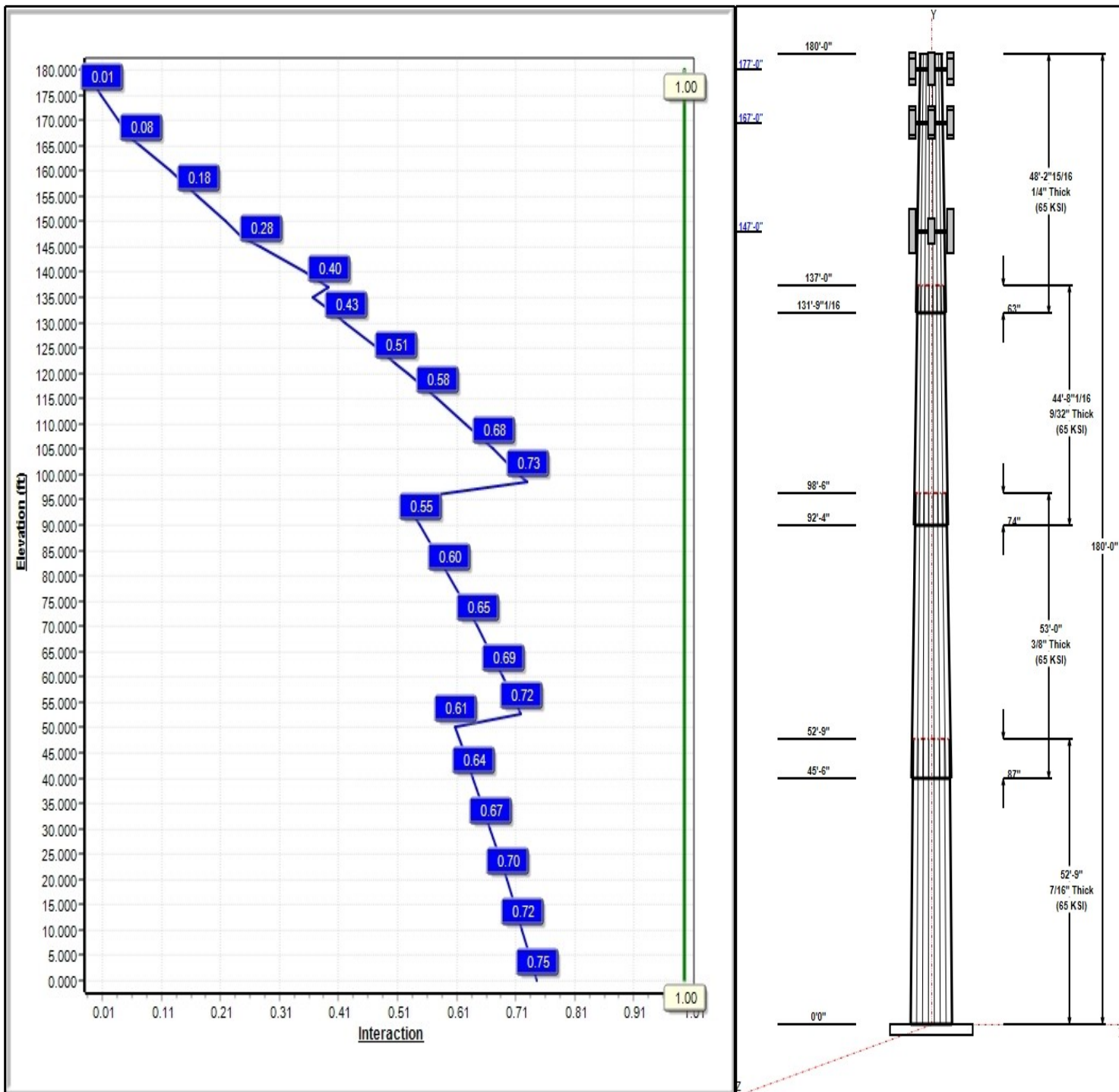
Dead Load Factor: 1.20
Wind Load Factor: 1.60

Load Case : 1.2D + 1.6W 101 mph Wind



Iterations: 26

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Structure: CT02721-S

Type: Tapered **Base Shape:** 16 Sided 10/10/2019
Site Name: South Windham **Taper:** 0.19500
Height: 180.00 (ft)
Base Elev: 0.00 (ft) Page: 2



Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	52.75	49.71	60.00	0.438		0.19500	65
2	53.00	41.54	51.88	0.375	Slip	0.19500	65
3	44.67	34.60	43.31	0.281	Slip	0.19500	65
4	48.25	26.71	36.12	0.250	Slip	0.19500	65

Discrete Appurtenances

Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
177.00	177.00	3	BXA-70063-6CF	Verizon
177.00	177.00	6	LPA-80080-4CF	Verizon
177.00	177.00	3	BXA-171085-8BF	Verizon
177.00	177.00	6	RFS FD9R6004-2C-3L	Verizon
177.00	177.00	1	Low Profile Platform	Verizon
167.00	167.00	3	APXVTM14-C-I20	Sprint Nextel
167.00	167.00	3	APXVSP18-C-A20	Sprint Nextel
167.00	167.00	4	RFS ACU-A20-N RET	Sprint Nextel
167.00	167.00	3	Alcatel Lucent	Sprint Nextel
167.00	167.00	3	Alcatel Lucent 1900 MHz	Sprint Nextel
167.00	167.00	3	Alcatel Lucent 800 MHz	Sprint Nextel
167.00	167.00	3	Alcatel Lucent 800 MHz	Sprint Nextel
167.00	167.00	1	Low Profile Platform	Sprint Nextel
147.00	147.00	6	DMP65R-BU8DA	AT&T
147.00	147.00	3	TT08-19DB111-001	AT&T
147.00	147.00	3	RRUS 4478 B14	AT&T
147.00	147.00	3	RRUS 8843 B2 B66A	AT&T
147.00	147.00	3	RRUS 4449 B5/B12	AT&T
147.00	147.00	1	Site Pro 1 RMQP-496-HK	AT&T
147.00	147.00	3	7770.00	AT&T
147.00	147.00	3	CCI DTMAPB7819VG12A	AT&T
147.00	147.00	1	Raycap DC6-48-60-18-8F	AT&T
122.00	122.00	1	LMU Nokia CS72188.01+	AT&T

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
0.00	177.00	Inside	1 5/8" Coax	Verizon
0.00	167.00	Inside	1-1/4" Hybrid	Sprint Nextel
0.00	147.00	Inside	1 5/8" Coax	AT&T
0.00	147.00	Inside	1/2" Fiber	AT&T
0.00	147.00	Inside	3" Conduit	AT&T
0.00	147.00	Inside	3/4" DC	AT&T

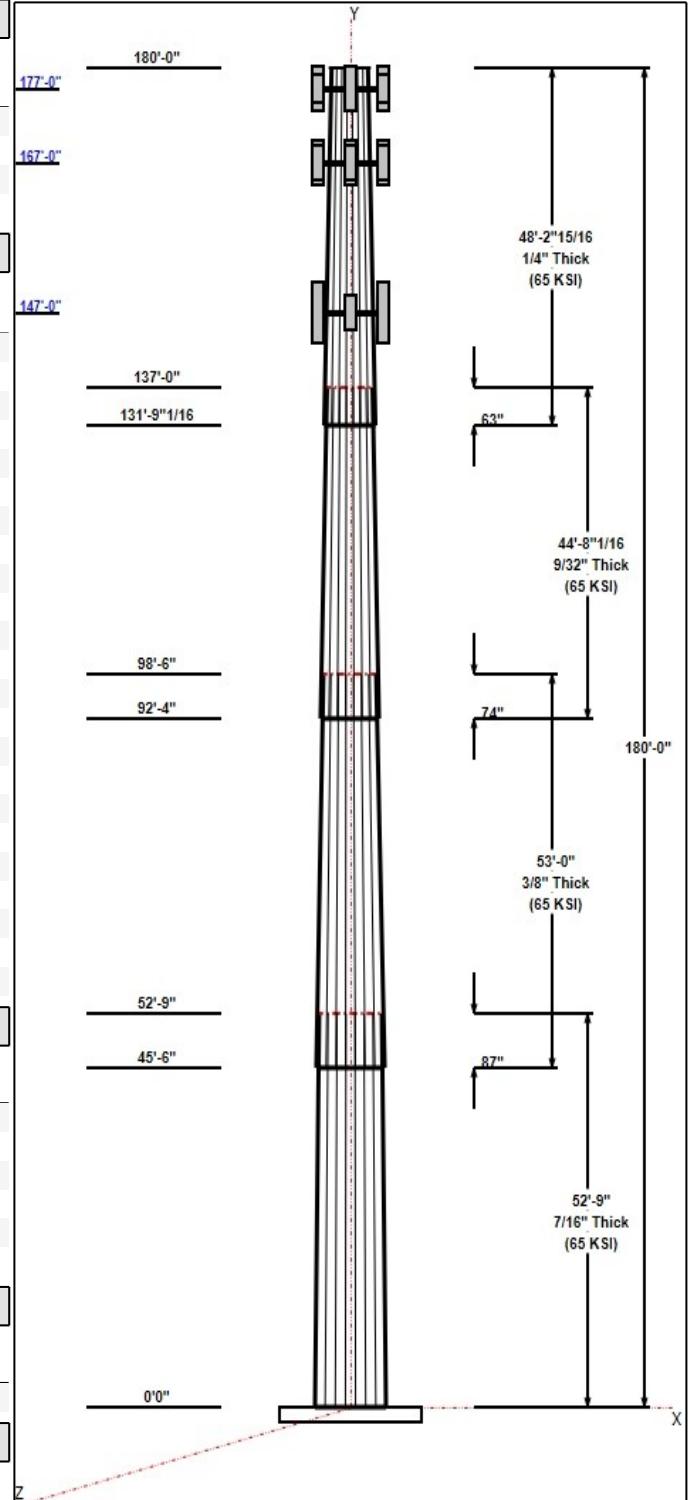
Anchor Bolts

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

Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
3.0000	74.6	50.0	Round

Reactions



Structure: CT02721-S

Type: Tapered
Site Name: South Windham
Height: 180.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 16 Sided
Taper: 0.19500

10/10/2019

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Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 101 mph Wind	4961.9	41.3	55.0
0.9D + 1.6W 101 mph Wind	4911.1	41.3	41.2
1.2D + 1.0Di + 1.0Wi 50 mph Wind	1354.6	10.8	92.2
1.2D + 1.0E	214.3	1.7	55.1
0.9D + 1.0E	211.9	1.7	41.3
1.0D + 1.0W 60 mph Wind	1088.5	9.1	45.9

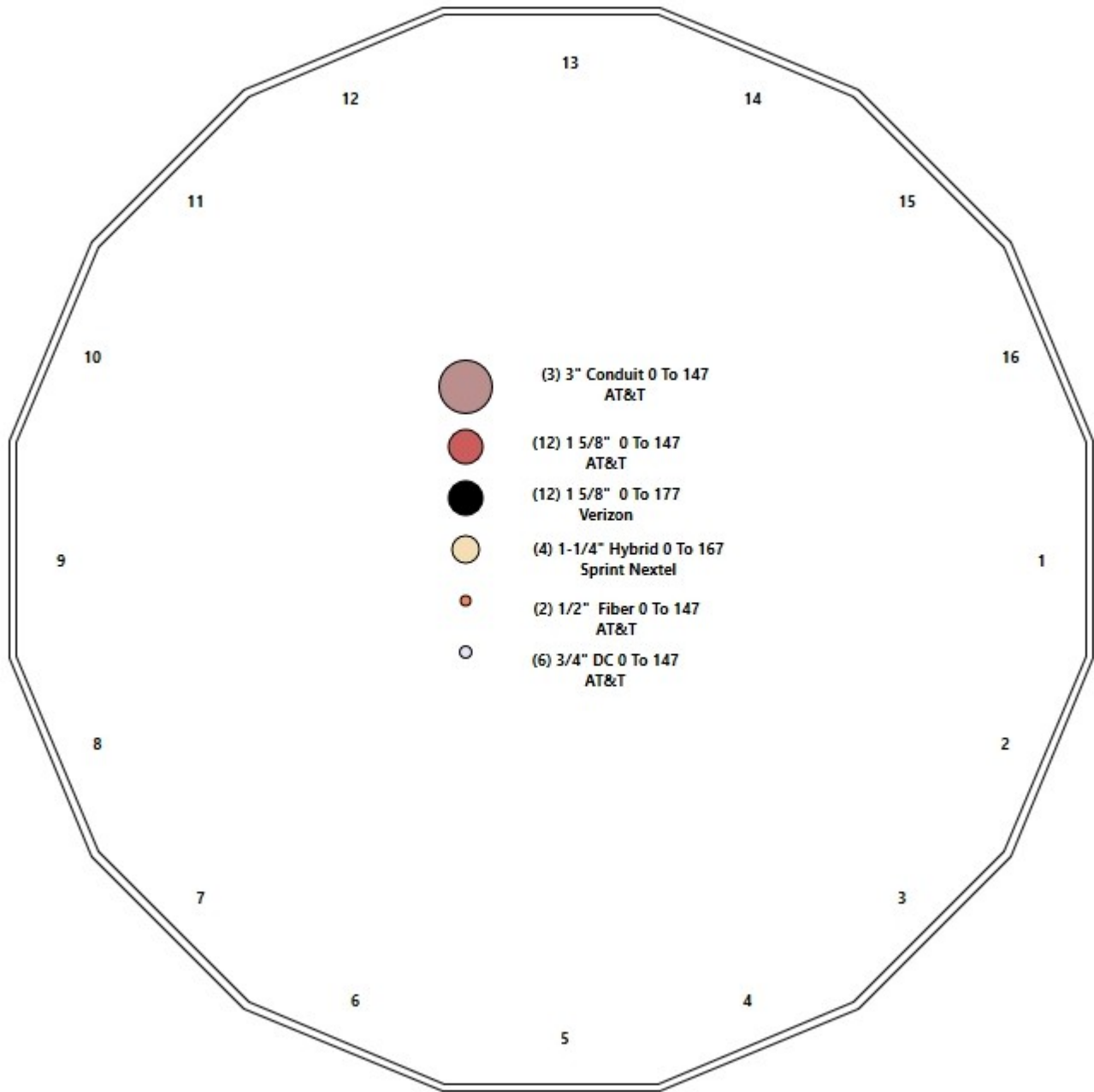
Structure: CT02721-S - Coax Line Placement

Type: Monopole
Site Name: South Windham
Height: 180.00 (ft)

10/10/2019



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Shaft Properties

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	16	52.750	0.4375	65		0.00	13,633
2	16	53.000	0.3750	65	Slip	87.00	9,996
3	16	44.670	0.2813	65	Slip	74.00	5,274
4	16	48.247	0.2500	65	Slip	63.00	4,081
Total Shaft Weight:							32,983

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	60.00	0.00	83.13	37256.48	25.69	137.14	49.71	52.75	68.77	21095.6	21.01	113.6	0.195003
2	51.88	45.50	61.61	20645.15	25.93	138.34	41.54	98.50	49.25	10543.6	20.44	110.7	0.195003
3	43.31	92.33	38.60	9027.97	29.04	153.98	34.60	137.00	30.79	4579.92	22.88	123.0	0.195003
4	36.12	131.7	28.61	4649.94	27.15	144.48	26.71	180.00	21.10	1866.87	19.66	106.8	0.195003

Load Summary

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Discrete Appurtenances

No.	Elev (ft)	Description	Qty	No Ice			Ice			Hor. Ecc. (ft)	Vert Ecc (ft)
				Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor		
1	177.00	BXA-70063-6CF	3	17.00	7.57	0.73	271.32	9.322	0.73	0.00	0.00
2	177.00	LPA-80080-4CF	6	12.00	2.61	1.70	168.73	3.828	1.70	0.00	0.00
3	177.00	BXA-171085-8BF	3	10.50	2.94	0.84	99.35	5.188	0.84	0.00	0.00
4	177.00	RFS FD9R6004-2C-3L Diplexers	6	3.10	0.37	0.62	13.98	0.988	0.62	0.00	0.00
5	177.00	Low Profile Platform	1	1500.00	22.00	1.00	3274.34	45.942	1.00	0.00	0.00
6	167.00	APXVTM14-C-I20	3	56.20	6.34	0.77	287.82	7.874	0.77	0.00	0.00
7	167.00	APXVSP18-C-A20	3	57.00	8.02	0.83	289.96	11.785	0.83	0.00	0.00
8	167.00	RFS ACU-A20-N RET	4	1.00	0.14	0.79	6.79	0.540	0.79	0.00	0.00
9	167.00	Alcatel Lucent TD-RRH8x20-25	3	70.00	4.05	0.67	229.90	5.175	0.67	0.00	0.00
10	167.00	Alcatel Lucent 1900 MHz RRH	3	60.00	2.77	0.67	172.45	4.480	0.67	0.00	0.00
11	167.00	Alcatel Lucent 800 MHz RRH	3	53.00	2.49	0.67	152.68	4.032	0.67	0.00	0.00
12	167.00	Alcatel Lucent 800 MHz Filter	3	8.80	0.78	0.69	32.58	1.652	0.69	0.00	0.00
13	167.00	Low Profile Platform	1	1200.00	25.00	1.00	2611.24	53.225	1.00	0.00	0.00
14	147.00	DMP65R-BU8DA	6	95.70	17.87	0.73	620.27	20.330	0.73	0.00	0.00
15	147.00	TT08-19DB111-001	3	22.00	0.79	0.91	57.42	1.635	0.91	0.00	0.00
16	147.00	RRUS 4478 B14	3	59.40	2.02	0.81	154.97	3.562	0.81	0.00	0.00
17	147.00	RRUS 8843 B2 B66A	3	72.00	1.64	0.92	228.70	2.380	0.92	0.00	0.00
18	147.00	RRUS 4449 B5/B12	3	73.00	1.64	0.90	198.01	3.739	0.90	0.00	0.00
19	147.00	Site Pro 1 RMQP-496-HK + pipe	1	2065.00	37.14	1.00	5671.19	80.264	1.00	0.00	0.00
20	147.00	7770.00	3	35.00	5.51	0.78	228.61	6.948	0.78	0.00	0.00
21	147.00	CCI DTMAPB7819VG12A TMA	3	19.20	0.97	0.69	53.16	1.841	0.69	0.00	0.00
22	147.00	Raycap DC6-48-60-18-8F	1	31.80	0.92	1.00	114.07	1.503	1.00	0.00	0.00
23	122.00	LMU Nokia CS72188.01+ Direct	1	20.00	2.50	1.00	70.78	4.054	1.00	0.00	0.00
Totals:			69	7,324.90			23,957.44				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
0.00	177.00	(12) 1 5/8" Coax	0.00	Inside
0.00	167.00	(4) 1-1/4" Hybrid	0.00	Inside
0.00	147.00	(12) 1 5/8" Coax	0.00	Inside
0.00	147.00	(2) 1/2" Fiber	0.00	Inside
0.00	147.00	(3) 3" Conduit	0.00	Inside
0.00	147.00	(6) 3/4" DC	0.00	Inside

Shaft Section Properties

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
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Increment Length: 5 (ft)

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in ³)	Weight (lb)
0.00		0.4375	60.000	83.127	37256.5	25.69	137.14	73.5	1218.	0.0
5.00		0.4375	59.025	81.766	35456.6	25.24	134.91	74.0	1178.	1402.7
10.00		0.4375	58.050	80.405	33715.7	24.80	132.69	74.5	1139.	1379.6
15.00		0.4375	57.075	79.045	32032.8	24.36	130.46	75.0	1100.	1356.4
20.00		0.4375	56.100	77.684	30406.7	23.91	128.23	75.5	1063.	1333.3
25.00		0.4375	55.125	76.323	28836.7	23.47	126.00	76.0	1026.	1310.1
30.00		0.4375	54.150	74.962	27321.7	23.03	123.77	76.5	989.7	1287.0
35.00		0.4375	53.175	73.602	25860.6	22.59	121.54	77.0	954.0	1263.8
40.00		0.4375	52.200	72.241	24452.7	22.14	119.31	77.5	918.9	1240.7
45.00		0.4375	51.225	70.880	23096.7	21.70	117.09	78.0	884.5	1217.5
45.50	Bot - Section 2	0.4375	51.127	70.744	22964.0	21.65	116.86	78.1	881.0	120.5
50.00		0.4375	50.250	69.519	21791.9	21.26	114.86	78.5	850.7	2009.3
52.75	Top - Section 1	0.3750	50.464	59.918	18991.2	25.18	134.57	0.0	0.0	1210.7
55.00		0.3750	50.025	59.394	18496.5	24.94	133.40	74.3	725.3	456.7
60.00		0.3750	49.050	58.227	17428.1	24.43	130.80	74.9	697.0	1000.6
65.00		0.3750	48.075	57.061	16401.6	23.91	128.20	75.5	669.2	980.8
70.00		0.3750	47.100	55.895	15416.3	23.39	125.60	76.1	642.0	960.9
75.00		0.3750	46.125	54.728	14471.2	22.87	123.00	76.7	615.4	941.1
80.00		0.3750	45.150	53.562	13565.5	22.36	120.40	77.3	589.4	921.2
85.00		0.3750	44.175	52.395	12698.5	21.84	117.80	77.9	563.9	901.4
90.00		0.3750	43.200	51.229	11869.2	21.32	115.20	78.4	538.9	881.5
92.33	Bot - Section 3	0.3750	42.745	50.685	11494.9	21.08	113.99	78.7	527.5	404.6
95.00		0.3750	42.225	50.063	11076.8	20.81	112.60	79.0	514.6	805.3
98.50	Top - Section 2	0.2813	42.105	37.524	8292.0	28.19	149.71	0.0	0.0	1041.9
100.00		0.2813	41.812	37.261	8119.2	27.98	148.67	70.9	380.9	190.9
105.00		0.2813	40.837	36.386	7560.7	27.29	145.20	71.7	363.2	626.5
110.00		0.2813	39.862	35.512	7028.4	26.60	141.73	72.5	345.9	611.6
115.00		0.2813	38.887	34.637	6521.7	25.91	138.27	73.3	329.0	596.7
120.00		0.2813	37.912	33.762	6039.9	25.22	134.80	74.0	312.5	581.9
122.00		0.2813	37.522	33.412	5854.1	24.95	133.41	74.3	306.0	228.6
125.00		0.2813	36.937	32.887	5582.5	24.53	131.33	74.8	296.5	338.4
130.00		0.2813	35.962	32.012	5148.8	23.84	127.87	75.6	280.8	552.1
131.75	Bot - Section 4	0.2813	35.620	31.706	5002.2	23.60	126.65	75.9	275.5	190.1
135.00		0.2813	34.987	31.138	4738.1	23.15	124.40	76.4	265.6	660.4
137.00	Top - Section 3	0.2500	35.096	27.790	4263.1	26.33	140.39	0.0	0.0	401.6
140.00		0.2500	34.512	27.324	4052.2	25.87	138.05	73.3	230.3	281.0
145.00		0.2500	33.537	26.546	3716.0	25.09	134.15	74.2	217.3	458.3
147.00		0.2500	33.147	26.235	3586.9	24.78	132.59	74.5	212.3	179.6
150.00		0.2500	32.562	25.769	3398.9	24.32	130.25	75.1	204.8	265.4
155.00		0.2500	31.587	24.991	3100.4	23.54	126.35	75.9	192.5	431.8
160.00		0.2500	30.612	24.214	2819.9	22.77	122.45	76.8	180.7	418.6
165.00		0.2500	29.637	23.436	2556.9	21.99	118.55	77.7	169.2	405.4
167.00		0.2500	29.247	23.125	2456.4	21.68	116.99	78.0	164.8	158.4
170.00		0.2500	28.662	22.659	2310.7	21.21	114.65	78.6	158.1	233.7
175.00		0.2500	27.687	21.881	2080.9	20.44	110.75	79.4	147.4	378.9
177.00		0.2500	27.297	21.570	1993.4	20.13	109.19	79.8	143.2	147.9
180.00		0.2500	26.712	21.103	1866.9	19.66	106.85	80.3	137.1	217.8

32983.0

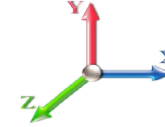
Wind Loading - Shaft

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
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Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20
Wind Load Factor 1.60



Iterations 26

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	21.088	23.20	474.71	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	466.99	0.750	0.000	5.00	25.283	18.96	703.8	0.0	1683.3
10.00		1.00	0.85	21.088	23.20	459.28	0.750	0.000	5.00	24.868	18.65	692.2	0.0	1655.5
15.00		1.00	0.85	21.088	23.20	451.57	0.750	0.000	5.00	24.454	18.34	680.7	0.0	1627.7
20.00		1.00	0.90	22.375	24.61	457.20	0.750	0.000	5.00	24.040	18.03	710.0	0.0	1599.9
25.00		1.00	0.95	23.451	25.80	459.93	0.750	0.000	5.00	23.626	17.72	731.3	0.0	1572.2
30.00		1.00	0.98	24.369	26.81	460.55	0.750	0.000	5.00	23.212	17.41	746.6	0.0	1544.4
35.00		1.00	1.01	25.172	27.69	459.65	0.750	0.000	5.00	22.797	17.10	757.5	0.0	1516.6
40.00		1.00	1.04	25.890	28.48	457.61	0.750	0.000	5.00	22.383	16.79	764.9	0.0	1488.8
45.00		1.00	1.07	26.540	29.19	454.67	0.750	0.000	5.00	21.969	16.48	769.6	0.0	1461.0
45.50	Bot - Section 2	1.00	1.07	26.602	29.26	454.33	0.750	0.000	0.50	2.174	1.63	76.3	0.0	144.6
50.00		1.00	1.09	27.135	29.85	450.99	0.750	0.000	4.50	19.667	14.75	704.5	0.0	2411.1
52.75	Top - Section 1	1.00	1.11	27.443	30.19	448.70	0.750	0.000	2.75	11.854	8.89	429.4	0.0	1452.9
55.00		1.00	1.12	27.685	30.45	453.50	0.750	0.000	2.25	9.605	7.20	351.0	0.0	548.1
60.00		1.00	1.14	28.197	31.02	448.75	0.750	0.000	5.00	21.045	15.78	783.3	0.0	1200.7
65.00		1.00	1.16	28.676	31.54	443.55	0.750	0.000	5.00	20.631	15.47	780.9	0.0	1176.9
70.00		1.00	1.17	29.127	32.04	437.96	0.750	0.000	5.00	20.217	15.16	777.3	0.0	1153.1
75.00		1.00	1.19	29.553	32.51	432.02	0.750	0.000	5.00	19.802	14.85	772.5	0.0	1129.3
80.00		1.00	1.21	29.958	32.95	425.77	0.750	0.000	5.00	19.388	14.54	766.7	0.0	1105.5
85.00		1.00	1.22	30.342	33.38	419.24	0.750	0.000	5.00	18.974	14.23	759.9	0.0	1081.6
90.00		1.00	1.24	30.710	33.78	412.46	0.750	0.000	5.00	18.560	13.92	752.3	0.0	1057.8
92.33	Bot - Section 3	1.00	1.24	30.876	33.96	409.22	0.750	0.000	2.33	8.519	6.39	347.2	0.0	485.5
95.00		1.00	1.25	31.061	34.17	405.45	0.750	0.000	2.67	9.753	7.32	399.9	0.0	966.3
98.50	Top - Section 2	1.00	1.26	31.299	34.43	400.42	0.750	0.000	3.50	12.623	9.47	521.5	0.0	1250.3
100.00		1.00	1.27	31.399	34.54	403.66	0.750	0.000	1.50	5.348	4.01	221.6	0.0	229.0
105.00		1.00	1.28	31.723	34.89	396.28	0.750	0.000	5.00	17.556	13.17	735.1	0.0	751.8
110.00		1.00	1.29	32.035	35.24	388.72	0.750	0.000	5.00	17.142	12.86	724.9	0.0	734.0
115.00		1.00	1.30	32.336	35.57	380.99	0.750	0.000	5.00	16.728	12.55	714.0	0.0	716.1
120.00		1.00	1.32	32.627	35.89	373.11	0.750	0.000	5.00	16.313	12.23	702.6	0.0	698.2
122.00	Appurtenance(s)	1.00	1.32	32.741	36.01	369.91	0.750	0.000	2.00	6.409	4.81	277.0	0.0	274.3
125.00		1.00	1.33	32.909	36.20	365.08	0.750	0.000	3.00	9.490	7.12	412.2	0.0	406.1
130.00		1.00	1.34	33.182	36.50	356.91	0.750	0.000	5.00	15.485	11.61	678.2	0.0	662.5
131.75	Bot - Section 4	1.00	1.34	33.275	36.60	354.01	0.750	0.000	1.75	5.332	4.00	234.2	0.0	228.1
135.00		1.00	1.35	33.446	36.79	348.61	0.750	0.000	3.25	9.877	7.41	436.0	0.0	792.5
137.00	Top - Section 3	1.00	1.35	33.550	36.91	345.26	0.750	0.000	2.00	6.007	4.51	266.0	0.0	481.9
140.00		1.00	1.36	33.703	37.07	345.20	0.750	0.000	3.00	8.862	6.65	394.2	0.0	337.2
145.00		1.00	1.37	33.953	37.35	336.69	0.750	0.000	5.00	14.455	10.84	647.8	0.0	549.9
147.00	Appurtenance(s)	1.00	1.37	34.051	37.46	333.25	0.750	0.000	2.00	5.666	4.25	254.7	0.0	215.5
150.00		1.00	1.38	34.196	37.62	328.07	0.750	0.000	3.00	8.375	6.28	378.0	0.0	318.5
155.00		1.00	1.39	34.433	37.88	319.35	0.750	0.000	5.00	13.626	10.22	619.3	0.0	518.2
160.00		1.00	1.40	34.664	38.13	310.52	0.750	0.000	5.00	13.212	9.91	604.5	0.0	502.3
165.00		1.00	1.41	34.890	38.38	301.61	0.750	0.000	5.00	12.798	9.60	589.4	0.0	486.4
167.00	Appurtenance(s)	1.00	1.41	34.978	38.48	298.02	0.750	0.000	2.00	5.003	3.75	231.0	0.0	190.1
170.00		1.00	1.42	35.110	38.62	292.61	0.750	0.000	3.00	7.380	5.54	342.0	0.0	280.4
175.00		1.00	1.42	35.324	38.86	283.52	0.750	0.000	5.00	11.969	8.98	558.1	0.0	454.7
177.00	Appurtenance(s)	1.00	1.43	35.409	38.95	279.86	0.750	0.000	2.00	4.672	3.50	218.4	0.0	177.4
180.00		1.00	1.43	35.535	39.09	274.34	0.750	0.000	3.00	6.883	5.16	322.9	0.0	261.4

Wind Loading - Shaft

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 9



Totals:	180.00	25,341.9	39,579.7
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Discrete Appurtenance Forces

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

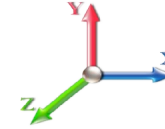


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Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



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	177.00	RFS FD9R6004-2C-3L	6	35.409	38.950	0.50	0.80	1.10	22.32	0.000	0.000	68.62	0.00	0.00
2	177.00	BXA-171085-8BF	3	35.409	38.950	0.67	0.80	5.93	37.80	0.000	0.000	369.37	0.00	0.00
3	177.00	LPA-80080-4CF	6	35.409	38.950	1.36	0.80	21.30	86.40	0.000	0.000	1327.26	0.00	0.00
4	177.00	BXA-70063-6CF	3	35.409	38.950	0.58	0.80	13.26	61.20	0.000	0.000	826.53	0.00	0.00
5	177.00	Low Profile Platform	1	35.409	38.950	1.00	1.00	22.00	1800.00	0.000	0.000	1371.04	0.00	0.00
6	167.00	Alcatel Lucent 1900 MHz	3	34.978	38.476	0.54	0.80	4.45	216.00	0.000	0.000	274.21	0.00	0.00
7	167.00	RFS ACU-A20-N RET	4	34.978	38.476	0.63	0.80	0.35	4.80	0.000	0.000	21.79	0.00	0.00
8	167.00	Alcatel Lucent	3	34.978	38.476	0.54	0.80	6.51	252.00	0.000	0.000	400.91	0.00	0.00
9	167.00	Low Profile Platform	1	34.978	38.476	1.00	1.00	25.00	1440.00	0.000	0.000	1539.04	0.00	0.00
10	167.00	Alcatel Lucent 800 MHz	3	34.978	38.476	0.54	0.80	4.00	190.80	0.000	0.000	246.49	0.00	0.00
11	167.00	Alcatel Lucent 800 MHz	3	34.978	38.476	0.55	0.80	1.29	31.68	0.000	0.000	79.52	0.00	0.00
12	167.00	APXVSP18-C-A20	3	34.978	38.476	0.66	0.80	15.98	205.20	0.000	0.000	983.50	0.00	0.00
13	167.00	APXVTM14-C-I20	3	34.978	38.476	0.62	0.80	11.72	202.32	0.000	0.000	721.27	0.00	0.00
14	147.00	DMP65R-BU8DA	6	34.051	37.456	0.58	0.80	62.62	689.04	0.000	0.000	3752.63	0.00	0.00
15	147.00	TT08-19DB111-001	3	34.051	37.456	0.73	0.80	1.73	79.20	0.000	0.000	103.40	0.00	0.00
16	147.00	RRUS 4478 B14	3	34.051	37.456	0.65	0.80	3.93	213.84	0.000	0.000	235.34	0.00	0.00
17	147.00	RRUS 8843 B2 B66A	3	34.051	37.456	0.74	0.80	3.62	259.20	0.000	0.000	217.01	0.00	0.00
18	147.00	RRUS 4449 B5/B12	3	34.051	37.456	0.72	0.80	3.54	262.80	0.000	0.000	212.30	0.00	0.00
19	147.00	Site Pro 1 RMQP-496-HK	1	34.051	37.456	1.00	1.00	37.14	2478.00	0.000	0.000	2225.81	0.00	0.00
20	147.00	7770.00	3	34.051	37.456	0.62	0.80	10.31	126.00	0.000	0.000	618.16	0.00	0.00
21	147.00	CCI DTMABP7819VG12A	3	34.051	37.456	0.55	0.80	1.61	69.12	0.000	0.000	96.27	0.00	0.00
22	147.00	Raycap DC6-48-60-18-8F	1	34.051	37.456	0.80	0.80	0.74	38.16	0.000	0.000	44.11	0.00	0.00
23	122.00	LMU Nokia CS72188.01+	1	32.741	36.015	0.80	0.80	2.00	24.00	0.000	0.000	115.25	0.00	0.00

Totals: 8,789.88

15,849.82

Total Applied Force Summary

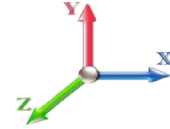
Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 11



Load Case: 1.2D + 1.6W 101 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



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		703.76	1894.18	0.00	0.00
10.00		692.23	1866.40	0.00	0.00
15.00		680.70	1838.62	0.00	0.00
20.00		710.01	1810.84	0.00	0.00
25.00		731.34	1783.06	0.00	0.00
30.00		746.64	1755.27	0.00	0.00
35.00		757.50	1727.49	0.00	0.00
40.00		764.94	1699.71	0.00	0.00
45.00		769.63	1671.93	0.00	0.00
45.50		76.34	165.66	0.00	0.00
50.00		704.46	2600.91	0.00	0.00
52.75		429.40	1568.87	0.00	0.00
55.00		351.02	643.00	0.00	0.00
60.00		783.30	1411.61	0.00	0.00
65.00		780.93	1387.80	0.00	0.00
70.00		777.28	1363.99	0.00	0.00
75.00		772.49	1340.17	0.00	0.00
80.00		766.68	1316.36	0.00	0.00
85.00		759.94	1292.55	0.00	0.00
90.00		752.35	1268.73	0.00	0.00
92.33		347.22	583.93	0.00	0.00
95.00		399.90	1078.79	0.00	0.00
98.50		521.50	1397.92	0.00	0.00
100.00		221.64	292.30	0.00	0.00
105.00		735.14	962.72	0.00	0.00
110.00		724.86	944.86	0.00	0.00
115.00		713.99	927.00	0.00	0.00
120.00		702.58	909.14	0.00	0.00
122.00	(1) attachments	392.25	382.65	0.00	0.00
125.00		412.23	532.62	0.00	0.00
130.00		678.23	873.42	0.00	0.00
131.75		234.20	302.05	0.00	0.00
135.00		436.05	929.40	0.00	0.00
137.00		266.04	566.39	0.00	0.00
140.00		394.24	463.60	0.00	0.00
145.00		647.83	760.83	0.00	0.00
147.00	(26) attachments	7759.70	4515.25	0.00	0.00
150.00		378.02	372.96	0.00	0.00
155.00		619.34	608.90	0.00	0.00
160.00		604.54	593.02	0.00	0.00
165.00		589.39	577.15	0.00	0.00
167.00	(23) attachments	4497.72	2769.21	0.00	0.00
170.00		342.04	325.35	0.00	0.00
175.00		558.11	529.56	0.00	0.00
177.00	(19) attachments	4181.18	2215.10	0.00	0.00
180.00		322.87	261.37	0.00	0.00

Total Applied Force Summary

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Totals:	41,191.74	55,082.63	0.00	0.00
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Calculated Forces

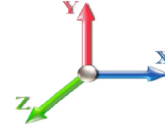
Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.2D + 1.6W 101 mph Wind

Iterations 26

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	-55.01	-41.28	0.00	-4961.9	0.00	4961.90	5499.24	2749.62	13525.8	6714.82	0.00	0.000	0.000	0.749
5.00	-52.99	-40.75	0.00	-4755.4	0.00	4755.49	5446.13	2723.07	13174.3	6540.32	0.10	-0.186	0.000	0.737
10.00	-50.99	-40.21	0.00	-4551.7	0.00	4551.75	5391.79	2695.90	12824.2	6366.51	0.39	-0.372	0.000	0.725
15.00	-49.03	-39.68	0.00	-4350.6	0.00	4350.69	5336.22	2668.11	12475.6	6193.46	0.89	-0.560	0.000	0.712
20.00	-47.10	-39.10	0.00	-4152.2	0.00	4152.29	5279.43	2639.71	12128.7	6021.24	1.57	-0.749	0.000	0.699
25.00	-45.20	-38.50	0.00	-3956.7	0.00	3956.77	5221.40	2610.70	11783.7	5849.94	2.46	-0.939	0.000	0.685
30.00	-43.33	-37.86	0.00	-3764.2	0.00	3764.29	5162.15	2581.08	11440.6	5679.62	3.55	-1.129	0.000	0.671
35.00	-41.50	-37.21	0.00	-3574.9	0.00	3574.98	5101.67	2550.83	11099.7	5510.36	4.83	-1.320	0.000	0.657
40.00	-39.70	-36.53	0.00	-3388.9	0.00	3388.94	5039.96	2519.98	10761.0	5342.24	6.32	-1.512	0.000	0.642
45.00	-37.98	-35.79	0.00	-3206.2	0.00	3206.28	4977.02	2488.51	10424.8	5175.32	8.00	-1.703	0.000	0.627
45.50	-37.76	-35.77	0.00	-3188.3	0.00	3188.38	4970.66	2485.33	10391.3	5158.70	8.18	-1.723	0.000	0.626
50.00	-35.09	-35.07	0.00	-3027.4	0.00	3027.42	4912.85	2456.43	10091.1	5009.68	9.89	-1.896	0.000	0.612
52.75	-33.48	-34.64	0.00	-2930.9	0.00	2930.98	3995.12	1997.56	8262.25	4101.73	11.01	-2.003	0.000	0.723
55.00	-32.76	-34.36	0.00	-2853.0	0.00	2853.03	3974.20	1987.10	8146.45	4044.24	11.98	-2.091	0.000	0.714
60.00	-31.26	-33.64	0.00	-2681.2	0.00	2681.25	3926.82	1963.41	7890.08	3916.97	14.28	-2.304	0.000	0.693
65.00	-29.78	-32.91	0.00	-2513.0	0.00	2513.08	3878.22	1939.11	7635.13	3790.40	16.81	-2.516	0.000	0.671
70.00	-28.34	-32.17	0.00	-2348.5	0.00	2348.54	3828.38	1914.19	7381.75	3664.61	19.56	-2.727	0.000	0.649
75.00	-26.92	-31.43	0.00	-2187.6	0.00	2187.68	3777.31	1888.66	7130.10	3539.68	22.52	-2.936	0.000	0.625
80.00	-25.54	-30.69	0.00	-2030.5	0.00	2030.52	3725.02	1862.51	6880.32	3415.68	25.71	-3.143	0.000	0.602
85.00	-24.18	-29.94	0.00	-1877.0	0.00	1877.07	3671.50	1835.75	6632.56	3292.68	29.11	-3.348	0.000	0.577
90.00	-22.89	-29.18	0.00	-1727.3	0.00	1727.36	3616.75	1808.37	6386.97	3170.76	32.72	-3.550	0.000	0.551
92.33	-22.28	-28.83	0.00	-1659.2	0.00	1659.29	3590.78	1795.39	6273.15	3114.26	34.48	-3.645	0.000	0.539
95.00	-21.17	-28.41	0.00	-1582.4	0.00	1582.40	3560.77	1780.38	6143.71	3050.00	36.55	-3.752	0.000	0.525
98.50	-19.76	-27.83	0.00	-1482.9	0.00	1482.98	2386.87	1193.44	4124.84	2047.75	39.35	-3.890	0.000	0.733
100.00	-19.41	-27.64	0.00	-1441.2	0.00	1441.24	2378.03	1189.02	4080.63	2025.79	40.58	-3.949	0.000	0.720
105.00	-18.39	-26.91	0.00	-1303.0	0.00	1303.04	2347.75	1173.88	3933.45	1952.73	44.84	-4.189	0.000	0.676
110.00	-17.40	-26.19	0.00	-1168.4	0.00	1168.48	2316.25	1158.12	3786.73	1879.89	49.35	-4.422	0.000	0.630
115.00	-16.43	-25.47	0.00	-1037.5	0.00	1037.54	2283.51	1141.75	3640.60	1807.35	54.10	-4.645	0.000	0.582
120.00	-15.52	-24.73	0.00	-910.21	0.00	910.21	2249.55	1124.77	3495.22	1735.17	59.07	-4.857	0.000	0.532
122.00	-15.13	-24.33	0.00	-860.75	0.00	860.75	2235.62	1117.81	3437.31	1706.42	61.12	-4.941	0.000	0.512
125.00	-14.57	-23.92	0.00	-787.75	0.00	787.75	2214.35	1107.18	3350.73	1663.44	64.27	-5.061	0.000	0.481
130.00	-13.71	-23.19	0.00	-668.17	0.00	668.17	2177.93	1088.97	3207.29	1592.24	69.66	-5.246	0.000	0.426
131.75	-13.40	-22.95	0.00	-627.50	0.00	627.50	2164.87	1082.44	3157.27	1567.40	71.60	-5.309	0.000	0.407
135.00	-12.48	-22.45	0.00	-552.99	0.00	552.99	2140.28	1070.14	3065.05	1521.62	75.24	-5.418	0.000	0.370
137.00	-11.91	-22.15	0.00	-508.02	0.00	508.02	1820.19	910.09	2619.63	1300.49	77.53	-5.482	0.000	0.398
140.00	-11.45	-21.73	0.00	-441.66	0.00	441.66	1802.60	901.30	2550.50	1266.18	80.99	-5.570	0.000	0.356
145.00	-10.72	-21.03	0.00	-333.00	0.00	333.00	1772.28	886.14	2435.71	1209.19	86.89	-5.706	0.000	0.282
147.00	-6.99	-12.86	0.00	-290.94	0.00	290.94	1759.80	879.90	2390.02	1186.51	89.29	-5.754	0.000	0.249
150.00	-6.64	-12.46	0.00	-252.35	0.00	252.35	1740.72	870.36	2321.75	1152.61	92.92	-5.819	0.000	0.223
155.00	-6.08	-11.79	0.00	-190.06	0.00	190.06	1707.94	853.97	2208.76	1096.52	99.06	-5.911	0.000	0.177
160.00	-5.54	-11.13	0.00	-131.11	0.00	131.11	1673.92	836.96	2096.88	1040.98	105.28	-5.985	0.000	0.129
165.00	-5.02	-10.49	0.00	-75.44	0.00	75.44	1638.68	819.34	1986.28	986.07	111.57	-6.037	0.000	0.080
167.00	-2.74	-5.73	0.00	-54.46	0.00	54.46	1624.24	812.12	1942.43	964.30	114.09	-6.052	0.000	0.058
170.00	-2.45	-5.35	0.00	-37.29	0.00	37.29	1602.21	801.11	1877.10	931.87	117.90	-6.067	0.000	0.042
175.00	-1.99	-4.74	0.00	-10.53	0.00	10.53	1564.52	782.26	1769.48	878.45	124.25	-6.082	0.000	0.013
177.00	-0.23	-0.35	0.00	-1.05	0.00	1.05	1549.09	774.55	1726.91	857.31	126.79	-6.084	0.000	0.001
180.00	0.00	-0.32	0.00	0.00	0.00	0.00	1525.59	762.80	1663.59	825.87	130.61	-6.084	0.000	0.000

Calculated Forces

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

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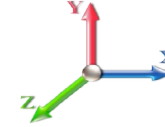
Wind Loading - Shaft

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (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 101 mph Wind

Dead Load Factor 0.90
Wind Load Factor 1.60



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	21.088	23.20	474.71	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	21.088	23.20	466.99	0.750	0.000	5.00	25.283	18.96	703.8	0.0	1262.5
10.00		1.00	0.85	21.088	23.20	459.28	0.750	0.000	5.00	24.868	18.65	692.2	0.0	1241.6
15.00		1.00	0.85	21.088	23.20	451.57	0.750	0.000	5.00	24.454	18.34	680.7	0.0	1220.8
20.00		1.00	0.90	22.375	24.61	457.20	0.750	0.000	5.00	24.040	18.03	710.0	0.0	1200.0
25.00		1.00	0.95	23.451	25.80	459.93	0.750	0.000	5.00	23.626	17.72	731.3	0.0	1179.1
30.00		1.00	0.98	24.369	26.81	460.55	0.750	0.000	5.00	23.212	17.41	746.6	0.0	1158.3
35.00		1.00	1.01	25.172	27.69	459.65	0.750	0.000	5.00	22.797	17.10	757.5	0.0	1137.4
40.00		1.00	1.04	25.890	28.48	457.61	0.750	0.000	5.00	22.383	16.79	764.9	0.0	1116.6
45.00		1.00	1.07	26.540	29.19	454.67	0.750	0.000	5.00	21.969	16.48	769.6	0.0	1095.8
45.50	Bot - Section 2	1.00	1.07	26.602	29.26	454.33	0.750	0.000	0.50	2.174	1.63	76.3	0.0	108.4
50.00		1.00	1.09	27.135	29.85	450.99	0.750	0.000	4.50	19.667	14.75	704.5	0.0	1808.3
52.75	Top - Section 1	1.00	1.11	27.443	30.19	448.70	0.750	0.000	2.75	11.854	8.89	429.4	0.0	1089.7
55.00		1.00	1.12	27.685	30.45	453.50	0.750	0.000	2.25	9.605	7.20	351.0	0.0	411.1
60.00		1.00	1.14	28.197	31.02	448.75	0.750	0.000	5.00	21.045	15.78	783.3	0.0	900.5
65.00		1.00	1.16	28.676	31.54	443.55	0.750	0.000	5.00	20.631	15.47	780.9	0.0	882.7
70.00		1.00	1.17	29.127	32.04	437.96	0.750	0.000	5.00	20.217	15.16	777.3	0.0	864.8
75.00		1.00	1.19	29.553	32.51	432.02	0.750	0.000	5.00	19.802	14.85	772.5	0.0	847.0
80.00		1.00	1.21	29.958	32.95	425.77	0.750	0.000	5.00	19.388	14.54	766.7	0.0	829.1
85.00		1.00	1.22	30.342	33.38	419.24	0.750	0.000	5.00	18.974	14.23	759.9	0.0	811.2
90.00		1.00	1.24	30.710	33.78	412.46	0.750	0.000	5.00	18.560	13.92	752.3	0.0	793.4
92.33	Bot - Section 3	1.00	1.24	30.876	33.96	409.22	0.750	0.000	2.33	8.519	6.39	347.2	0.0	364.1
95.00		1.00	1.25	31.061	34.17	405.45	0.750	0.000	2.67	9.753	7.32	399.9	0.0	724.7
98.50	Top - Section 2	1.00	1.26	31.299	34.43	400.42	0.750	0.000	3.50	12.623	9.47	521.5	0.0	937.7
100.00		1.00	1.27	31.399	34.54	403.66	0.750	0.000	1.50	5.348	4.01	221.6	0.0	171.8
105.00		1.00	1.28	31.723	34.89	396.28	0.750	0.000	5.00	17.556	13.17	735.1	0.0	563.9
110.00		1.00	1.29	32.035	35.24	388.72	0.750	0.000	5.00	17.142	12.86	724.9	0.0	550.5
115.00		1.00	1.30	32.336	35.57	380.99	0.750	0.000	5.00	16.728	12.55	714.0	0.0	537.1
120.00		1.00	1.32	32.627	35.89	373.11	0.750	0.000	5.00	16.313	12.23	702.6	0.0	523.7
122.00	Appurtenance(s)	1.00	1.32	32.741	36.01	369.91	0.750	0.000	2.00	6.409	4.81	277.0	0.0	205.7
125.00		1.00	1.33	32.909	36.20	365.08	0.750	0.000	3.00	9.490	7.12	412.2	0.0	304.6
130.00		1.00	1.34	33.182	36.50	356.91	0.750	0.000	5.00	15.485	11.61	678.2	0.0	496.9
131.75	Bot - Section 4	1.00	1.34	33.275	36.60	354.01	0.750	0.000	1.75	5.332	4.00	234.2	0.0	171.1
135.00		1.00	1.35	33.446	36.79	348.61	0.750	0.000	3.25	9.877	7.41	436.0	0.0	594.3
137.00	Top - Section 3	1.00	1.35	33.550	36.91	345.26	0.750	0.000	2.00	6.007	4.51	266.0	0.0	361.4
140.00		1.00	1.36	33.703	37.07	345.20	0.750	0.000	3.00	8.862	6.65	394.2	0.0	252.9
145.00		1.00	1.37	33.953	37.35	336.69	0.750	0.000	5.00	14.455	10.84	647.8	0.0	412.4
147.00	Appurtenance(s)	1.00	1.37	34.051	37.46	333.25	0.750	0.000	2.00	5.666	4.25	254.7	0.0	161.6
150.00		1.00	1.38	34.196	37.62	328.07	0.750	0.000	3.00	8.375	6.28	378.0	0.0	238.9
155.00		1.00	1.39	34.433	37.88	319.35	0.750	0.000	5.00	13.626	10.22	619.3	0.0	388.6
160.00		1.00	1.40	34.664	38.13	310.52	0.750	0.000	5.00	13.212	9.91	604.5	0.0	376.7
165.00		1.00	1.41	34.890	38.38	301.61	0.750	0.000	5.00	12.798	9.60	589.4	0.0	364.8
167.00	Appurtenance(s)	1.00	1.41	34.978	38.48	298.02	0.750	0.000	2.00	5.003	3.75	231.0	0.0	142.6
170.00		1.00	1.42	35.110	38.62	292.61	0.750	0.000	3.00	7.380	5.54	342.0	0.0	210.3
175.00		1.00	1.42	35.324	38.86	283.52	0.750	0.000	5.00	11.969	8.98	558.1	0.0	341.0
177.00	Appurtenance(s)	1.00	1.43	35.409	38.95	279.86	0.750	0.000	2.00	4.672	3.50	218.4	0.0	133.1
180.00		1.00	1.43	35.535	39.09	274.34	0.750	0.000	3.00	6.883	5.16	322.9	0.0	196.0

Wind Loading - Shaft

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (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



Totals:	180.00	25,341.9	29,684.7
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Discrete Appurtenance Forces

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

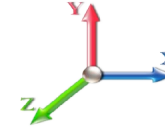


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Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



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	177.00	RFS FD9R6004-2C-3L	6	35.409	38.950	0.50	0.80	1.10	16.74	0.000	0.000	68.62	0.00	0.00	
2	177.00	BXA-171085-8BF	3	35.409	38.950	0.67	0.80	5.93	28.35	0.000	0.000	369.37	0.00	0.00	
3	177.00	LPA-80080-4CF	6	35.409	38.950	1.36	0.80	21.30	64.80	0.000	0.000	1327.26	0.00	0.00	
4	177.00	BXA-70063-6CF	3	35.409	38.950	0.58	0.80	13.26	45.90	0.000	0.000	826.53	0.00	0.00	
5	177.00	Low Profile Platform	1	35.409	38.950	1.00	1.00	22.00	1350.00	0.000	0.000	1371.04	0.00	0.00	
6	167.00	Alcatel Lucent 1900 MHz	3	34.978	38.476	0.54	0.80	4.45	162.00	0.000	0.000	274.21	0.00	0.00	
7	167.00	RFS ACU-A20-N RET	4	34.978	38.476	0.63	0.80	0.35	3.60	0.000	0.000	21.79	0.00	0.00	
8	167.00	Alcatel Lucent	3	34.978	38.476	0.54	0.80	6.51	189.00	0.000	0.000	400.91	0.00	0.00	
9	167.00	Low Profile Platform	1	34.978	38.476	1.00	1.00	25.00	1080.00	0.000	0.000	1539.04	0.00	0.00	
10	167.00	Alcatel Lucent 800 MHz	3	34.978	38.476	0.54	0.80	4.00	143.10	0.000	0.000	246.49	0.00	0.00	
11	167.00	Alcatel Lucent 800 MHz	3	34.978	38.476	0.55	0.80	1.29	23.76	0.000	0.000	79.52	0.00	0.00	
12	167.00	APXVSP18-C-A20	3	34.978	38.476	0.66	0.80	15.98	153.90	0.000	0.000	983.50	0.00	0.00	
13	167.00	APXVTM14-C-I20	3	34.978	38.476	0.62	0.80	11.72	151.74	0.000	0.000	721.27	0.00	0.00	
14	147.00	DMP65R-BU8DA	6	34.051	37.456	0.58	0.80	62.62	516.78	0.000	0.000	3752.63	0.00	0.00	
15	147.00	TT08-19DB111-001	3	34.051	37.456	0.73	0.80	1.73	59.40	0.000	0.000	103.40	0.00	0.00	
16	147.00	RRUS 4478 B14	3	34.051	37.456	0.65	0.80	3.93	160.38	0.000	0.000	235.34	0.00	0.00	
17	147.00	RRUS 8843 B2 B66A	3	34.051	37.456	0.74	0.80	3.62	194.40	0.000	0.000	217.01	0.00	0.00	
18	147.00	RRUS 4449 B5/B12	3	34.051	37.456	0.72	0.80	3.54	197.10	0.000	0.000	212.30	0.00	0.00	
19	147.00	Site Pro 1 RMQP-496-HK	1	34.051	37.456	1.00	1.00	37.14	1858.50	0.000	0.000	2225.81	0.00	0.00	
20	147.00	7770.00	3	34.051	37.456	0.62	0.80	10.31	94.50	0.000	0.000	618.16	0.00	0.00	
21	147.00	CCI DTMABP7819VG12A	3	34.051	37.456	0.55	0.80	1.61	51.84	0.000	0.000	96.27	0.00	0.00	
22	147.00	Raycap DC6-48-60-18-8F	1	34.051	37.456	0.80	0.80	0.74	28.62	0.000	0.000	44.11	0.00	0.00	
23	122.00	LMU Nokia CS72188.01+	1	32.741	36.015	0.80	0.80	2.00	18.00	0.000	0.000	115.25	0.00	0.00	
Totals:									6,592.41						15,849.82

Total Applied Force Summary

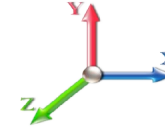
Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 18



Load Case: 0.9D + 1.6W 101 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



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
5.00		703.76	1420.64	0.00	0.00
10.00		692.23	1399.80	0.00	0.00
15.00		680.70	1378.96	0.00	0.00
20.00		710.01	1358.13	0.00	0.00
25.00		731.34	1337.29	0.00	0.00
30.00		746.64	1316.45	0.00	0.00
35.00		757.50	1295.62	0.00	0.00
40.00		764.94	1274.78	0.00	0.00
45.00		769.63	1253.95	0.00	0.00
45.50		76.34	124.25	0.00	0.00
50.00		704.46	1950.69	0.00	0.00
52.75		429.40	1176.66	0.00	0.00
55.00		351.02	482.25	0.00	0.00
60.00		783.30	1058.71	0.00	0.00
65.00		780.93	1040.85	0.00	0.00
70.00		777.28	1022.99	0.00	0.00
75.00		772.49	1005.13	0.00	0.00
80.00		766.68	987.27	0.00	0.00
85.00		759.94	969.41	0.00	0.00
90.00		752.35	951.55	0.00	0.00
92.33		347.22	437.94	0.00	0.00
95.00		399.90	809.09	0.00	0.00
98.50		521.50	1048.44	0.00	0.00
100.00		221.64	219.22	0.00	0.00
105.00		735.14	722.04	0.00	0.00
110.00		724.86	708.64	0.00	0.00
115.00		713.99	695.25	0.00	0.00
120.00		702.58	681.85	0.00	0.00
122.00	(1) attachments	392.25	286.99	0.00	0.00
125.00		412.23	399.47	0.00	0.00
130.00		678.23	655.06	0.00	0.00
131.75		234.20	226.54	0.00	0.00
135.00		436.05	697.05	0.00	0.00
137.00		266.04	424.79	0.00	0.00
140.00		394.24	347.70	0.00	0.00
145.00		647.83	570.62	0.00	0.00
147.00	(26) attachments	7759.70	3386.43	0.00	0.00
150.00		378.02	279.72	0.00	0.00
155.00		619.34	456.67	0.00	0.00
160.00		604.54	444.77	0.00	0.00
165.00		589.39	432.86	0.00	0.00
167.00	(23) attachments	4497.72	2076.91	0.00	0.00
170.00		342.04	244.02	0.00	0.00
175.00		558.11	397.17	0.00	0.00
177.00	(19) attachments	4181.18	1661.32	0.00	0.00
180.00		322.87	196.03	0.00	0.00

Total Applied Force Summary

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Totals:	41,191.74	41,311.98	0.00	0.00
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Calculated Forces

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (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 101 mph Wind	Iterations 25
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	-41.24	-41.26	0.00	-4911.0	0.00	4911.05	5499.24	2749.62	13525.8	6714.82	0.00	0.000	0.000	0.739
5.00	-39.69	-40.68	0.00	-4704.7	0.00	4704.76	5446.13	2723.07	13174.3	6540.32	0.10	-0.184	0.000	0.727
10.00	-38.17	-40.10	0.00	-4501.3	0.00	4501.37	5391.79	2695.90	12824.2	6366.51	0.39	-0.368	0.000	0.714
15.00	-36.67	-39.53	0.00	-4300.8	0.00	4300.85	5336.22	2668.11	12475.6	6193.46	0.88	-0.554	0.000	0.702
20.00	-35.19	-38.92	0.00	-4103.1	0.00	4103.19	5279.43	2639.71	12128.7	6021.24	1.56	-0.741	0.000	0.688
25.00	-33.74	-38.28	0.00	-3908.5	0.00	3908.59	5221.40	2610.70	11783.7	5849.94	2.43	-0.928	0.000	0.675
30.00	-32.31	-37.62	0.00	-3717.1	0.00	3717.18	5162.15	2581.08	11440.6	5679.62	3.51	-1.116	0.000	0.661
35.00	-30.91	-36.94	0.00	-3529.1	0.00	3529.10	5101.67	2550.83	11099.7	5510.36	4.78	-1.305	0.000	0.647
40.00	-29.54	-36.24	0.00	-3344.4	0.00	3344.42	5039.96	2519.98	10761.0	5342.24	6.24	-1.494	0.000	0.632
45.00	-28.24	-35.48	0.00	-3163.2	0.00	3163.24	4977.02	2488.51	10424.8	5175.32	7.91	-1.683	0.000	0.617
45.50	-28.06	-35.45	0.00	-3145.5	0.00	3145.50	4970.66	2485.33	10391.3	5158.70	8.09	-1.702	0.000	0.616
50.00	-26.05	-34.75	0.00	-2985.9	0.00	2985.97	4912.85	2456.43	10091.1	5009.68	9.78	-1.873	0.000	0.602
52.75	-24.83	-34.32	0.00	-2890.4	0.00	2890.41	3995.12	1997.56	8262.25	4101.73	10.89	-1.979	0.000	0.711
55.00	-24.27	-34.02	0.00	-2813.1	0.00	2813.19	3974.20	1987.10	8146.45	4044.24	11.84	-2.065	0.000	0.702
60.00	-23.12	-33.28	0.00	-2643.1	0.00	2643.11	3926.82	1963.41	7890.08	3916.97	14.12	-2.275	0.000	0.681
65.00	-21.99	-32.54	0.00	-2476.7	0.00	2476.72	3878.22	1939.11	7635.13	3790.40	16.61	-2.484	0.000	0.659
70.00	-20.89	-31.79	0.00	-2314.0	0.00	2314.04	3828.38	1914.19	7381.75	3664.61	19.32	-2.692	0.000	0.637
75.00	-19.82	-31.04	0.00	-2155.1	0.00	2155.10	3777.31	1888.66	7130.10	3539.68	22.25	-2.898	0.000	0.614
80.00	-18.76	-30.29	0.00	-1999.9	0.00	1999.90	3725.02	1862.51	6880.32	3415.68	25.40	-3.102	0.000	0.591
85.00	-17.73	-29.54	0.00	-1848.4	0.00	1848.46	3671.50	1835.75	6632.56	3292.68	28.75	-3.304	0.000	0.566
90.00	-16.76	-28.77	0.00	-1700.7	0.00	1700.78	3616.75	1808.37	6386.97	3170.76	32.32	-3.503	0.000	0.541
92.33	-16.29	-28.43	0.00	-1633.6	0.00	1633.64	3590.78	1795.39	6273.15	3114.26	34.05	-3.596	0.000	0.529
95.00	-15.45	-28.01	0.00	-1557.8	0.00	1557.83	3560.77	1780.38	6143.71	3050.00	36.09	-3.701	0.000	0.515
98.50	-14.39	-27.44	0.00	-1459.8	0.00	1459.80	2386.87	1193.44	4124.84	2047.75	38.85	-3.837	0.000	0.719
100.00	-14.12	-27.25	0.00	-1418.6	0.00	1418.64	2378.03	1189.02	4080.63	2025.79	40.07	-3.895	0.000	0.707
105.00	-13.34	-26.52	0.00	-1282.4	0.00	1282.41	2347.75	1173.88	3933.45	1952.73	44.27	-4.132	0.000	0.663
110.00	-12.59	-25.79	0.00	-1149.8	0.00	1149.83	2316.25	1158.12	3786.73	1879.89	48.72	-4.361	0.000	0.618
115.00	-11.86	-25.07	0.00	-1020.8	0.00	1020.88	2283.51	1141.75	3640.60	1807.35	53.40	-4.580	0.000	0.571
120.00	-11.17	-24.34	0.00	-895.54	0.00	895.54	2249.55	1124.77	3495.22	1735.17	58.31	-4.789	0.000	0.522
122.00	-10.88	-23.94	0.00	-846.86	0.00	846.86	2235.62	1117.81	3437.31	1706.42	60.33	-4.872	0.000	0.502
125.00	-10.45	-23.53	0.00	-775.03	0.00	775.03	2214.35	1107.18	3350.73	1663.44	63.43	-4.990	0.000	0.471
130.00	-9.81	-22.81	0.00	-657.39	0.00	657.39	2177.93	1088.97	3207.29	1592.24	68.75	-5.172	0.000	0.418
131.75	-9.58	-22.58	0.00	-617.39	0.00	617.39	2164.87	1082.44	3157.27	1567.40	70.66	-5.234	0.000	0.399
135.00	-8.89	-22.09	0.00	-544.10	0.00	544.10	2140.28	1070.14	3065.05	1521.62	74.25	-5.341	0.000	0.362
137.00	-8.46	-21.80	0.00	-499.84	0.00	499.84	1820.19	910.09	2619.63	1300.49	76.50	-5.404	0.000	0.390
140.00	-8.11	-21.39	0.00	-434.53	0.00	434.53	1802.60	901.30	2550.50	1266.18	79.92	-5.491	0.000	0.348
145.00	-7.57	-20.70	0.00	-327.59	0.00	327.59	1772.28	886.14	2435.71	1209.19	85.74	-5.625	0.000	0.276
147.00	-4.96	-12.65	0.00	-286.20	0.00	286.20	1759.80	879.90	2390.02	1186.51	88.10	-5.672	0.000	0.244
150.00	-4.70	-12.25	0.00	-248.25	0.00	248.25	1740.72	870.36	2321.75	1152.61	91.68	-5.735	0.000	0.218
155.00	-4.29	-11.59	0.00	-187.00	0.00	187.00	1707.94	853.97	2208.76	1096.52	97.73	-5.826	0.000	0.173
160.00	-3.90	-10.95	0.00	-129.03	0.00	129.03	1673.92	836.96	2096.88	1040.98	103.86	-5.899	0.000	0.126
165.00	-3.52	-10.32	0.00	-74.27	0.00	74.27	1638.68	819.34	1986.28	986.07	110.06	-5.950	0.000	0.078
167.00	-1.92	-5.63	0.00	-53.62	0.00	53.62	1624.24	812.12	1942.43	964.30	112.55	-5.964	0.000	0.057
170.00	-1.71	-5.27	0.00	-36.72	0.00	36.72	1602.21	801.11	1877.10	931.87	116.29	-5.980	0.000	0.041
175.00	-1.38	-4.67	0.00	-10.37	0.00	10.37	1564.52	782.26	1769.48	878.45	122.56	-5.995	0.000	0.013
177.00	-0.16	-0.34	0.00	-1.02	0.00	1.02	1549.09	774.55	1726.91	857.31	125.06	-5.996	0.000	0.001
180.00	0.00	-0.32	0.00	0.00	0.00	0.00	1525.59	762.80	1663.59	825.87	128.82	-5.996	0.000	0.000

Calculated Forces

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

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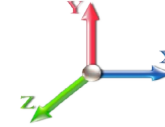
Wind Loading - Shaft

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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

Dead Load Factor 1.20
Wind Load Factor 1.00



Iterations 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	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.656	5.00	26.663	32.00	181.9	635.2	2318.5
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.775	5.00	26.348	31.62	179.7	671.2	2326.7
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.848	5.00	25.995	31.19	177.3	688.4	2316.1
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.902	5.00	25.625	30.75	185.5	697.4	2297.3
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.945	5.00	25.247	30.30	191.5	701.6	2273.8
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.981	5.00	24.862	29.83	196.0	702.8	2247.1
35.00		1.00	1.01	6.169	6.79	0.00	1.200	2.012	5.00	24.474	29.37	199.3	701.7	2218.3
40.00		1.00	1.04	6.345	6.98	0.00	1.200	2.039	5.00	24.082	28.90	201.7	698.9	2187.7
45.00		1.00	1.07	6.504	7.15	0.00	1.200	2.063	5.00	23.688	28.43	203.4	694.7	2155.8
45.50	Bot - Section 2	1.00	1.07	6.519	7.17	0.00	1.200	2.065	0.50	2.346	2.82	20.2	69.4	214.0
50.00		1.00	1.09	6.650	7.32	0.00	1.200	2.085	4.50	21.231	25.48	186.4	629.5	3040.6
52.75	Top - Section 1	1.00	1.11	6.726	7.40	0.00	1.200	2.096	2.75	12.814	15.38	113.8	382.9	1835.8
55.00		1.00	1.12	6.785	7.46	0.00	1.200	2.105	2.25	10.395	12.47	93.1	312.0	860.1
60.00		1.00	1.14	6.910	7.60	0.00	1.200	2.123	5.00	22.814	27.38	208.1	686.6	1887.3
65.00		1.00	1.16	7.028	7.73	0.00	1.200	2.140	5.00	22.414	26.90	207.9	679.1	1856.0
70.00		1.00	1.17	7.138	7.85	0.00	1.200	2.156	5.00	22.013	26.42	207.4	671.1	1824.2
75.00		1.00	1.19	7.243	7.97	0.00	1.200	2.171	5.00	21.612	25.93	206.6	662.6	1791.8
80.00		1.00	1.21	7.342	8.08	0.00	1.200	2.185	5.00	21.209	25.45	205.5	653.6	1759.0
85.00		1.00	1.22	7.436	8.18	0.00	1.200	2.198	5.00	20.806	24.97	204.2	644.2	1725.8
90.00		1.00	1.24	7.526	8.28	0.00	1.200	2.211	5.00	20.402	24.48	202.7	634.4	1692.2
92.33	Bot - Section 3	1.00	1.24	7.567	8.32	0.00	1.200	2.217	2.33	9.381	11.26	93.7	293.9	779.4
95.00		1.00	1.25	7.612	8.37	0.00	1.200	2.223	2.67	10.741	12.89	107.9	337.2	1303.5
98.50	Top - Section 2	1.00	1.26	7.671	8.44	0.00	1.200	2.231	3.50	13.924	16.71	141.0	437.5	1687.8
100.00		1.00	1.27	7.695	8.46	0.00	1.200	2.234	1.50	5.906	7.09	60.0	186.6	415.6
105.00		1.00	1.28	7.774	8.55	0.00	1.200	2.245	5.00	19.427	23.31	199.4	611.2	1363.0
110.00		1.00	1.29	7.851	8.64	0.00	1.200	2.256	5.00	19.022	22.83	197.1	600.3	1334.2
115.00		1.00	1.30	7.925	8.72	0.00	1.200	2.266	5.00	18.616	22.34	194.7	589.1	1305.2
120.00		1.00	1.32	7.996	8.80	0.00	1.200	2.276	5.00	18.210	21.85	192.2	577.7	1276.0
122.00	Appurtenance(s)	1.00	1.32	8.024	8.83	0.00	1.200	2.279	2.00	7.169	8.60	75.9	229.2	503.5
125.00		1.00	1.33	8.065	8.87	0.00	1.200	2.285	3.00	10.632	12.76	113.2	339.7	745.8
130.00		1.00	1.34	8.132	8.95	0.00	1.200	2.294	5.00	17.396	20.88	186.7	554.4	1216.9
131.75	Bot - Section 4	1.00	1.34	8.155	8.97	0.00	1.200	2.297	1.75	6.003	7.20	64.6	192.9	421.0
135.00		1.00	1.35	8.197	9.02	0.00	1.200	2.303	3.25	11.123	13.35	120.3	356.9	1149.4
137.00	Top - Section 3	1.00	1.35	8.222	9.04	0.00	1.200	2.306	2.00	6.777	8.13	73.6	218.3	700.2
140.00		1.00	1.36	8.260	9.09	0.00	1.200	2.311	3.00	10.016	12.02	109.2	322.2	659.4
145.00		1.00	1.37	8.321	9.15	0.00	1.200	2.319	5.00	16.387	19.66	180.0	525.2	1075.2
147.00	Appurtenance(s)	1.00	1.37	8.345	9.18	0.00	1.200	2.322	2.00	6.440	7.73	70.9	208.1	423.6
150.00		1.00	1.38	8.381	9.22	0.00	1.200	2.327	3.00	9.538	11.45	105.5	307.7	626.2
155.00		1.00	1.39	8.439	9.28	0.00	1.200	2.335	5.00	15.572	18.69	173.5	500.2	1018.4
160.00		1.00	1.40	8.495	9.34	0.00	1.200	2.342	5.00	15.164	18.20	170.0	487.4	989.7
165.00		1.00	1.41	8.551	9.41	0.00	1.200	2.349	5.00	14.755	17.71	166.5	474.6	961.0
167.00	Appurtenance(s)	1.00	1.41	8.572	9.43	0.00	1.200	2.352	2.00	5.787	6.94	65.5	187.7	377.9
170.00		1.00	1.42	8.604	9.46	0.00	1.200	2.356	3.00	8.559	10.27	97.2	276.9	557.4
175.00		1.00	1.42	8.657	9.52	0.00	1.200	2.363	5.00	13.939	16.73	159.3	448.4	903.1
177.00	Appurtenance(s)	1.00	1.43	8.678	9.55	0.00	1.200	2.366	2.00	5.460	6.55	62.5	177.3	354.7
180.00		1.00	1.43	8.709	9.58	0.00	1.200	2.370	3.00	8.068	9.68	92.7	261.1	522.5

Wind Loading - Shaft

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (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



Totals:	180.00	6,845.6	61,498.4
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Discrete Appurtenance Forces

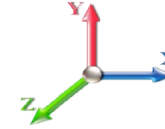
Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Page: 24

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

Dead Load Factor 1.20
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	177.00	RFS FD9R6004-2C-3L	6	8.678	9.546	0.50	0.80	2.94	73.80	0.000	0.000	28.06	0.00	0.00	
2	177.00	BXA-171085-8BF	3	8.678	9.546	0.67	0.80	10.46	248.25	0.000	0.000	99.84	0.00	0.00	
3	177.00	LPA-80080-4CF	6	8.678	9.546	1.36	0.80	31.23	828.20	0.000	0.000	298.14	0.00	0.00	
4	177.00	BXA-70063-6CF	3	8.678	9.546	0.58	0.80	16.33	824.17	0.000	0.000	155.91	0.00	0.00	
5	177.00	Low Profile Platform	1	8.678	9.546	1.00	1.00	45.94	3274.34	0.000	0.000	438.54	0.00	0.00	
6	167.00	Alcatel Lucent 1900 MHz	3	8.572	9.429	0.54	0.80	7.20	481.64	0.000	0.000	67.92	0.00	0.00	
7	167.00	RFS ACU-A20-N RET	4	8.572	9.429	0.63	0.80	1.36	22.76	0.000	0.000	12.87	0.00	0.00	
8	167.00	Alcatel Lucent	3	8.572	9.429	0.54	0.80	8.32	731.70	0.000	0.000	78.47	0.00	0.00	
9	167.00	Low Profile Platform	1	8.572	9.429	1.00	1.00	53.22	2551.24	0.000	0.000	501.88	0.00	0.00	
10	167.00	Alcatel Lucent 800 MHz	3	8.572	9.429	0.54	0.80	6.48	426.53	0.000	0.000	61.13	0.00	0.00	
11	167.00	Alcatel Lucent 800 MHz	3	8.572	9.429	0.55	0.80	2.74	88.01	0.000	0.000	25.79	0.00	0.00	
12	167.00	APXVSP18-C-A20	3	8.572	9.429	0.66	0.80	23.48	755.57	0.000	0.000	221.37	0.00	0.00	
13	167.00	APXVTM14-C-I20	3	8.572	9.429	0.62	0.80	14.55	897.18	0.000	0.000	137.21	0.00	0.00	
14	147.00	DMP65R-BU8DA	6	8.345	9.180	0.58	0.80	71.24	3836.47	0.000	0.000	653.92	0.00	0.00	
15	147.00	TT08-19DB111-001	3	8.345	9.180	0.73	0.80	3.57	162.65	0.000	0.000	32.77	0.00	0.00	
16	147.00	RRUS 4478 B14	3	8.345	9.180	0.65	0.80	6.93	523.04	0.000	0.000	63.57	0.00	0.00	
17	147.00	RRUS 8843 B2 B66A	3	8.345	9.180	0.74	0.80	5.26	703.21	0.000	0.000	48.25	0.00	0.00	
18	147.00	RRUS 4449 B5/B12	3	8.345	9.180	0.72	0.80	8.08	637.83	0.000	0.000	74.14	0.00	0.00	
19	147.00	Site Pro 1 RMQP-496-HK	1	8.345	9.180	1.00	1.00	80.26	5949.19	0.000	0.000	736.79	0.00	0.00	
20	147.00	7770.00	3	8.345	9.180	0.62	0.80	13.01	706.84	0.000	0.000	119.40	0.00	0.00	
21	147.00	CCI DTMABP7819VG12A	3	8.345	9.180	0.55	0.80	3.05	149.09	0.000	0.000	27.99	0.00	0.00	
22	147.00	Raycap DC6-48-60-18-8F	1	8.345	9.180	0.80	0.80	1.20	102.73	0.000	0.000	11.04	0.00	0.00	
23	122.00	LMU Nokia CS72188.01+	1	8.024	8.826	0.80	0.80	3.24	45.28	0.000	0.000	28.63	0.00	0.00	
Totals:									24,019.72						3,923.62

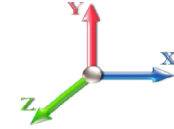
Total Applied Force Summary

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 25



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

Dead Load Factor 1.20
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
5.00		181.89	2529.39	0.00	0.00
10.00		179.74	2537.56	0.00	0.00
15.00		177.33	2526.99	0.00	0.00
20.00		185.48	2508.21	0.00	0.00
25.00		191.53	2484.69	0.00	0.00
30.00		195.99	2458.04	0.00	0.00
35.00		199.30	2429.15	0.00	0.00
40.00		201.70	2398.57	0.00	0.00
45.00		203.38	2366.66	0.00	0.00
45.50		20.19	235.09	0.00	0.00
50.00		186.37	3230.38	0.00	0.00
52.75		113.76	1951.78	0.00	0.00
55.00		93.10	955.02	0.00	0.00
60.00		208.10	2098.21	0.00	0.00
65.00		207.93	2066.94	0.00	0.00
70.00		207.42	2035.10	0.00	0.00
75.00		206.62	2002.74	0.00	0.00
80.00		205.54	1969.94	0.00	0.00
85.00		204.22	1936.72	0.00	0.00
90.00		202.69	1903.14	0.00	0.00
92.33		93.70	877.80	0.00	0.00
95.00		107.93	1415.97	0.00	0.00
98.50		140.98	1835.41	0.00	0.00
100.00		59.99	478.85	0.00	0.00
105.00		199.37	1573.91	0.00	0.00
110.00		197.13	1545.13	0.00	0.00
115.00		194.73	1516.12	0.00	0.00
120.00		192.20	1486.87	0.00	0.00
122.00	(1) attachments	104.56	633.19	0.00	0.00
125.00		113.19	872.31	0.00	0.00
130.00		186.74	1427.77	0.00	0.00
131.75		64.62	494.98	0.00	0.00
135.00		120.34	1286.31	0.00	0.00
137.00		73.55	784.68	0.00	0.00
140.00		109.20	785.76	0.00	0.00
145.00		179.99	1286.06	0.00	0.00
147.00	(26) attachments	1838.81	13279.04	0.00	0.00
150.00		105.51	680.63	0.00	0.00
155.00		173.46	1109.08	0.00	0.00
160.00		170.04	1080.46	0.00	0.00
165.00		166.54	1051.70	0.00	0.00
167.00	(23) attachments	1172.12	6368.80	0.00	0.00
170.00		97.21	602.28	0.00	0.00
175.00		159.28	977.97	0.00	0.00
177.00	(19) attachments	1083.03	5633.39	0.00	0.00
180.00		92.75	522.48	0.00	0.00

Total Applied Force Summary

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Totals:	10,769.27	92,231.27	0.00	0.00
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Calculated Forces

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

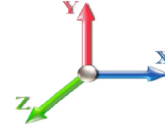


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Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Iterations 25

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	-92.23	-10.81	0.00	-1354.6	0.00	1354.64	5499.24	2749.62	13525.8	6714.82	0.00	0.000	0.000	0.219
5.00	-89.69	-10.71	0.00	-1300.5	0.00	1300.59	5446.13	2723.07	13174.3	6540.32	0.03	-0.051	0.000	0.215
10.00	-87.14	-10.60	0.00	-1247.0	0.00	1247.06	5391.79	2695.90	12824.2	6366.51	0.11	-0.102	0.000	0.212
15.00	-84.60	-10.50	0.00	-1194.0	0.00	1194.05	5336.22	2668.11	12475.6	6193.46	0.24	-0.153	0.000	0.209
20.00	-82.09	-10.38	0.00	-1141.5	0.00	1141.58	5279.43	2639.71	12128.7	6021.24	0.43	-0.205	0.000	0.205
25.00	-79.59	-10.25	0.00	-1089.6	0.00	1089.69	5221.40	2610.70	11783.7	5849.94	0.67	-0.257	0.000	0.202
30.00	-77.13	-10.11	0.00	-1038.4	0.00	1038.46	5162.15	2581.08	11440.6	5679.62	0.97	-0.310	0.000	0.198
35.00	-74.69	-9.97	0.00	-987.91	0.00	987.91	5101.67	2550.83	11099.7	5510.36	1.32	-0.363	0.000	0.194
40.00	-72.28	-9.81	0.00	-938.08	0.00	938.08	5039.96	2519.98	10761.0	5342.24	1.73	-0.416	0.000	0.190
45.00	-69.92	-9.63	0.00	-889.01	0.00	889.01	4977.02	2488.51	10424.8	5175.32	2.20	-0.469	0.000	0.186
45.50	-69.68	-9.64	0.00	-884.19	0.00	884.19	4970.66	2485.33	10391.3	5158.70	2.25	-0.474	0.000	0.185
50.00	-66.44	-9.47	0.00	-840.82	0.00	840.82	4912.85	2456.43	10091.1	5009.68	2.72	-0.522	0.000	0.181
52.75	-64.49	-9.37	0.00	-814.78	0.00	814.78	3995.12	1997.56	8262.25	4101.73	3.03	-0.552	0.000	0.215
55.00	-63.52	-9.31	0.00	-793.70	0.00	793.70	3974.20	1987.10	8146.45	4044.24	3.29	-0.576	0.000	0.212
60.00	-61.42	-9.15	0.00	-747.14	0.00	747.14	3926.82	1963.41	7890.08	3916.97	3.93	-0.636	0.000	0.206
65.00	-59.35	-8.97	0.00	-701.42	0.00	701.42	3878.22	1939.11	7635.13	3790.40	4.62	-0.695	0.000	0.200
70.00	-57.30	-8.80	0.00	-656.55	0.00	656.55	3828.38	1914.19	7381.75	3664.61	5.38	-0.754	0.000	0.194
75.00	-55.30	-8.62	0.00	-612.55	0.00	612.55	3777.31	1888.66	7130.10	3539.68	6.20	-0.812	0.000	0.188
80.00	-53.32	-8.44	0.00	-569.44	0.00	569.44	3725.02	1862.51	6880.32	3415.68	7.09	-0.870	0.000	0.181
85.00	-51.38	-8.26	0.00	-527.23	0.00	527.23	3671.50	1835.75	6632.56	3292.68	8.03	-0.928	0.000	0.174
90.00	-49.47	-8.06	0.00	-485.94	0.00	485.94	3616.75	1808.37	6386.97	3170.76	9.03	-0.985	0.000	0.167
92.33	-48.59	-7.97	0.00	-467.13	0.00	467.13	3590.78	1795.39	6273.15	3114.26	9.52	-1.011	0.000	0.164
95.00	-47.18	-7.87	0.00	-445.87	0.00	445.87	3560.77	1780.38	6143.71	3050.00	10.09	-1.041	0.000	0.159
98.50	-45.34	-7.72	0.00	-418.32	0.00	418.32	2386.87	1193.44	4124.84	2047.75	10.87	-1.080	0.000	0.223
100.00	-44.86	-7.68	0.00	-406.75	0.00	406.75	2378.03	1189.02	4080.63	2025.79	11.21	-1.097	0.000	0.220
105.00	-43.28	-7.50	0.00	-368.34	0.00	368.34	2347.75	1173.88	3933.45	1952.73	12.40	-1.165	0.000	0.207
110.00	-41.73	-7.32	0.00	-330.83	0.00	330.83	2316.25	1158.12	3786.73	1879.89	13.65	-1.231	0.000	0.194
115.00	-40.21	-7.13	0.00	-294.24	0.00	294.24	2283.51	1141.75	3640.60	1807.35	14.98	-1.294	0.000	0.180
120.00	-38.72	-6.94	0.00	-258.57	0.00	258.57	2249.55	1124.77	3495.22	1735.17	16.36	-1.354	0.000	0.166
122.00	-38.09	-6.84	0.00	-244.69	0.00	244.69	2235.62	1117.81	3437.31	1706.42	16.94	-1.378	0.000	0.160
125.00	-37.21	-6.73	0.00	-224.19	0.00	224.19	2214.35	1107.18	3350.73	1663.44	17.81	-1.412	0.000	0.152
130.00	-35.79	-6.53	0.00	-190.54	0.00	190.54	2177.93	1088.97	3207.29	1592.24	19.32	-1.465	0.000	0.136
131.75	-35.29	-6.47	0.00	-179.09	0.00	179.09	2164.87	1082.44	3157.27	1567.40	19.86	-1.483	0.000	0.131
135.00	-34.01	-6.33	0.00	-158.10	0.00	158.10	2140.28	1070.14	3065.05	1521.62	20.88	-1.514	0.000	0.120
137.00	-33.22	-6.25	0.00	-145.42	0.00	145.42	1820.19	910.09	2619.63	1300.49	21.52	-1.532	0.000	0.130
140.00	-32.44	-6.13	0.00	-126.70	0.00	126.70	1802.60	901.30	2550.50	1266.18	22.49	-1.557	0.000	0.118
145.00	-31.15	-5.93	0.00	-96.03	0.00	96.03	1772.28	886.14	2435.71	1209.19	24.15	-1.597	0.000	0.097
147.00	-17.93	-3.73	0.00	-84.17	0.00	84.17	1759.80	879.90	2390.02	1186.51	24.82	-1.610	0.000	0.081
150.00	-17.25	-3.61	0.00	-72.98	0.00	72.98	1740.72	870.36	2321.75	1152.61	25.83	-1.629	0.000	0.073
155.00	-16.14	-3.41	0.00	-54.93	0.00	54.93	1707.94	853.97	2208.76	1096.52	27.56	-1.656	0.000	0.060
160.00	-15.07	-3.22	0.00	-37.87	0.00	37.87	1673.92	836.96	2096.88	1040.98	29.30	-1.677	0.000	0.045
165.00	-14.02	-3.02	0.00	-21.80	0.00	21.80	1638.68	819.34	1986.28	986.07	31.07	-1.692	0.000	0.031
167.00	-7.69	-1.66	0.00	-15.76	0.00	15.76	1624.24	812.12	1942.43	964.30	31.78	-1.696	0.000	0.021
170.00	-7.09	-1.55	0.00	-10.77	0.00	10.77	1602.21	801.11	1877.10	931.87	32.84	-1.701	0.000	0.016
175.00	-6.12	-1.36	0.00	-3.04	0.00	3.04	1564.52	782.26	1769.48	878.45	34.63	-1.705	0.000	0.007
177.00	-0.52	-0.11	0.00	-0.32	0.00	0.32	1549.09	774.55	1726.91	857.31	35.34	-1.706	0.000	0.001
180.00	0.00	-0.09	0.00	0.00	0.00	0.00	1525.59	762.80	1663.59	825.87	36.41	-1.706	0.000	0.000

Calculated Forces

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

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Seismic Segment Forces (Factored)

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

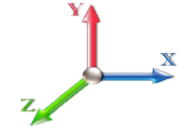


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Load Case: 1.2D + 1.0E

Iterations 23

Gust Response Factor 1.10		Sds 0.18	Ss 0.17
Dead Load Factor 1.20	Seismic Load Factor 1.00	Sd1 0.10	S1 0.06
Wind Load Factor 0.00	Structure Frequency (f1) 0.33	SA 0.03	Seismic Importance Factor 1.00



Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1402.7	0.00	0.03	0.02	22.49	
10.00		1379.5	0.01	0.05	0.03	33.15	
15.00		1356.4	0.01	0.06	0.03	38.50	
20.00		1333.2	0.02	0.07	0.04	41.10	
25.00		1310.1	0.04	0.07	0.04	42.26	
30.00		1286.9	0.05	0.07	0.04	42.71	
35.00		1263.8	0.07	0.07	0.04	42.87	
40.00		1240.6	0.09	0.07	0.04	42.95	
45.00		1217.5	0.12	0.07	0.03	42.99	
45.50	Bot - Section 2	120.48	0.12	0.07	0.03	4.26	
50.00		2009.2	0.15	0.07	0.03	72.20	
52.75	Top - Section 1	1210.7	0.16	0.07	0.03	43.82	
55.00		456.74	0.18	0.07	0.03	16.60	
60.00		1000.5	0.21	0.06	0.02	36.30	
65.00		980.75	0.25	0.06	0.02	34.72	
70.00		960.91	0.29	0.05	0.01	32.00	
75.00		941.06	0.33	0.04	0.01	27.78	
80.00		921.22	0.37	0.03	0.01	21.79	
85.00		901.37	0.42	0.01	0.01	14.00	
90.00		881.53	0.47	-0.01	0.01	4.80	
92.33	Bot - Section 3	404.59	0.50	-0.02	0.01	0.12	
95.00		805.26	0.53	-0.03	0.01	-4.62	
98.50	Top - Section 2	1041.9	0.57	-0.04	0.01	-14.08	
100.00		190.86	0.58	-0.05	0.01	-3.19	
105.00		626.51	0.64	-0.07	0.02	-16.32	
110.00		611.63	0.71	-0.09	0.03	-20.02	
115.00		596.75	0.77	-0.11	0.05	-21.58	
120.00		581.86	0.84	-0.12	0.07	-21.01	
122.00	Appurtenance(s)	248.58	0.87	-0.12	0.08	-8.73	
125.00		338.40	0.91	-0.12	0.09	-11.02	
130.00		552.10	0.99	-0.11	0.12	-14.14	
131.75	Bot - Section 4	190.08	1.01	-0.11	0.14	-4.25	
135.00		660.38	1.06	-0.09	0.17	-10.07	
137.00	Top - Section 3	401.57	1.09	-0.07	0.18	-4.08	
140.00		281.00	1.14	-0.04	0.21	-0.44	
145.00		458.27	1.23	0.03	0.27	7.09	
147.00	Appurtenance(s)	3692.4	1.26	0.07	0.30	85.77	
150.00		265.44	1.31	0.14	0.35	9.52	
155.00		431.81	1.40	0.29	0.43	25.77	
160.00		418.58	1.49	0.48	0.53	36.39	
165.00		405.36	1.59	0.74	0.65	47.71	
167.00	Appurtenance(s)	2277.4	1.63	0.86	0.71	298.36	
170.00		233.69	1.69	1.07	0.79	35.53	
175.00		378.90	1.79	1.48	0.95	72.02	
177.00	Appurtenance(s)	1820.9	1.83	1.67	1.03	375.68	

Seismic Segment Forces (Factored)

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 30
Struct Class: II		



180.00	217.81	1.89	1.98	1.14	50.49
	Totals: 40,307.9				1,548.2
					Total Wind: 41,191.7

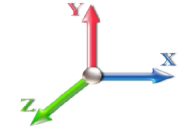
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (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 23
Gust Response Factor 1.10	Sds 0.18	Ss 0.17
Dead Load Factor 1.20	Seismic Load Factor 1.00	S1 0.06
Wind Load Factor 0.00	Structure Frequency (f1) 0.33	SA 0.03
	Seismic Importance Factor 1.00	



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-55.08	-1.70	0.00	-214.30	0.00	214.30	5499.24	2749.62	13525.8	6714.82	0.00	0.00	0.00	0.042
5.00	-53.19	-1.69	0.00	-205.78	0.00	205.78	5446.13	2723.07	13174.3	6540.32	0.00	-0.01	0.041	
10.00	-51.32	-1.66	0.00	-197.33	0.00	197.33	5391.79	2695.90	12824.2	6366.51	0.02	-0.02	0.041	
15.00	-49.48	-1.63	0.00	-189.01	0.00	189.01	5336.22	2668.11	12475.6	6193.46	0.04	-0.02	0.040	
20.00	-47.67	-1.60	0.00	-180.86	0.00	180.86	5279.43	2639.71	12128.7	6021.24	0.07	-0.03	0.039	
25.00	-45.89	-1.56	0.00	-172.88	0.00	172.88	5221.40	2610.70	11783.7	5849.94	0.11	-0.04	0.038	
30.00	-44.13	-1.52	0.00	-165.08	0.00	165.08	5162.15	2581.08	11440.6	5679.62	0.15	-0.05	0.038	
35.00	-42.41	-1.48	0.00	-157.47	0.00	157.47	5101.67	2550.83	11099.7	5510.36	0.21	-0.06	0.037	
40.00	-40.71	-1.44	0.00	-150.05	0.00	150.05	5039.96	2519.98	10761.0	5342.24	0.27	-0.07	0.036	
45.00	-39.03	-1.40	0.00	-142.83	0.00	142.83	4977.02	2488.51	10424.8	5175.32	0.35	-0.07	0.035	
45.50	-38.87	-1.40	0.00	-142.13	0.00	142.13	4970.66	2485.33	10391.3	5158.70	0.36	-0.08	0.035	
50.00	-36.27	-1.33	0.00	-135.82	0.00	135.82	4912.85	2456.43	10091.1	5009.68	0.43	-0.08	0.034	
52.75	-34.70	-1.29	0.00	-132.16	0.00	132.16	3995.12	1997.56	8262.25	4101.73	0.48	-0.09	0.041	
55.00	-34.05	-1.27	0.00	-129.27	0.00	129.27	3974.20	1987.10	8146.45	4044.24	0.52	-0.09	0.041	
60.00	-32.64	-1.24	0.00	-122.91	0.00	122.91	3926.82	1963.41	7890.08	3916.97	0.62	-0.10	0.040	
65.00	-31.25	-1.21	0.00	-116.71	0.00	116.71	3878.22	1939.11	7635.13	3790.40	0.74	-0.11	0.039	
70.00	-29.89	-1.18	0.00	-110.67	0.00	110.67	3828.38	1914.19	7381.75	3664.61	0.86	-0.12	0.038	
75.00	-28.55	-1.15	0.00	-104.78	0.00	104.78	3777.31	1888.66	7130.10	3539.68	0.99	-0.13	0.037	
80.00	-27.23	-1.13	0.00	-99.02	0.00	99.02	3725.02	1862.51	6880.32	3415.68	1.13	-0.14	0.036	
85.00	-25.94	-1.12	0.00	-93.36	0.00	93.36	3671.50	1835.75	6632.56	3292.68	1.29	-0.15	0.035	
90.00	-24.67	-1.11	0.00	-87.76	0.00	87.76	3616.75	1808.37	6386.97	3170.76	1.45	-0.16	0.035	
92.33	-24.09	-1.11	0.00	-85.16	0.00	85.16	3590.78	1795.39	6273.15	3114.26	1.53	-0.17	0.034	
95.00	-23.01	-1.11	0.00	-82.19	0.00	82.19	3560.77	1780.38	6143.71	3050.00	1.62	-0.17	0.033	
98.50	-21.61	-1.11	0.00	-78.29	0.00	78.29	2386.87	1193.44	4124.84	2047.75	1.75	-0.18	0.047	
100.00	-21.32	-1.11	0.00	-76.63	0.00	76.63	2378.03	1189.02	4080.63	2025.79	1.81	-0.18	0.047	
105.00	-20.36	-1.12	0.00	-71.06	0.00	71.06	2347.75	1173.88	3933.45	1952.73	2.01	-0.20	0.045	
110.00	-19.41	-1.12	0.00	-65.48	0.00	65.48	2316.25	1158.12	3786.73	1879.89	2.22	-0.21	0.043	
115.00	-18.48	-1.12	0.00	-59.90	0.00	59.90	2283.51	1141.75	3640.60	1807.35	2.44	-0.22	0.041	
120.00	-17.57	-1.12	0.00	-54.31	0.00	54.31	2249.55	1124.77	3495.22	1735.17	2.68	-0.23	0.039	
122.00	-17.19	-1.12	0.00	-52.08	0.00	52.08	2235.62	1117.81	3437.31	1706.42	2.78	-0.24	0.038	
125.00	-16.66	-1.12	0.00	-48.73	0.00	48.73	2214.35	1107.18	3350.73	1663.44	2.93	-0.25	0.037	
130.00	-15.79	-1.12	0.00	-43.15	0.00	43.15	2177.93	1088.97	3207.29	1592.24	3.19	-0.26	0.034	
131.75	-15.48	-1.12	0.00	-41.19	0.00	41.19	2164.87	1082.44	3157.27	1567.40	3.29	-0.26	0.033	
135.00	-14.55	-1.11	0.00	-37.57	0.00	37.57	2140.28	1070.14	3065.05	1521.62	3.47	-0.27	0.031	
137.00	-13.99	-1.11	0.00	-35.34	0.00	35.34	1820.19	910.09	2619.63	1300.49	3.58	-0.27	0.035	
140.00	-13.52	-1.11	0.00	-32.01	0.00	32.01	1802.60	901.30	2550.50	1266.18	3.76	-0.28	0.033	
145.00	-12.76	-1.10	0.00	-26.46	0.00	26.46	1772.28	886.14	2435.71	1209.19	4.05	-0.29	0.029	
147.00	-8.25	-0.99	0.00	-24.25	0.00	24.25	1759.80	879.90	2390.02	1186.51	4.18	-0.29	0.025	
150.00	-7.87	-0.98	0.00	-21.27	0.00	21.27	1740.72	870.36	2321.75	1152.61	4.36	-0.30	0.023	
155.00	-7.27	-0.96	0.00	-16.36	0.00	16.36	1707.94	853.97	2208.76	1096.52	4.68	-0.31	0.019	
160.00	-6.67	-0.92	0.00	-11.58	0.00	11.58	1673.92	836.96	2096.88	1040.98	5.00	-0.31	0.015	
165.00	-6.10	-0.87	0.00	-7.00	0.00	7.00	1638.68	819.34	1986.28	986.07	5.34	-0.32	0.011	
167.00	-3.33	-0.55	0.00	-5.27	0.00	5.27	1624.24	812.12	1942.43	964.30	5.47	-0.32	0.008	
170.00	-3.00	-0.51	0.00	-3.61	0.00	3.61	1602.21	801.11	1877.10	931.87	5.67	-0.32	0.006	
175.00	-2.47	-0.44	0.00	-1.04	0.00	1.04	1564.52	782.26	1769.48	878.45	6.01	-0.32	0.003	
177.00	-0.26	-0.05	0.00	-0.16	0.00	0.16	1549.09	774.55	1726.91	857.31	6.14	-0.32	0.000	
180.00	0.00	-0.05	0.00	0.00	0.00	0.00	1525.59	762.80	1663.59	825.87	6.34	-0.32	0.000	

Calculated Forces

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

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Seismic Segment Forces (Factored)

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 0.9D + 1.0E

Iterations 23

Gust Response Factor 1.10	Sds 0.18	Ss 0.17	
Dead Load Factor 0.90	Seismic Load Factor 1.00	Sd1 0.10	
Wind Load Factor 0.00	Structure Frequency (f1) 0.33	S1 0.06	

SA 0.03 **Seismic Importance Factor** 1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1402.7	0.00	0.03	0.02	22.49	
10.00		1379.5	0.01	0.05	0.03	33.15	
15.00		1356.4	0.01	0.06	0.03	38.50	
20.00		1333.2	0.02	0.07	0.04	41.10	
25.00		1310.1	0.04	0.07	0.04	42.26	
30.00		1286.9	0.05	0.07	0.04	42.71	
35.00		1263.8	0.07	0.07	0.04	42.87	
40.00		1240.6	0.09	0.07	0.04	42.95	
45.00		1217.5	0.12	0.07	0.03	42.99	
45.50	Bot - Section 2	120.48	0.12	0.07	0.03	4.26	
50.00		2009.2	0.15	0.07	0.03	72.20	
52.75	Top - Section 1	1210.7	0.16	0.07	0.03	43.82	
55.00		456.74	0.18	0.07	0.03	16.60	
60.00		1000.5	0.21	0.06	0.02	36.30	
65.00		980.75	0.25	0.06	0.02	34.72	
70.00		960.91	0.29	0.05	0.01	32.00	
75.00		941.06	0.33	0.04	0.01	27.78	
80.00		921.22	0.37	0.03	0.01	21.79	
85.00		901.37	0.42	0.01	0.01	14.00	
90.00		881.53	0.47	-0.01	0.01	4.80	
92.33	Bot - Section 3	404.59	0.50	-0.02	0.01	0.12	
95.00		805.26	0.53	-0.03	0.01	-4.62	
98.50	Top - Section 2	1041.9	0.57	-0.04	0.01	-14.08	
100.00		190.86	0.58	-0.05	0.01	-3.19	
105.00		626.51	0.64	-0.07	0.02	-16.32	
110.00		611.63	0.71	-0.09	0.03	-20.02	
115.00		596.75	0.77	-0.11	0.05	-21.58	
120.00		581.86	0.84	-0.12	0.07	-21.01	
122.00	Appurtenance(s)	248.58	0.87	-0.12	0.08	-8.73	
125.00		338.40	0.91	-0.12	0.09	-11.02	
130.00		552.10	0.99	-0.11	0.12	-14.14	
131.75	Bot - Section 4	190.08	1.01	-0.11	0.14	-4.25	
135.00		660.38	1.06	-0.09	0.17	-10.07	
137.00	Top - Section 3	401.57	1.09	-0.07	0.18	-4.08	
140.00		281.00	1.14	-0.04	0.21	-0.44	
145.00		458.27	1.23	0.03	0.27	7.09	
147.00	Appurtenance(s)	3692.4	1.26	0.07	0.30	85.77	
150.00		265.44	1.31	0.14	0.35	9.52	
155.00		431.81	1.40	0.29	0.43	25.77	
160.00		418.58	1.49	0.48	0.53	36.39	
165.00		405.36	1.59	0.74	0.65	47.71	
167.00	Appurtenance(s)	2277.4	1.63	0.86	0.71	298.36	
170.00		233.69	1.69	1.07	0.79	35.53	
175.00		378.90	1.79	1.48	0.95	72.02	
177.00	Appurtenance(s)	1820.9	1.83	1.67	1.03	375.68	

Seismic Segment Forces (Factored)

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Page: 34
Struct Class: II		



180.00	217.81	1.89	1.98	1.14	50.49	
	Totals:	40,307.9			1,548.2	Total Wind:
						41,191.7

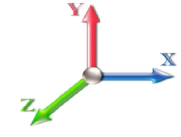
Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (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 23
Gust Response Factor 1.10	Sds 0.18	Ss 0.17
Dead Load Factor 0.90	Seismic Load Factor 1.00	S1 0.06
Wind Load Factor 0.00	Structure Frequency (f1) 0.33	SA 0.03
	Seismic Importance Factor 1.00	



Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-41.31	-1.70	0.00	-211.94	0.00	211.94	5499.24	2749.62	13525.8	6714.82	0.00	0.00	0.00	0.039
5.00	-39.89	-1.69	0.00	-203.42	0.00	203.42	5446.13	2723.07	13174.3	6540.32	0.00	0.00	-0.01	0.038
10.00	-38.49	-1.66	0.00	-194.99	0.00	194.99	5391.79	2695.90	12824.2	6366.51	0.02	0.02	-0.02	0.038
15.00	-37.11	-1.63	0.00	-186.69	0.00	186.69	5336.22	2668.11	12475.6	6193.46	0.04	0.04	-0.02	0.037
20.00	-35.75	-1.59	0.00	-178.57	0.00	178.57	5279.43	2639.71	12128.7	6021.24	0.07	0.07	-0.03	0.036
25.00	-34.42	-1.55	0.00	-170.63	0.00	170.63	5221.40	2610.70	11783.7	5849.94	0.11	0.11	-0.04	0.036
30.00	-33.10	-1.51	0.00	-162.88	0.00	162.88	5162.15	2581.08	11440.6	5679.62	0.15	0.15	-0.05	0.035
35.00	-31.80	-1.47	0.00	-155.32	0.00	155.32	5101.67	2550.83	11099.7	5510.36	0.21	0.21	-0.06	0.034
40.00	-30.53	-1.43	0.00	-147.96	0.00	147.96	5039.96	2519.98	10761.0	5342.24	0.27	0.27	-0.07	0.034
45.00	-29.27	-1.39	0.00	-140.80	0.00	140.80	4977.02	2488.51	10424.8	5175.32	0.34	0.34	-0.07	0.033
45.50	-29.15	-1.39	0.00	-140.11	0.00	140.11	4970.66	2485.33	10391.3	5158.70	0.35	0.35	-0.07	0.033
50.00	-27.20	-1.32	0.00	-133.86	0.00	133.86	4912.85	2456.43	10091.1	5009.68	0.43	0.43	-0.08	0.032
52.75	-26.02	-1.27	0.00	-130.25	0.00	130.25	3995.12	1997.56	8262.25	4101.73	0.47	0.47	-0.09	0.038
55.00	-25.54	-1.26	0.00	-127.38	0.00	127.38	3974.20	1987.10	8146.45	4044.24	0.52	0.52	-0.09	0.038
60.00	-24.48	-1.22	0.00	-121.09	0.00	121.09	3926.82	1963.41	7890.08	3916.97	0.62	0.62	-0.10	0.037
65.00	-23.44	-1.19	0.00	-114.98	0.00	114.98	3878.22	1939.11	7635.13	3790.40	0.73	0.73	-0.11	0.036
70.00	-22.42	-1.16	0.00	-109.02	0.00	109.02	3828.38	1914.19	7381.75	3664.61	0.85	0.85	-0.12	0.036
75.00	-21.41	-1.13	0.00	-103.22	0.00	103.22	3777.31	1888.66	7130.10	3539.68	0.98	0.98	-0.13	0.035
80.00	-20.42	-1.11	0.00	-97.54	0.00	97.54	3725.02	1862.51	6880.32	3415.68	1.12	1.12	-0.14	0.034
85.00	-19.46	-1.10	0.00	-91.97	0.00	91.97	3671.50	1835.75	6632.56	3292.68	1.27	1.27	-0.15	0.033
90.00	-18.50	-1.10	0.00	-86.47	0.00	86.47	3616.75	1808.37	6386.97	3170.76	1.43	1.43	-0.16	0.032
92.33	-18.07	-1.10	0.00	-83.91	0.00	83.91	3590.78	1795.39	6273.15	3114.26	1.51	1.51	-0.16	0.032
95.00	-17.26	-1.10	0.00	-80.99	0.00	80.99	3560.77	1780.38	6143.71	3050.00	1.60	1.60	-0.17	0.031
98.50	-16.21	-1.09	0.00	-77.15	0.00	77.15	2386.87	1193.44	4124.84	2047.75	1.73	1.73	-0.18	0.044
100.00	-15.99	-1.10	0.00	-75.51	0.00	75.51	2378.03	1189.02	4080.63	2025.79	1.78	1.78	-0.18	0.044
105.00	-15.27	-1.10	0.00	-70.03	0.00	70.03	2347.75	1173.88	3933.45	1952.73	1.98	1.98	-0.19	0.042
110.00	-14.56	-1.10	0.00	-64.55	0.00	64.55	2316.25	1158.12	3786.73	1879.89	2.19	2.19	-0.20	0.041
115.00	-13.86	-1.10	0.00	-59.06	0.00	59.06	2283.51	1141.75	3640.60	1807.35	2.41	2.41	-0.22	0.039
120.00	-13.18	-1.10	0.00	-53.57	0.00	53.57	2249.55	1124.77	3495.22	1735.17	2.64	2.64	-0.23	0.037
122.00	-12.89	-1.10	0.00	-51.38	0.00	51.38	2235.62	1117.81	3437.31	1706.42	2.74	2.74	-0.23	0.036
125.00	-12.49	-1.10	0.00	-48.09	0.00	48.09	2214.35	1107.18	3350.73	1663.44	2.89	2.89	-0.24	0.035
130.00	-11.84	-1.10	0.00	-42.60	0.00	42.60	2177.93	1088.97	3207.29	1592.24	3.15	3.15	-0.25	0.032
131.75	-11.61	-1.10	0.00	-40.67	0.00	40.67	2164.87	1082.44	3157.27	1567.40	3.24	3.24	-0.26	0.031
135.00	-10.91	-1.09	0.00	-37.11	0.00	37.11	2140.28	1070.14	3065.05	1521.62	3.42	3.42	-0.26	0.029
137.00	-10.49	-1.09	0.00	-34.92	0.00	34.92	1820.19	910.09	2619.63	1300.49	3.53	3.53	-0.27	0.033
140.00	-10.14	-1.09	0.00	-31.64	0.00	31.64	1802.60	901.30	2550.50	1266.18	3.71	3.71	-0.28	0.031
145.00	-9.57	-1.08	0.00	-26.17	0.00	26.17	1772.28	886.14	2435.71	1209.19	4.00	4.00	-0.29	0.027
147.00	-6.18	-0.98	0.00	-24.00	0.00	24.00	1759.80	879.90	2390.02	1186.51	4.12	4.12	-0.29	0.024
150.00	-5.90	-0.97	0.00	-21.06	0.00	21.06	1740.72	870.36	2321.75	1152.61	4.30	4.30	-0.29	0.022
155.00	-5.45	-0.95	0.00	-16.19	0.00	16.19	1707.94	853.97	2208.76	1096.52	4.62	4.62	-0.30	0.018
160.00	-5.00	-0.91	0.00	-11.47	0.00	11.47	1673.92	836.96	2096.88	1040.98	4.94	4.94	-0.31	0.014
165.00	-4.57	-0.86	0.00	-6.94	0.00	6.94	1638.68	819.34	1986.28	986.07	5.26	5.26	-0.31	0.010
167.00	-2.50	-0.55	0.00	-5.22	0.00	5.22	1624.24	812.12	1942.43	964.30	5.39	5.39	-0.31	0.007
170.00	-2.25	-0.51	0.00	-3.58	0.00	3.58	1602.21	801.11	1877.10	931.87	5.59	5.59	-0.32	0.005
175.00	-1.85	-0.44	0.00	-1.03	0.00	1.03	1564.52	782.26	1769.48	878.45	5.92	5.92	-0.32	0.002
177.00	-0.20	-0.05	0.00	-0.15	0.00	0.15	1549.09	774.55	1726.91	857.31	6.06	6.06	-0.32	0.000
180.00	0.00	-0.05	0.00	0.00	0.00	0.00	1525.59	762.80	1663.59	825.87	6.26	6.26	-0.32	0.000

Calculated Forces

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

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Wind Loading - Shaft

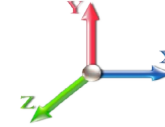
Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 24

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	282.00	0.750	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	277.42	0.750	0.000	5.00	25.283	18.96	155.2	0.0	1402.7
10.00		1.00	0.85	7.442	8.19	272.84	0.750	0.000	5.00	24.868	18.65	152.7	0.0	1379.6
15.00		1.00	0.85	7.442	8.19	268.26	0.750	0.000	5.00	24.454	18.34	150.1	0.0	1356.4
20.00		1.00	0.90	7.896	8.69	271.60	0.750	0.000	5.00	24.040	18.03	156.6	0.0	1333.3
25.00		1.00	0.95	8.276	9.10	273.23	0.750	0.000	5.00	23.626	17.72	161.3	0.0	1310.1
30.00		1.00	0.98	8.600	9.46	273.59	0.750	0.000	5.00	23.212	17.41	164.7	0.0	1287.0
35.00		1.00	1.01	8.883	9.77	273.06	0.750	0.000	5.00	22.797	17.10	167.1	0.0	1263.8
40.00		1.00	1.04	9.137	10.05	271.85	0.750	0.000	5.00	22.383	16.79	168.7	0.0	1240.7
45.00		1.00	1.07	9.366	10.30	270.10	0.750	0.000	5.00	21.969	16.48	169.8	0.0	1217.5
45.50	Bot - Section 2	1.00	1.07	9.388	10.33	269.90	0.750	0.000	0.50	2.174	1.63	16.8	0.0	120.5
50.00		1.00	1.09	9.576	10.53	267.91	0.750	0.000	4.50	19.667	14.75	155.4	0.0	2009.3
52.75	Top - Section 1	1.00	1.11	9.685	10.65	266.55	0.750	0.000	2.75	11.854	8.89	94.7	0.0	1210.7
55.00		1.00	1.12	9.770	10.75	269.40	0.750	0.000	2.25	9.605	7.20	77.4	0.0	456.7
60.00		1.00	1.14	9.951	10.95	266.58	0.750	0.000	5.00	21.045	15.78	172.8	0.0	1000.6
65.00		1.00	1.16	10.120	11.13	263.49	0.750	0.000	5.00	20.631	15.47	172.2	0.0	980.8
70.00		1.00	1.17	10.279	11.31	260.17	0.750	0.000	5.00	20.217	15.16	171.4	0.0	960.9
75.00		1.00	1.19	10.430	11.47	256.64	0.750	0.000	5.00	19.802	14.85	170.4	0.0	941.1
80.00		1.00	1.21	10.572	11.63	252.93	0.750	0.000	5.00	19.388	14.54	169.1	0.0	921.2
85.00		1.00	1.22	10.708	11.78	249.05	0.750	0.000	5.00	18.974	14.23	167.6	0.0	901.4
90.00		1.00	1.24	10.838	11.92	245.03	0.750	0.000	5.00	18.560	13.92	165.9	0.0	881.5
92.33	Bot - Section 3	1.00	1.24	10.896	11.99	243.10	0.750	0.000	2.33	8.519	6.39	76.6	0.0	404.6
95.00		1.00	1.25	10.962	12.06	240.86	0.750	0.000	2.67	9.753	7.32	88.2	0.0	805.3
98.50	Top - Section 2	1.00	1.26	11.046	12.15	237.87	0.750	0.000	3.50	12.623	9.47	115.0	0.0	1041.9
100.00		1.00	1.27	11.081	12.19	239.80	0.750	0.000	1.50	5.348	4.01	48.9	0.0	190.9
105.00		1.00	1.28	11.195	12.31	235.41	0.750	0.000	5.00	17.556	13.17	162.1	0.0	626.5
110.00		1.00	1.29	11.305	12.44	230.92	0.750	0.000	5.00	17.142	12.86	159.9	0.0	611.6
115.00		1.00	1.30	11.412	12.55	226.33	0.750	0.000	5.00	16.728	12.55	157.5	0.0	596.7
120.00		1.00	1.32	11.514	12.67	221.65	0.750	0.000	5.00	16.313	12.23	155.0	0.0	581.9
122.00	Appurtenance(s)	1.00	1.32	11.554	12.71	219.75	0.750	0.000	2.00	6.409	4.81	61.1	0.0	228.6
125.00		1.00	1.33	11.614	12.78	216.88	0.750	0.000	3.00	9.490	7.12	90.9	0.0	338.4
130.00		1.00	1.34	11.710	12.88	212.02	0.750	0.000	5.00	15.485	11.61	149.6	0.0	552.1
131.75	Bot - Section 4	1.00	1.34	11.743	12.92	210.31	0.750	0.000	1.75	5.332	4.00	51.7	0.0	190.1
135.00		1.00	1.35	11.803	12.98	207.10	0.750	0.000	3.25	9.877	7.41	96.2	0.0	660.4
137.00	Top - Section 3	1.00	1.35	11.840	13.02	205.10	0.750	0.000	2.00	6.007	4.51	58.7	0.0	401.6
140.00		1.00	1.36	11.894	13.08	205.07	0.750	0.000	3.00	8.862	6.65	87.0	0.0	281.0
145.00		1.00	1.37	11.982	13.18	200.01	0.750	0.000	5.00	14.455	10.84	142.9	0.0	458.3
147.00	Appurtenance(s)	1.00	1.37	12.017	13.22	197.97	0.750	0.000	2.00	5.666	4.25	56.2	0.0	179.6
150.00		1.00	1.38	12.068	13.27	194.89	0.750	0.000	3.00	8.375	6.28	83.4	0.0	265.4
155.00		1.00	1.39	12.152	13.37	189.71	0.750	0.000	5.00	13.626	10.22	136.6	0.0	431.8
160.00		1.00	1.40	12.233	13.46	184.47	0.750	0.000	5.00	13.212	9.91	133.3	0.0	418.6
165.00		1.00	1.41	12.313	13.54	179.17	0.750	0.000	5.00	12.798	9.60	130.0	0.0	405.4
167.00	Appurtenance(s)	1.00	1.41	12.344	13.58	177.04	0.750	0.000	2.00	5.003	3.75	51.0	0.0	158.4
170.00		1.00	1.42	12.390	13.63	173.82	0.750	0.000	3.00	7.380	5.54	75.4	0.0	233.7
175.00		1.00	1.42	12.466	13.71	168.43	0.750	0.000	5.00	11.969	8.98	123.1	0.0	378.9
177.00	Appurtenance(s)	1.00	1.43	12.496	13.75	166.25	0.750	0.000	2.00	4.672	3.50	48.2	0.0	147.9
180.00		1.00	1.43	12.540	13.79	162.98	0.750	0.000	3.00	6.883	5.16	71.2	0.0	217.8

Wind Loading - Shaft

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (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



Totals:	180.00	5,589.6	32,983.0
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Discrete Appurtenance Forces

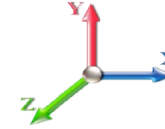
Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 24

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	177.00	RFS FD9R6004-2C-3L	6	12.496	13.746	0.50	0.80	1.10	18.60	0.000	0.000	15.14	0.00	0.00	
2	177.00	BXA-171085-8BF	3	12.496	13.746	0.67	0.80	5.93	31.50	0.000	0.000	81.47	0.00	0.00	
3	177.00	LPA-80080-4CF	6	12.496	13.746	1.36	0.80	21.30	72.00	0.000	0.000	292.75	0.00	0.00	
4	177.00	BXA-70063-6CF	3	12.496	13.746	0.58	0.80	13.26	51.00	0.000	0.000	182.30	0.00	0.00	
5	177.00	Low Profile Platform	1	12.496	13.746	1.00	1.00	22.00	1500.00	0.000	0.000	302.41	0.00	0.00	
6	167.00	Alcatel Lucent 1900 MHz	3	12.344	13.578	0.54	0.80	4.45	180.00	0.000	0.000	60.48	0.00	0.00	
7	167.00	RFS ACU-A20-N RET	4	12.344	13.578	0.63	0.80	0.35	4.00	0.000	0.000	4.81	0.00	0.00	
8	167.00	Alcatel Lucent	3	12.344	13.578	0.54	0.80	6.51	210.00	0.000	0.000	88.43	0.00	0.00	
9	167.00	Low Profile Platform	1	12.344	13.578	1.00	1.00	25.00	1200.00	0.000	0.000	339.46	0.00	0.00	
10	167.00	Alcatel Lucent 800 MHz	3	12.344	13.578	0.54	0.80	4.00	159.00	0.000	0.000	54.37	0.00	0.00	
11	167.00	Alcatel Lucent 800 MHz	3	12.344	13.578	0.55	0.80	1.29	26.40	0.000	0.000	17.54	0.00	0.00	
12	167.00	APXVSP18-C-A20	3	12.344	13.578	0.66	0.80	15.98	171.00	0.000	0.000	216.93	0.00	0.00	
13	167.00	APXVTM14-C-I20	3	12.344	13.578	0.62	0.80	11.72	168.60	0.000	0.000	159.09	0.00	0.00	
14	147.00	DMP65R-BU8DA	6	12.017	13.219	0.58	0.80	62.62	574.20	0.000	0.000	827.70	0.00	0.00	
15	147.00	TT08-19DB111-001	3	12.017	13.219	0.73	0.80	1.73	66.00	0.000	0.000	22.81	0.00	0.00	
16	147.00	RRUS 4478 B14	3	12.017	13.219	0.65	0.80	3.93	178.20	0.000	0.000	51.91	0.00	0.00	
17	147.00	RRUS 8843 B2 B66A	3	12.017	13.219	0.74	0.80	3.62	216.00	0.000	0.000	47.87	0.00	0.00	
18	147.00	RRUS 4449 B5/B12	3	12.017	13.219	0.72	0.80	3.54	219.00	0.000	0.000	46.83	0.00	0.00	
19	147.00	Site Pro 1 RMQP-496-HK	1	12.017	13.219	1.00	1.00	37.14	2065.00	0.000	0.000	490.94	0.00	0.00	
20	147.00	7770.00	3	12.017	13.219	0.62	0.80	10.31	105.00	0.000	0.000	136.35	0.00	0.00	
21	147.00	CCI DTMABP7819VG12A	3	12.017	13.219	0.55	0.80	1.61	57.60	0.000	0.000	21.23	0.00	0.00	
22	147.00	Raycap DC6-48-60-18-8F	1	12.017	13.219	0.80	0.80	0.74	31.80	0.000	0.000	9.73	0.00	0.00	
23	122.00	LMU Nokia CS72188.01+	1	11.554	12.710	0.80	0.80	2.00	20.00	0.000	0.000	25.42	0.00	0.00	
Totals:									7,324.90						3,495.94

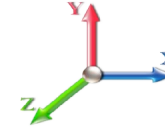
Total Applied Force Summary

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
		Page: 40



Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00
Wind Load Factor 1.00



Iterations 24

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		155.23	1578.49	0.00	0.00
10.00		152.68	1555.33	0.00	0.00
15.00		150.14	1532.18	0.00	0.00
20.00		156.61	1509.03	0.00	0.00
25.00		161.31	1485.88	0.00	0.00
30.00		164.68	1462.73	0.00	0.00
35.00		167.08	1439.58	0.00	0.00
40.00		168.72	1416.42	0.00	0.00
45.00		169.76	1393.27	0.00	0.00
45.50		16.84	138.05	0.00	0.00
50.00		155.38	2167.43	0.00	0.00
52.75		94.71	1307.40	0.00	0.00
55.00		77.42	535.83	0.00	0.00
60.00		172.77	1176.34	0.00	0.00
65.00		172.25	1156.50	0.00	0.00
70.00		171.44	1136.66	0.00	0.00
75.00		170.39	1116.81	0.00	0.00
80.00		169.10	1096.97	0.00	0.00
85.00		167.62	1077.12	0.00	0.00
90.00		165.94	1057.28	0.00	0.00
92.33		76.58	486.61	0.00	0.00
95.00		88.20	898.99	0.00	0.00
98.50		115.02	1164.94	0.00	0.00
100.00		48.89	243.58	0.00	0.00
105.00		162.15	802.26	0.00	0.00
110.00		159.88	787.38	0.00	0.00
115.00		157.48	772.50	0.00	0.00
120.00		154.97	757.61	0.00	0.00
122.00	(1) attachments	86.52	318.88	0.00	0.00
125.00		90.92	443.85	0.00	0.00
130.00		149.60	727.85	0.00	0.00
131.75		51.66	251.71	0.00	0.00
135.00		96.18	774.50	0.00	0.00
137.00		58.68	471.99	0.00	0.00
140.00		86.96	386.33	0.00	0.00
145.00		142.89	634.02	0.00	0.00
147.00	(26) attachments	1711.53	3762.71	0.00	0.00
150.00		83.38	310.80	0.00	0.00
155.00		136.61	507.41	0.00	0.00
160.00		133.34	494.18	0.00	0.00
165.00		130.00	480.96	0.00	0.00
167.00	(23) attachments	992.05	2307.68	0.00	0.00
170.00		75.44	271.13	0.00	0.00
175.00		123.10	441.30	0.00	0.00
177.00	(19) attachments	922.23	1845.91	0.00	0.00
180.00		71.21	217.81	0.00	0.00

Total Applied Force Summary

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



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Totals:	9,085.52	45,902.20	0.00	0.00
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Calculated Forces

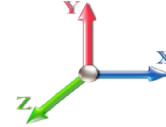
Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II



Load Case: 1.0D + 1.0W 60 mph Wind

Iterations 24

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	-45.90	-9.10	0.00	-1088.5	0.00	1088.52	5499.24	2749.62	13525.8	6714.82	0.00	0.000	0.000	0.170
5.00	-44.31	-8.98	0.00	-1043.0	0.00	1043.02	5446.13	2723.07	13174.3	6540.32	0.02	-0.041	0.000	0.168
10.00	-42.75	-8.85	0.00	-998.13	0.00	998.13	5391.79	2695.90	12824.2	6366.51	0.09	-0.082	0.000	0.165
15.00	-41.21	-8.73	0.00	-953.87	0.00	953.87	5336.22	2668.11	12475.6	6193.46	0.19	-0.123	0.000	0.162
20.00	-39.70	-8.60	0.00	-910.22	0.00	910.22	5279.43	2639.71	12128.7	6021.24	0.35	-0.164	0.000	0.159
25.00	-38.21	-8.46	0.00	-867.23	0.00	867.23	5221.40	2610.70	11783.7	5849.94	0.54	-0.206	0.000	0.156
30.00	-36.74	-8.32	0.00	-824.93	0.00	824.93	5162.15	2581.08	11440.6	5679.62	0.78	-0.248	0.000	0.152
35.00	-35.30	-8.17	0.00	-783.35	0.00	783.35	5101.67	2550.83	11099.7	5510.36	1.06	-0.289	0.000	0.149
40.00	-33.87	-8.02	0.00	-742.51	0.00	742.51	5039.96	2519.98	10761.0	5342.24	1.38	-0.331	0.000	0.146
45.00	-32.48	-7.85	0.00	-702.42	0.00	702.42	4977.02	2488.51	10424.8	5175.32	1.75	-0.373	0.000	0.142
45.50	-32.34	-7.85	0.00	-698.50	0.00	698.50	4970.66	2485.33	10391.3	5158.70	1.79	-0.378	0.000	0.142
50.00	-30.17	-7.69	0.00	-663.19	0.00	663.19	4912.85	2456.43	10091.1	5009.68	2.17	-0.416	0.000	0.139
52.75	-28.86	-7.60	0.00	-642.04	0.00	642.04	3995.12	1997.56	8262.25	4101.73	2.41	-0.439	0.000	0.164
55.00	-28.32	-7.53	0.00	-624.95	0.00	624.95	3974.20	1987.10	8146.45	4044.24	2.63	-0.458	0.000	0.162
60.00	-27.14	-7.37	0.00	-587.29	0.00	587.29	3926.82	1963.41	7890.08	3916.97	3.13	-0.505	0.000	0.157
65.00	-25.98	-7.21	0.00	-550.43	0.00	550.43	3878.22	1939.11	7635.13	3790.40	3.69	-0.551	0.000	0.152
70.00	-24.84	-7.05	0.00	-514.38	0.00	514.38	3828.38	1914.19	7381.75	3664.61	4.29	-0.598	0.000	0.147
75.00	-23.72	-6.88	0.00	-479.14	0.00	479.14	3777.31	1888.66	7130.10	3539.68	4.94	-0.643	0.000	0.142
80.00	-22.62	-6.72	0.00	-444.73	0.00	444.73	3725.02	1862.51	6880.32	3415.68	5.64	-0.689	0.000	0.136
85.00	-21.54	-6.56	0.00	-411.13	0.00	411.13	3671.50	1835.75	6632.56	3292.68	6.38	-0.734	0.000	0.131
90.00	-20.48	-6.39	0.00	-378.35	0.00	378.35	3616.75	1808.37	6386.97	3170.76	7.17	-0.778	0.000	0.125
92.33	-19.99	-6.31	0.00	-363.45	0.00	363.45	3590.78	1795.39	6273.15	3114.26	7.56	-0.799	0.000	0.122
95.00	-19.09	-6.22	0.00	-346.62	0.00	346.62	3560.77	1780.38	6143.71	3050.00	8.01	-0.822	0.000	0.119
98.50	-17.92	-6.09	0.00	-324.85	0.00	324.85	2386.87	1193.44	4124.84	2047.75	8.63	-0.852	0.000	0.166
100.00	-17.68	-6.05	0.00	-315.71	0.00	315.71	2378.03	1189.02	4080.63	2025.79	8.90	-0.865	0.000	0.163
105.00	-16.87	-5.89	0.00	-285.45	0.00	285.45	2347.75	1173.88	3933.45	1952.73	9.83	-0.918	0.000	0.153
110.00	-16.08	-5.73	0.00	-255.99	0.00	255.99	2316.25	1158.12	3786.73	1879.89	10.82	-0.969	0.000	0.143
115.00	-15.31	-5.58	0.00	-227.32	0.00	227.32	2283.51	1141.75	3640.60	1807.35	11.86	-1.018	0.000	0.133
120.00	-14.55	-5.42	0.00	-199.44	0.00	199.44	2249.55	1124.77	3495.22	1735.17	12.95	-1.064	0.000	0.121
122.00	-14.23	-5.33	0.00	-188.61	0.00	188.61	2235.62	1117.81	3437.31	1706.42	13.40	-1.083	0.000	0.117
125.00	-13.79	-5.24	0.00	-172.63	0.00	172.63	2214.35	1107.18	3350.73	1663.44	14.09	-1.109	0.000	0.110
130.00	-13.06	-5.08	0.00	-146.44	0.00	146.44	2177.93	1088.97	3207.29	1592.24	15.28	-1.150	0.000	0.098
131.75	-12.81	-5.03	0.00	-137.54	0.00	137.54	2164.87	1082.44	3157.27	1567.40	15.70	-1.163	0.000	0.094
135.00	-12.03	-4.92	0.00	-121.22	0.00	121.22	2140.28	1070.14	3065.05	1521.62	16.50	-1.187	0.000	0.085
137.00	-11.56	-4.85	0.00	-111.37	0.00	111.37	1820.19	910.09	2619.63	1300.49	17.00	-1.201	0.000	0.092
140.00	-11.17	-4.76	0.00	-96.82	0.00	96.82	1802.60	901.30	2550.50	1266.18	17.76	-1.221	0.000	0.083
145.00	-10.54	-4.61	0.00	-73.00	0.00	73.00	1772.28	886.14	2435.71	1209.19	19.06	-1.250	0.000	0.066
147.00	-6.82	-2.82	0.00	-63.78	0.00	63.78	1759.80	879.90	2390.02	1186.51	19.58	-1.261	0.000	0.058
150.00	-6.51	-2.73	0.00	-55.33	0.00	55.33	1740.72	870.36	2321.75	1152.61	20.38	-1.275	0.000	0.052
155.00	-6.00	-2.58	0.00	-41.68	0.00	41.68	1707.94	853.97	2208.76	1096.52	21.73	-1.295	0.000	0.042
160.00	-5.51	-2.44	0.00	-28.76	0.00	28.76	1673.92	836.96	2096.88	1040.98	23.09	-1.311	0.000	0.031
165.00	-5.03	-2.30	0.00	-16.55	0.00	16.55	1638.68	819.34	1986.28	986.07	24.47	-1.323	0.000	0.020
167.00	-2.75	-1.26	0.00	-11.95	0.00	11.95	1624.24	812.12	1942.43	964.30	25.03	-1.326	0.000	0.014
170.00	-2.48	-1.17	0.00	-8.18	0.00	8.18	1602.21	801.11	1877.10	931.87	25.86	-1.330	0.000	0.010
175.00	-2.04	-1.04	0.00	-2.31	0.00	2.31	1564.52	782.26	1769.48	878.45	27.26	-1.333	0.000	0.004
177.00	-0.22	-0.08	0.00	-0.23	0.00	0.23	1549.09	774.55	1726.91	857.31	27.81	-1.333	0.000	0.000
180.00	0.00	-0.07	0.00	0.00	0.00	0.00	1525.59	762.80	1663.59	825.87	28.65	-1.333	0.000	0.000

Calculated Forces

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II

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Final Analysis Summary

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
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Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 101 mph Wind	41.3	0.00	55.01	0.00	0.00	4961.90
0.9D + 1.6W 101 mph Wind	41.3	0.00	41.24	0.00	0.00	4911.05
1.2D + 1.0Di + 1.0Wi 50 mph Wind	10.8	0.00	92.23	0.00	0.00	1354.64
1.2D + 1.0E	1.7	0.00	55.08	0.00	0.00	214.30
0.9D + 1.0E	1.7	0.00	41.31	0.00	0.00	211.94
1.0D + 1.0W 60 mph Wind	9.1	0.00	45.90	0.00	0.00	1088.52

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 101 mph Wind	-55.01	-41.28	0.00	-4961.9	0.00	-4961.9	5499.24	2749.6	13525.8	6714.82	0.00	0.749
0.9D + 1.6W 101 mph Wind	-41.24	-41.26	0.00	-4911.0	0.00	-4911.0	5499.24	2749.6	13525.8	6714.82	0.00	0.739
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-45.34	-7.72	0.00	-418.32	0.00	-418.32	2386.87	1193.4	4124.84	2047.75	98.50	0.223
1.2D + 1.0E	-21.61	-1.11	0.00	-78.29	0.00	-78.29	2386.87	1193.4	4124.84	2047.75	98.50	0.047
0.9D + 1.0E	-16.21	-1.09	0.00	-77.15	0.00	-77.15	2386.87	1193.4	4124.84	2047.75	98.50	0.044
1.0D + 1.0W 60 mph Wind	-45.90	-9.10	0.00	-1088.5	0.00	-1088.5	5499.24	2749.6	13525.8	6714.82	0.00	0.170

Base Plate Summary

Structure: CT02721-S	Code: EIA/TIA-222-G	10/10/2019
Site Name: South Windham	Exposure: C	
Height: 180.00 (ft)	Crest Height: 0.00	
Base Elev: 0.000 (ft)	Site Class: D - Stiff Soil	
Gh: 1.1	Topography: 1	Struct Class: II
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Reactions	Base Plate	Anchor Bolts
Original Design	Yield (ksi): 50.00	Bolt Circle: 68.62
Moment (kip-ft): 5047.00	Width (in): 74.62	Number Bolts: 20.00
Axial (kip): 57.10	Style: Round	Bolt Type: 2.25" 18J
Shear (kip): 40.10	Polygon Sides: 0.00	Bolt Diameter (in): 2.25
Analysis	Clip Length (in): 0.00	Yield (ksi): 75.00
Moment (kip-ft): 4961.90	Effective Len (in): 14.60	Ultimate (ksi): 100.00
Axial (kip): 92.23	Moment (kip-in): 767.85	Arrangement: Radial
Shear (kip): 41.28	Allow Stress (ksi): 67.50	Cluster Dist (in): 0.00
	Applied Stress (ksi): 0.00	Start Angle (deg): 0.00
Moment Design %: 98.31	Stress Ratio: 0.52	Compression
		Force (kip): 178.15
		Allowable (kip): 260.00
		Ratio: 0.70
		Tension
		Force (kip): 168.93
		Allowable (kip): 260.00
		Ratio: 0.67

	Monopole Mat Foundation Design		Date	
			10/31/2017	
	Customer Name:	Dr [redacted] C [redacted]	EIA/TIA Standard:	[redacted]
	Site Name:	[redacted] md [redacted]	Structure Height (Ft.):	[redacted]
	Site Number:	[redacted]	Engineer Name:	[redacted]
Engr. Number:	[redacted]	Engineer Login ID:	[redacted]	

Foundation Info Obtained from:

Dr [redacted] C [redacted]
 Monopole
 Analysis

Structure Type:

Analysis or Design?

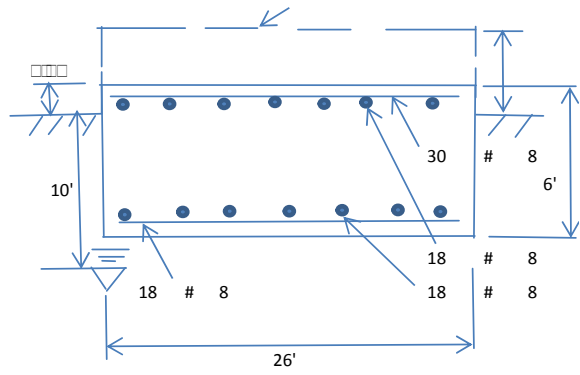
Base Reactions (Factored):

Axial Load (Kips): 55.0 Shear Force (Kips): 41.3
 Uplift Force (Kips): 0.0 Moment (Kips-ft): 4961.9

Allowable overstress %: [redacted]

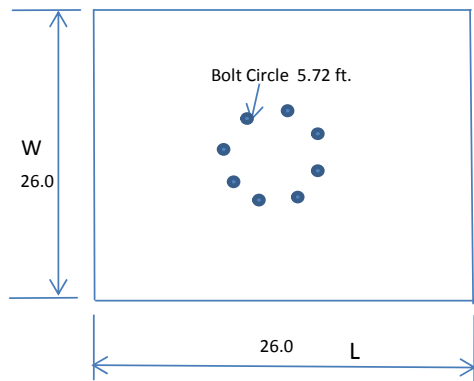
Foundation Geometries:

Anchor Bolt Circle (ft.): 5.72 Depth of Base BG (ft.): 5.50
 Thickness of Pad (ft.): 6.00
 Length of Pad (ft.): 26 Width of Pad (ft.): 26
 Final Length of pad (ft) 26.0 Final width of pad (ft): 26.0



Material Properties and Rebar Info:

Concrete Strength (psi): 3000 Steel Elastic Modulus: 29000 ksi
 Pad Rebar Yield (Ksi): 60 Tie Spacing (in): 12.0
 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): 30 Qty. of Rebar in Pad (W): 30
 Rebar at the top of the concrete pad:
 Qty. of Rebar in Pad (L): 18 Qty. of Rebar in Pad (W): 18



Apply 1.35 factor for e/w Per G: 1.35

Soil Design Parameters:

Water Table B.G.S. (ft): 10.0 Unit Weight of Water: 62.4 pcf Angle from Top of Pad: 30
 Ultimate Bearing Pressure (psf): 30000 Ultimate Skin Friction: 0 psf Angle from Bottm of Pad: 25
 Consider Friction for O.T.M. (Y/N): No Consider Friction for bearing (Y/N): No Angle from Bottm of Pad: 25
 Consider soil hor. resist. for OTM.: No Reduction factor on the maximum soil bearing pressure: 1.00

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Compression Strength Reduction Factor:	0.75
Total Dry Soil Volume (cu. Ft.):	0.00	Total Dry Soil Weight (Kips):	0.00
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	0.00	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	4056.00	Total Dry Concrete Weight (Kips):	608.40
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	608.40	Total Vertical Load on Base (Kips):	663.41

Check Soil Capacities:

Calculated Maxium Net Soil Pressure under the base (psf):	3761	<	Allowable Factored Soil Bearing (psf):	22500	0.17	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	7833.4	>	Design Factored Momnt (kips-ft):	5212	0.67	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.50					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

Concrete Pad:

One-Way Design Shear Capacity (L-Direction, Kips):	1755.9	>	One-Way Factored Shear (L-D. Kips):	266.3	0.15	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	1755.9	>	One-Way Factored Shear (W-D., Kips)	266.3	0.15	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	2063.1	>	One-Way Factored Shear (C-C, Kips):	736.6	0.36	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0011	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0011		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	7210.2	>	Moment at Bottom (L-Direct. K-Ft):	556.8	0.08	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	7210.2	>	Moment at Bottom (W-Direct. K-Ft):	556.8	0.08	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	10169.3	>	Moment at Bottom (C-C Dir. K-Ft):	787.4	0.08	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0007	OK!	Upper Steel Reinf. Ratio (W-Direct.):	0.0007		
Upper Steel Pad Moment Capacity (L-Direction. Kips-ft):	4349.0	>	Moment at the top (L-Dir Kips-Ft):	191.3	0.04	OK!
Upper Steel Pad Moment Capacity (W-Direction. Kips-ft):	4349.0	>	Moment at the top (W-Dir Kips-Ft):	191.3	0.04	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	6140.5	>	Moment at the top (C-C Direc. K-Ft):	711.5	0.12	OK!



Non-Ionizing Radiation Report

Compiled For: Smartlink on behalf of AT&T

Site Name: Windham Windham CTR

Site FA: 10035442

Site ID: CTL01064

193 Windham Center Road, Windham, CT 06280

Latitude: 41.6900481 Longitude: -72.1625269

Structure Type: Monopole

Report Date: October 4, 2019



Status: AT&T will be compliant with FCC rules on RF Exposure with the signage recommendation in section 4 of this report.

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1. Executive Summary:

Smartlink on behalf of AT&T has contracted Infinigy Solutions, LLC to determine whether the site Windham Windham CTR located at 193 Windham Center Road in Windham, CT Will Be Compliant with all Federal Communications Commission (FCC) rules and regulations for radio frequency (RF) exposure as indicated in **47CFR§1.1310**.

The report incorporates a theoretical RF field analysis in accordance with the FCC Rules and Regulations for all individuals classified as “Occupational or Controlled” and “General Public or Uncontrolled” (see Appendix A and B).

This document and the conclusions herein are based on information provided by Smartlink on behalf of AT&T.

As a result of the analysis, **AT&T Will Be Compliant with FCC rules with the installation of signage recommended in section 4.**

Engineering assumptions were made regarding the collation operator(s). The assumptions were made based upon typical deployment configurations and practices of the operator(s).

All Carriers, All Bands Cumulative Exposure %		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0179
	% Exposure	2.12%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0149
	% Exposure	0.45%

2. Site Summary:

Site Information	
Site Name: Windham Windham CTR	
Site Address: 193 Windham Center Road, Windham, CT 06280	
Site Type: Monopole	
Compliance Status	Will Be Compliant
Mitigation Required	No
Signage Required	Yes
Barriers Required	No
Access Locked	No
Area Controlled or Uncontrolled	Uncontrolled

3. Site Compliance

This report also incorporates overview of the site information:

- Antenna Inventory Table
- Calculation Tables showing exposure for each carrier transmit frequency
- Total exposure for all carriers existing and proposed at ground level considering the centerline of all antennas and horizontal distance from the tower.
- Maximum Effective Radiated Power Assumed as Worst Case for Calculations used in this study
- Calculations based on flat ground around base of the structure

4. Site Compliance Recommendations

Infinigy recommends the following upon the installation of antennas at the site:

Base of tower

Caution 2 sign.

Note: The above signage recommendation is moot if there is an existing caution 2 sign at the base of the tower.

5. Antenna Inventory Table

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
1a	Alpha	AT&T	Powerwave	7770	850	147	1282
2a	Alpha	AT&T	CCI	DMP65R-BU8D	700	147	2951
2b	Alpha	AT&T	CCI	DMP65R-BU8D	2100	147	3837
3a	Alpha	AT&T	CCI	DMP65R-BU8D	700	147	1476
3b	Alpha	AT&T	CCI	DMP65R-BU8D	1900	147	3664
3c	Alpha	AT&T	CCI	DMP65R-BU8D	850	147	1000
3d	Alpha	AT&T	CCI	DMP65R-BU8D	850	147	1000
4a	Beta	AT&T	Powerwave	7770	850	147	1282
4b	Beta	AT&T	Powerwave	7770	1900	147	1675
5a	Beta	AT&T	CCI	DMP65R-BU8D	700	147	2951
5b	Beta	AT&T	CCI	DMP65R-BU8D	2100	147	3837
6a	Beta	AT&T	CCI	DMP65R-BU8D	700	147	1476
6b	Beta	AT&T	CCI	DMP65R-BU8D	1900	147	3664
6c	Beta	AT&T	CCI	DMP65R-BU8D	850	147	1000
6d	Beta	AT&T	CCI	DMP65R-BU8D	850	147	1000
7a	Gamma	AT&T	Powerwave	7770	850	147	1282
7b	Gamma	AT&T	Powerwave	7770	1900	147	1675
8a	Gamma	AT&T	CCI	DMP65R-BU8D	700	147	2951
8b	Gamma	AT&T	CCI	DMP65R-BU8D	2100	147	3837
9a	Gamma	AT&T	CCI	DMP65R-BU8D	700	147	1476
9b	Gamma	AT&T	CCI	DMP65R-BU8D	1900	147	3664
9c	Gamma	AT&T	CCI	DMP65R-BU8D	850	147	1000
9d	Gamma	AT&T	CCI	DMP65R-BU8D	850	147	1000
10	Alpha	Verizon Wireless	Commscope	NNH-65C-R2B	700	177	1460
11	Alpha	Verizon Wireless	Commscope	NNH-65C-R2B	2100	177	1896

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
12	Alpha	Verizon Wireless	Commscope	NNH-65C-R2B	1900	177	1720
13	Alpha	Verizon Wireless	Commscope	NNH-65C-R2B	850	177	1452
14	Beta	Verizon Wireless	Commscope	NNH-65C-R2B	700	177	1460
17	Beta	Verizon Wireless	Commscope	NNH-65C-R2B	850	177	1452
18	Gamma	Verizon Wireless	Commscope	NNH-65C-R2B	700	177	1460
19	Gamma	Verizon Wireless	Commscope	NNH-65C-R2B	2100	177	1896
20	Gamma	Verizon Wireless	Commscope	NNH-65C-R2B	1900	177	1720
21	Gamma	Verizon Wireless	Commscope	NNH-65C-R2B	850	177	1452
22	Alpha	Sprint	RFS	APXVAARR18_N43-U-NA20	1900	167	1525
23a	Alpha	Sprint	Commscope	DT465B-2XR-V2	850	167	1710
23b	Alpha	Sprint	Commscope	DT465B-2XR-V2	2500	167	1757
24	Beta	Sprint	RFS	APXVAARR18_N43-U-NA20	1900	167	1525
25a	Beta	Sprint	Commscope	DT465B-2XR-V2	850	167	1710
25b	Beta	Sprint	Commscope	DT465B-2XR-V2	2500	167	1757
26	Gamma	Sprint	RFS	APXVAARR18_N43-U-NA20	1900	167	1525
27a	Gamma	Sprint	Commscope	DT465B-2XR-V2	850	167	1710
27b	Gamma	Sprint	Commscope	DT465B-2XR-V2	2500	167	1757

6. RF Guidelines

To ensure safety of company workers, the following points need to be taken into consideration and implemented at wireless sites in accordance with the Carriers policies:

- a) **Worksite:** Any employee at the site should avoid working directly in front of the antenna or in areas predicted to exceed general population exposure limits by 100%. Workers should insist that the transmitters be switched off during the work period.
- b) **RF Safety Training and Awareness:** All employees working in areas exceeding the general population limits should have a basic awareness of RF safety measures. Videos, classroom lectures and online courses are all appropriate training methods on these topics.
- c) **Site Access:** Restricting access to transmitting antenna locations is one of the most important elements of RF safety. This can be done with:
 - Locked doors/gates/ladder access
 - Alarmed doors
 - Restrictive barriers
- d) **Three-foot Buffer:** There is an inverse relationship between the strength of the field and the distance from the antenna. The RF field diminishes with distance from the antenna. Workers should maintain a three-foot distance from the antennas.
- e) **Antennas:** Workers should always assume that the antenna is transmitting and should never stop right in front of the antenna. If someone must pass by an antenna, he/she should move quickly, thus reducing RF exposure.

Attachment 1: AT&T Exposure Analysis

AT&T 700 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.5
	Exposure values at the site (mW/cm ²)	0.0033
	% Exposure	0.67%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.3
	Exposure values at the site (mW/cm ²)	0.0033
	% Exposure	0.15%

AT&T 850 MHz UMTS		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.6
	Exposure values at the site (mW/cm ²)	0.0010
	% Exposure	0.16%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.8
	Exposure values at the site (mW/cm ²)	0.0010
	% Exposure	0.03%

AT&T 850 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.6
	Exposure values at the site (mW/cm ²)	0.0008
	% Exposure	0.13%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.8
	Exposure values at the site (mW/cm ²)	0.0008
	% Exposure	0.03%

AT&T 850 MHz 5G		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.6
	Exposure values at the site (mW/cm ²)	0.0008
	% Exposure	0.13%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.8
	Exposure values at the site (mW/cm ²)	0.0008
	% Exposure	0.03%

AT&T 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0028
	% Exposure	0.28%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0028
	% Exposure	0.06%

AT&T 1900 MHz UMTS		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0013
	% Exposure	0.13%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0013
	% Exposure	0.03%

AT&T 2100 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0029
	% Exposure	0.29%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0029
	% Exposure	0.06%

Attachment 2: Verizon Wireless Exposure Analysis

Verizon Wireless 700 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.5
	Exposure values at the site (mW/cm ²)	0.0008
	% Exposure	0.16%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.3
	Exposure values at the site (mW/cm ²)	0.0008
	% Exposure	0.03%

Verizon Wireless 850 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.6
	Exposure values at the site (mW/cm ²)	0.0008
	% Exposure	0.13%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.8
	Exposure values at the site (mW/cm ²)	0.0008
	% Exposure	0.03%

Verizon Wireless 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0009
	% Exposure	0.09%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0009
	% Exposure	0.02%

Verizon Wireless 2100 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0010
	% Exposure	0.10%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0010
	% Exposure	0.02%

Attachment 3: Sprint Exposure Analysis

Sprint 862 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.6
	Exposure values at the site (mW/cm ²)	0.0010
	% Exposure	0.17%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0010
	% Exposure	0.0203%

Sprint 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0009
	% Exposure	0.09%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0009
	% Exposure	0.0181%

Sprint 2500 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0010
	% Exposure	0.10%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0010
	% Exposure	0.0208%

Attachment 4: Combined Exposure Analysis for each Carrier

AT&T All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0127
	% Exposure	1.64%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0127
	% Exposure	0.35%

Verizon Wireless All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0035
	% Exposure	0.48%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0035
	% Exposure	0.10%

Sprint All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0030
	% Exposure	0.36%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0030
	% Exposure	0.06%

7. Appendix A: FCC Guidelines

FCC Policies

The Federal Communications Commission (FCC) in 1996 implemented regulations and policies for analysis of RF propagation to evaluate RF emissions. All the analysis and results of this report are compared with FCC's (Federal Communications Commission) rules to determine whether a site is compliant for Occupational/Controlled or General Public/Uncontrolled exposure. All the analysis of RF propagation is done in terms of a percentage. The limits primarily indicate the power density and are generally expressed in terms of milliwatts per centimeter square, mW/cm².

FCC guidelines incorporate two separate tiers of exposure limits that are dependent on the scenario/ situation in which that exposure takes place or the status of the individuals who are subjected to that exposure. The decision as to which tier is applied to a scenario is based on the following definitions:

Occupational / Controlled

These limits apply in situations when someone is exposed to RF energy through his/her occupation, is fully aware of the harmful effects of the RF exposure and has an ability to exercise control over this exposure. Occupational / controlled exposure limits also apply when 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. limits for Occupational/Controlled exposure can be found on Table 1(A).

General Population / Uncontrolled

These limits apply to situations in which the general public may be exposed or in which persons who are exposed because of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure to RF. Therefore, members of the general public would always be considered under this category, for example, in the case of a telecommunications tower that exposes people in a nearby residential area. Exposure limits for General Population/Uncontrolled can be found on Table 1(B).

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

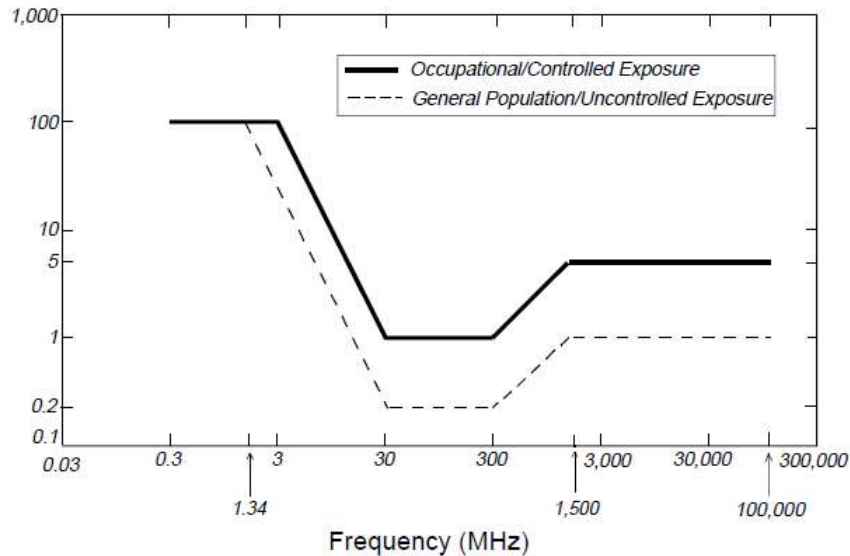
(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

*Plane-wave equivalent power density

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)
Plane-wave Equivalent Power Density



OSHA Statement:

The objective of the OSHA Act is to ensure the safety and health of the working men and women by enforcing certain standards. The act also assists and encourages the states in their efforts to ensure safe and healthy working conditions through means of research, information, education and training in the field of occupational safety and health and for other purposes.

According to OSHA Act section 5, important duties to be considered are:

(a) Each employer

- 1) Shall furnish to each of his employees' employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious harm to his employees
- 2) Shall comply with occupational safety and health standards promulgated under this act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

8. Appendix B: Preparer Certification

I, Tim Harris, preparer of this report, certify that I am fully trained and aware of the rules and regulations of both the Federal Communications Commission and the Occupational Safety and Health Administration regarding Human Exposure to Radio Frequency Radiation. In addition, I have been trained in 1) RF safety and 2) RF modeling using RoofView modeling software.

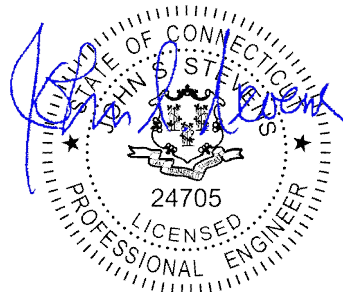
I certify that the information contained in this report is true and correct to the best of my knowledge.

Timothy A. Harris

10/4/2019

Signature

Date



10/04/2019

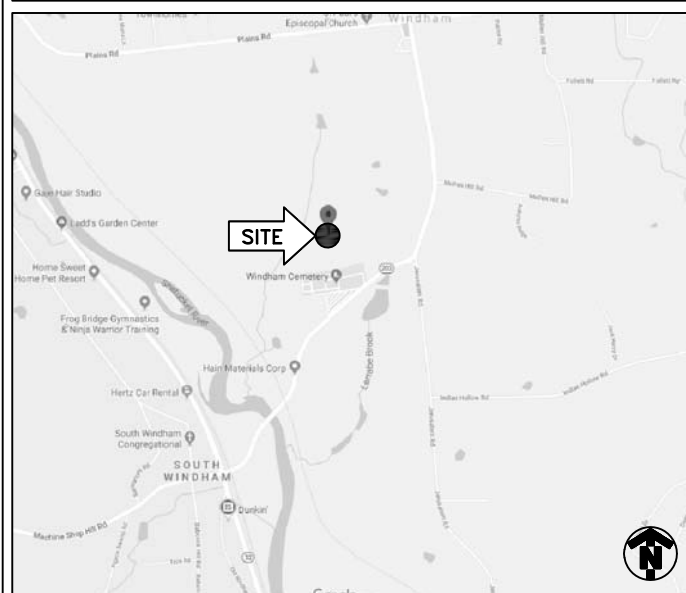
SHEET INDEX	
NO.	DESCRIPTION
T1	TITLE SHEET
C1	GENERAL NOTES
C2	OVERALL SITE PLAN
C2A	ENLARGED SITE PLAN
C3	ELEVATION VIEW
C4	ANTENNA ORIENTATION PLAN
C5	EQUIPMENT DETAILS
C6	PLUMBING DIAGRAM
C7	GROUNDING DETAILS

DRIVING DIRECTIONS

FROM 550 COCHITUATE RD.:

GET ON I-90 WEST/MASSACHUSETTS TURNPIKE. HEAD NORTHEAST TOWARD LEGGATT MCCALL CONN. TURN LEFT ONTO LEGGATT MCCALL CONN. CONTINUE ONTO BURR STREET. TURN LEFT ONTO COCHITUATE ROAD. USE THE RIGHT LANE TO TAKE THE RAMP TO I-90 EAST/MASSPIKE WEST/SPRINGFIELD/BOSTON. KEEP LEFT AT THE FORK, FOLLOW SIGNS FOR I-90 WEST/MASSACHUSETTS TURNPIKE/WORCESTER/SPRINGFIELD AND MERGE ONTO I-90 WEST/MASSACHUSETTS TURNPIKE. FOLLOW I-90 WEST/MASSACHUSETTS TURNPIKE AND I-395 SOUTH TO CT-14 WEST IN PLAINFIELD. TAKE EXIT 32 FROM I-395 SOUTH. MERGE ONTO I-90 WEST/MASSACHUSETTS TURNPIKE. TAKE EXIT 10 TOWARD MA-12 NORTH/AUBURN/WORCESTER. KEEP RIGHT AT THE FORK, FOLLOW SIGNS FOR I-395 SOUTH/US-20 EAST/NORWICH CT AND MERGE ONTO I-395 SOUTH. TAKE EXIT 32 FOR CT-14 TOWARD STERLING MOOSUP. FOLLOW CT-14 WEST TO YOUR DESTINATION IN WINDHAM. TURN RIGHT ONTO CT-14 WEST. TURN RIGHT ONTO CT-12 NORTH/CT-14 WEST. SLIGHT LEFT ONTO CT-14 WEST. TURN RIGHT TO STAY ON CT-14 WEST. TURN LEFT ONTO CT-203 SOUTH. TURN RIGHT. CONTINUE STRAIGHT. TURN RIGHT.

LOCATION MAP



PROJECT
LTE 2C/3C/4C/5C/RETROFIT
SITE NAME
WINDHAM WINDHAM CTR

CELL SITE ID
CTL01064
FA SITE NUMBER
10035442
PACE ID
**MRCTB040530/MRCTB040444/MRCTB040469
MRCTB040708/MRCTB040763**
SITE ADDRESS
**193 WINDHAM CENTER ROAD
WINDHAM, CT 06280**

STRUCTURE TYPE
MONOPOLE

PROJECT TEAM

PROJECT MANAGER

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793
ENGINEER

SCOPE OF WORK (PER LTE RFDS, DATED 07/30/2019 V2.00):

- HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED.
 - FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
 - FACILITY HAS NO PLUMBING OR REFRIGERANTS.
 - THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.
 - ALL NEW MATERIAL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. EQUIPMENT, ANTENNAS/RRU AND CABLES FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR.
- TOWER**
- REMOVE (6) PANEL ANTENNAS,(3) POWERWAVE 7770,(3) AM-X-CD-17-65-00T-RET
 - INSTALL (6) PANEL ANTENNAS,(6) CCI DMP65R-BU8DA
 - REMOVE (3) RRUS-11 B12
 - INSTALL (3) B14 4478
 - INSTALL (3) 4449 B5/B12
 - INSTALL (3) 8843 B2/B66A
 - INSTALL (2) DC6 SQUID W/ (1) FIBER AND (4) DC CABLES IN (3) 3" CONDUITS
 - REPLACE EXISTING ANTENNA PLATFORM MOUNT
- GROUND**
- SWAP BB W/ 6630
 - ADD XMU
 - ADD 6630
 - ADD IDLe CABLE

PROJECT SUMMARY

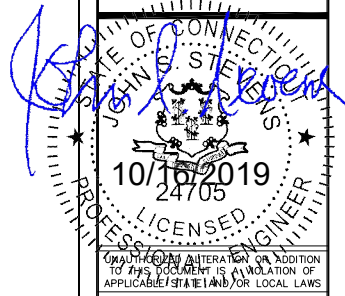
SITE NAME:	WINDHAM WINDHAM CTR	
CELL SITE ID:	CTL01064	
FA SITE #:	10035442	
SITE ADDRESS:	193 WINDHAM CENTER ROAD WINDHAM, CT 06280	
COUNTY:	WINDHAM	
SITE COORDINATES:	LATITUDE: 41.6900481° N (NAD 83)	LONGITUDE: 72.1625269° W (NAD 83)
RAD CENTER:	±147'	(AGL)
LANDLORD:	SBA COMMUNICATIONS	
APPLICANT:	AT&T MOBILITY 550 COCHITUATE RD. FRAMINGHAM, MA 01701	
CLIENT REPRESENTATIVE:	SMARTLINK, LLC 85 RANGEWAY RD., BUILDING 3, SUITE 102 NORTH BILLERICA, MA 01862	
CONTACT:	SHARON KEEFE (978) 930-3918	
ENGINEER:	INFINIGY 1033 WATERVLIET SHAKER ROAD ALBANY, NY 12205	
CONTACT:	ALEX WELLER (518) 690-0790	
BUILDING CODE:	2018 CT STATE BUILDING CODE 2015 INTERNATIONAL BUILDING CODE ANSI/TIA-222 G 2015 INTERNATIONAL PLUMBING CODE 2015 INTERNATIONAL MECHANICAL CODE 2015 INTERNATIONAL ENERGY CONSERVATION CODE 2017 NFPA 70	
ELECTRICAL CODE:	NATIONAL ELECTRICAL CODE (LATEST EDITION)	

Know what's below. Call before you dig.

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN CONNECTICUT, CONTACT CALL BEFORE YOU DIG TOLL FREE: 1-800-922-4455 OR www.cbyd.com

CONNECTICUT STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE

INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793



No.	Submittal / Revision	App'd	Date
2	REVISED FOR PERMIT	BMM	10/16/19
1	ISSUED FOR PERMIT	ASW	10/04/19
0	ISSUED FOR REVIEW	BMM	09/13/19

Drawn: BMM Date: 09/13/19
Designed: ASW Date: 09/13/19
Checked: AD Date: 09/13/19

Project Number: 499-006

Project Title:
**WINDHAM
WINDHAM CTR**
CTL01064
FA# 10035442
193 WINDHAM CENTER ROAD
WINDHAM, CT 06280

Prepared For:

Drawing Scale:
AS NOTED
CD
Date:
10/16/19

Drawing Title
TITLE PAGE
Drawing Number
T1

GENERAL NOTES

PART 1 – GENERAL REQUIREMENTS

- 1.1 THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
 - A. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
 - B. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
 - C. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC").
 - D. AND NFPA 101 (LIFE SAFETY CODE).
 - E. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM).
 - F. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE).
- 1.2 DEFINITIONS:
 - A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.
 - B. COMPANY: AT&T CORPORATION
 - C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
 - D. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.
 - E. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.
- 1.3 POINT OF CONTACT: COMMUNICATION BETWEEN THE COMPANY AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE COMPANY SITE DEVELOPMENT SPECIALIST OR OTHER PROJECT COORDINATOR APPOINTED TO MANAGE THE PROJECT FOR THE COMPANY.
- 1.4 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.
- 1.5 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES, AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.
 - A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.
- 1.6 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.
- 1.7 NOTICE TO PROCEED:
 - A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED.
 - B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE AT&T WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 – EXECUTION

- 2.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE, POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.
- 2.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.
- 2.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HERewith, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.

- 2.4 COMPANY FURNISHED MATERIAL AND EQUIPMENT: ALL HANDLING, STORAGE AND INSTALLATION OF COMPANY FURNISHED MATERIAL AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
 - A. CONTRACTOR SHALL PROCURE ALL OTHER REQUIRED WORK RELATED MATERIALS NOT PROVIDED BY AT&T TO SUCCESSFULLY CONSTRUCT A WIRELESS FACILITY.
- 2.5 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.
- 2.6 EXISTING CONDITIONS: NOTIFY THE COMPANY REPRESENTATIVE OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

PART 3 – RECEIPT OF MATERIAL & EQUIPMENT

- 3.1 RECEIPT OF MATERIAL AND EQUIPMENT: CONTRACTOR IS RESPONSIBLE FOR AT&T PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:
 - A. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
 - B. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
 - C. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
 - D. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO AT&T OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
 - E. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
 - F. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.

PART 4 – GENERAL REQUIREMENTS FOR CONSTRUCTION

- 4.1 CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.
- 4.2 EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.
- 4.3 CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.
 - A. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
 - B. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.
- 4.4 CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION.
- 4.5 CONDUCT TESTING AS REQUIRED HEREIN.

PART 5 – TESTS AND INSPECTIONS

- 5.1 TESTS AND INSPECTIONS:
 - A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.
 - B. CONTRACTOR SHALL COORDINATE TEST AND INSPECTION SCHEDULES WITH COMPANY'S REPRESENTATIVE WHO MUST BE ON SITE TO WITNESS SUCH TESTS AND INSPECTIONS.
 - C. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.
 - D. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.
 - E. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.

- F. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
- G. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

PART 6 – TRENCHING AND BACKFILLING

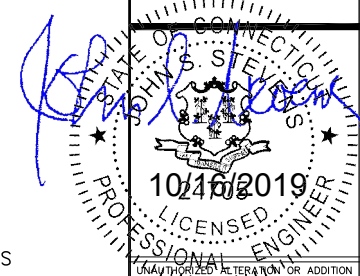
- 6.1 TRENCHING AND BACKFILLING: THE CONTRACTOR SHALL PERFORM ALL EXCAVATION OF EVERY DESCRIPTION AND OF WHATEVER SUBSTANCES ENCOUNTERED, TO THE DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS OTHERWISE SPECIFIED.
 - A. PROTECTION OF EXISTING UTILITIES: THE CONTRACTOR SHALL CHECK WITH THE LOCAL UTILITIES AND THE RESPECTIVE UTILITY LOCATOR COMPANIES PRIOR TO STARTING EXCAVATION OPERATIONS IN EACH RESPECTIVE AREA TO ASCERTAIN THE LOCATIONS OF KNOWN UTILITY LINES. THE LOCATIONS, NUMBER AND TYPES OF EXISTING UTILITY LINES DETAILED ON THE CONSTRUCTION DRAWINGS ARE APPROXIMATE AND DO NOT REPRESENT EXACT INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL LINES DAMAGED DURING EXCAVATION AND ALL ASSOCIATED OPERATIONS. ALL UTILITY LINES UNCOVERED DURING THE EXCAVATION OPERATIONS, SHALL BE PROTECTED FROM DAMAGE DURING EXCAVATION AND ASSOCIATED OPERATIONS. ALL REPAIRS SHALL BE APPROVED BY THE UTILITY COMPANY.
 - B. HAND DIGGING: UNLESS APPROVED IN WRITING OTHERWISE, ALL DIGGING WITHIN AN EXISTING CELL SITE COMPOUND IS TO BE DONE BY HAND.
 - C. DURING EXCAVATION, MATERIAL SUITABLE FOR BACKFILLING SHALL BE STOCKPILED IN AN ORDERLY MANNER A SUFFICIENT DISTANCE FROM THE BANKS OF THE TRENCH TO AVOID OVERLOADING AND TO PREVENT SLIDES OR CAVE-INS. ALL EXCAVATED MATERIALS NOT REQUIRED OR SUITABLE FOR BACKFILL SHALL BE REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
 - D. GRADING SHALL BE DONE AS MAY BE NECESSARY TO PREVENT SURFACE WATER FROM FLOWING INTO TRENCHES OR OTHER EXCAVATIONS, AND ANY WATER ACCUMULATING THEREIN SHALL BE REMOVED BY PUMPING OR BY OTHER APPROVED METHOD.
 - E. SHEETING AND SHORING SHALL BE DONE AS NECESSARY FOR THE PROTECTION OF THE WORK AND FOR THE SAFETY OF PERSONNEL. UNLESS OTHERWISE INDICATED, EXCAVATION SHALL BE BY OPEN CUT, EXCEPT THAT SHORT SECTIONS OF A TRENCH MAY BE TUNNELED IF, THE CONDUIT CAN BE SAFELY AND PROPERLY INSTALLED AND BACKFILL CAN BE PROPERLY TAMPED IN SUCH TUNNEL SECTIONS. EARTH EXCAVATION SHALL COMPRISE ALL MATERIALS AND SHALL INCLUDE CLAY, SILT, SAND, MUCK, GRAVEL, HARDPAN, LOOSE SHALE, AND LOOSE STONE.
 - F. TRENCHES SHALL BE OF NECESSARY WIDTH FOR THE PROPER LAYING OF THE CONDUIT OR CABLE, AND THE BANKS SHALL BE AS NEARLY VERTICAL AS PRACTICABLE. THE BOTTOM OF THE TRENCHES SHALL BE ACCURATELY GRADED TO PROVIDE UNIFORM BEARING AND SUPPORT FOR EACH SECTION OF THE CONDUIT OR CABLE ON UNDISTURBED SOIL AT EVERY POINT ALONG ITS ENTIRE LENGTH. EXCEPT WHERE ROCK IS ENCOUNTERED, CARE SHALL BE TAKEN NOT TO EXCAVATE BELOW THE DEPTHS INDICATED. WHERE ROCK EXCAVATIONS ARE NECESSARY, THE ROCK SHALL BE EXCAVATED TO A MINIMUM OVER DEPTH OF 6 INCHES BELOW THE TRENCH DEPTHS INDICATED ON THE CONSTRUCTION DRAWINGS OR SPECIFIED. OVER DEPTHS IN THE ROCK EXCAVATION AND UNAUTHORIZED OVER DEPTHS SHALL BE THOROUGHLY BACK FILLED AND TAMPED TO THE APPROPRIATE GRADE. WHENEVER WET OR OTHERWISE UNSTABLE SOIL THAT IS INCAPABLE OF PROPERLY SUPPORTING THE CONDUIT OR CABLE IS ENCOUNTERED IN THE BOTTOM OF THE TRENCH, SUCH SOLID SHALL BE REMOVED TO A MINIMUM OVER DEPTH OF 6 INCHES AND THE TRENCH BACKFILLED TO THE PROPER GRADE WITH EARTH OF OTHER SUITABLE MATERIAL, AS HEREINAFTER SPECIFIED.
 - G. BACKFILLING OF TRENCHES. TRENCHES SHALL NOT BE BACKFILLED UNTIL ALL SPECIFIED TESTS HAVE BEEN PERFORMED AND ACCEPTED. WHERE COMPACTED BACKFILL IS NOT INDICATED THE TRENCHES SHALL BE CAREFULLY BACKFILLED WITH SELECT MATERIAL SUCH AS EXCAVATED SOILS THAT ARE FREE OF ROOTS, SOD, RUBBISH OR STONES, DEPOSITED IN 6 INCH LAYERS AND THOROUGHLY AND CAREFULLY RAMMED UNTIL THE CONDUIT OR CABLE HAS A COVER OF NOT LESS THAN 1 FOOT. THE REMAINDER OF THE BACKFILL MATERIAL SHALL BE GRANULAR IN NATURE AND SHALL NOT CONTAIN ROOTS, SOD, RUBBING, OR STONES OF 2-1/2 INCH MAXIMUM DIMENSION. BACKFILL SHALL BE CAREFULLY PLACED IN THE TRENCH AND IN 1 FOOT LAYERS AND EACH LAYER TAMPED. SETTLING THE BACKFILL WITH WATER WILL BE PERMITTED. THE SURFACE SHALL BE GRADED TO A REASONABLE UNIFORMITY AND THE MOUNDING OVER THE TRENCHES LEFT IN A UNIFORM AND NEAT CONDITION.

SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	SURFACE MOUNTED PANEL BOARD
	TRANSFORMER
	KILOWATT HOUR METER
	JUNCTION BOX
	PULL BOX TO NEC/TELCO STANDARDS
-----	UNDERGROUND UTILITIES
	EXOTHERMIC WELD CONNECTION
	MECHANICAL CONNECTION
	GROUND ROD
	GROUND ROD WITH INSPECTION SLEEVE
	GROUND BAR
	120AC DUPLEX RECEPTACLE
	GROUND CONDUCTOR
	DC POWER AND FIBER OPTIC TRUNK CABLES
	DC POWER CABLES
	REPRESENTS DETAIL NUMBER
	REF. DRAWING NUMBER

ABBREVIATIONS

CIGBE	COAX ISOLATED GROUND BAR EXTERNAL
MIGB	MASTER ISOLATED GROUND BAR
SST	SELF SUPPORTING TOWER
GPS	GLOBAL POSITIONING SYSTEM
TYP.	TYPICAL
DWG	DRAWING
BCW	BARE COPPER WIRE
BFG	BELOW FINISH GRADE
PVC	POLYVINYL CHLORIDE
CAB	CABINET
C	CONDUIT
SS	STAINLESS STEEL
G	GROUND
AWG	AMERICAN WIRE GAUGE
RGS	RIGID GALVANIZED STEEL
AHJ	AUTHORITY HAVING JURISDICTION
TTLNA	TOWER TOP LOW NOISE AMPLIFIER
UNO	UNLESS NOTED OTHERWISE
EMT	ELECTRICAL METALLIC TUBING
AGL	ABOVE GROUND LEVEL

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0	ISSUED FOR REVIEW	BMM	09/13/19

Drawn: BMM Date: 09/13/19
Designed: ASW Date: 09/13/19
Checked: AB Date: 09/13/19

Project Number: 499-006

Project Title:
WINDHAM
WINDHAM CTR
CTL01064
FA# 10035442
193 WINDHAM CENTER ROAD
WINDHAM, CT 06280

Prepared For:
smartlink

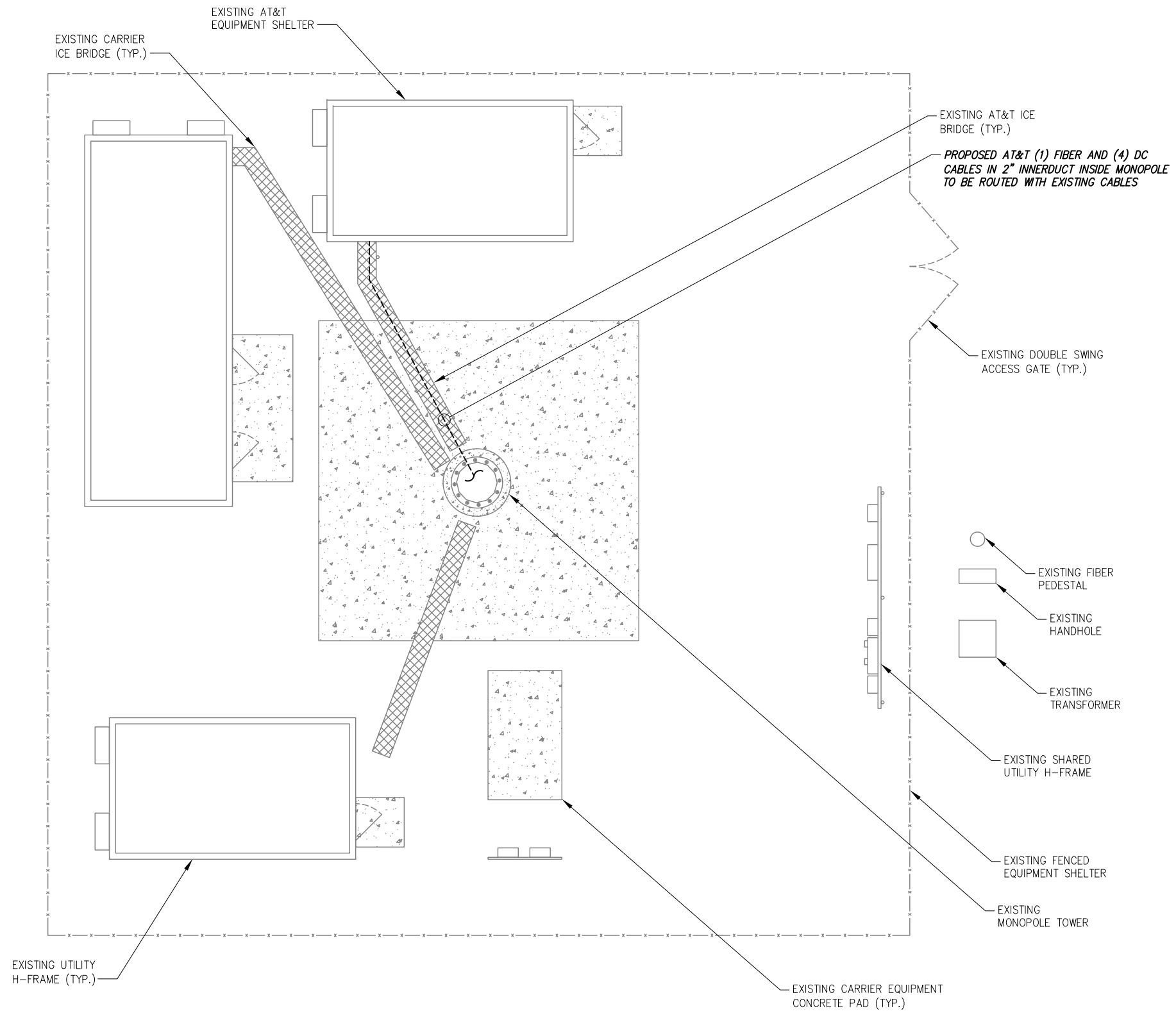
Drawing Scale:
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Date:
10/16/19

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Drawing Title:
GENERAL NOTES

Drawing Number:
C1



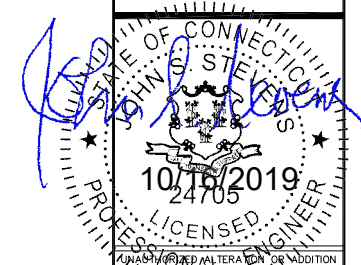
BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING AND PROVIDED INFORMATION, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.

TRUE NORTH

1 SITE PLAN
SCALE: AS NOTED

GRAPHIC SCALE:
10' 5' 0 5' 10'
SCALE (11x17): 1" = 10'-0"
SCALE (22x34): 1" = 5'-0"

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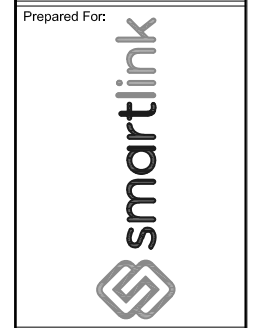
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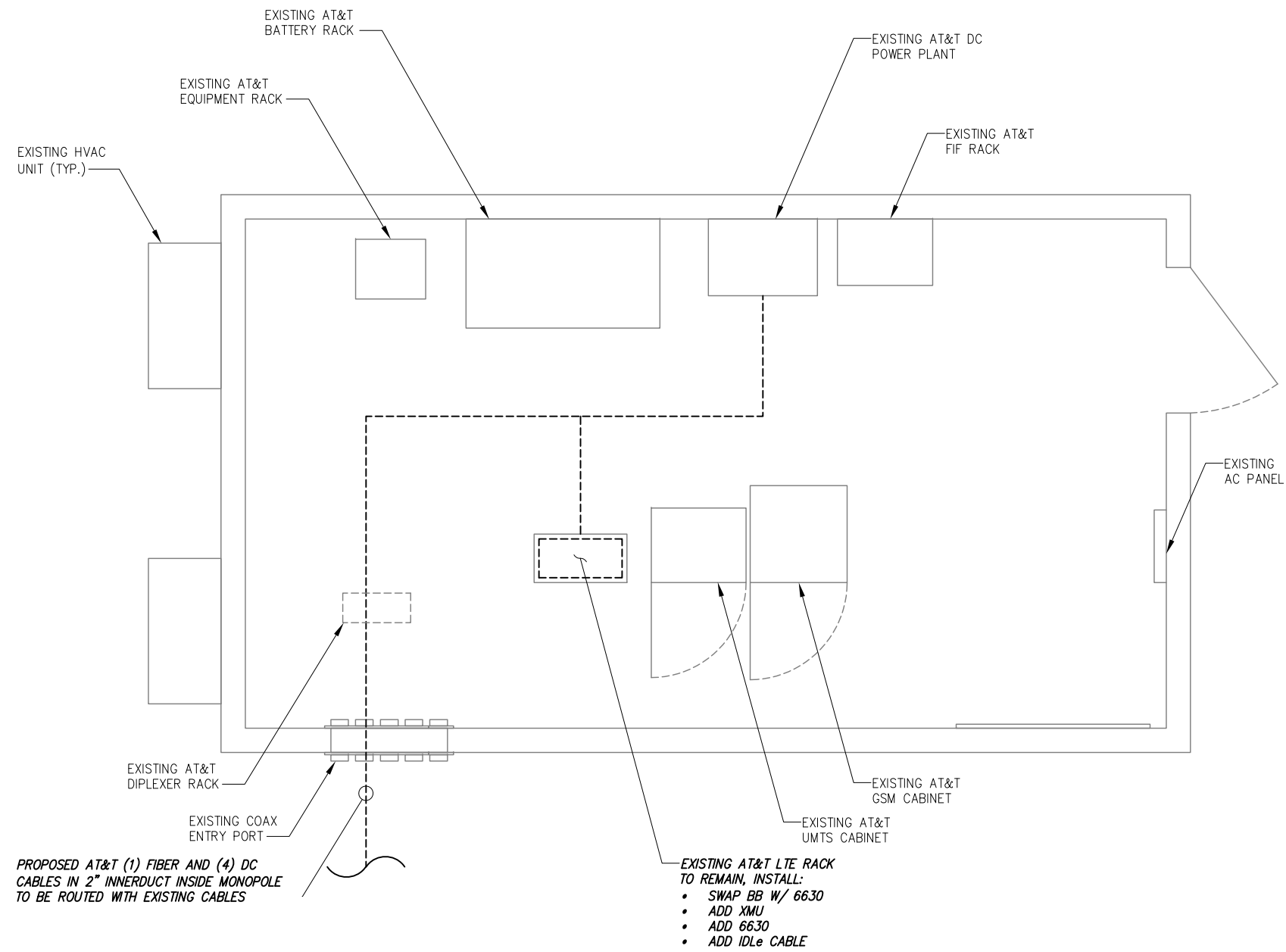
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Drawing Title
OVERALL SITE PLAN

Drawing Number
C2

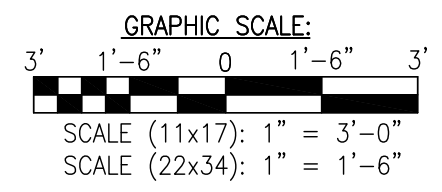


PROPOSED AT&T (1) FIBER AND (4) DC CABLES IN 2" INNERDUCT INSIDE MONOPOLE TO BE ROUTED WITH EXISTING CABLES

EXISTING AT&T LTE RACK TO REMAIN, INSTALL:
 • SWAP BB W/ 6630
 • ADD XMU
 • ADD 6630
 • ADD IDLe CABLE

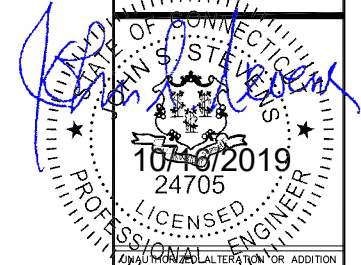
TRUE NORTH

2 ENLARGED EQUIPMENT PLAN
 SCALE: AS NOTED



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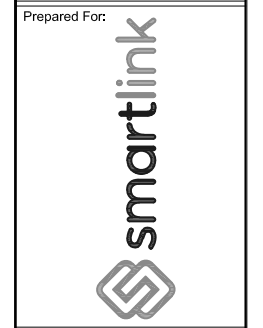
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Drawing Scale: AS NOTED
 Date: 10/16/19
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Drawing Title
ENLARGED SITE PLAN

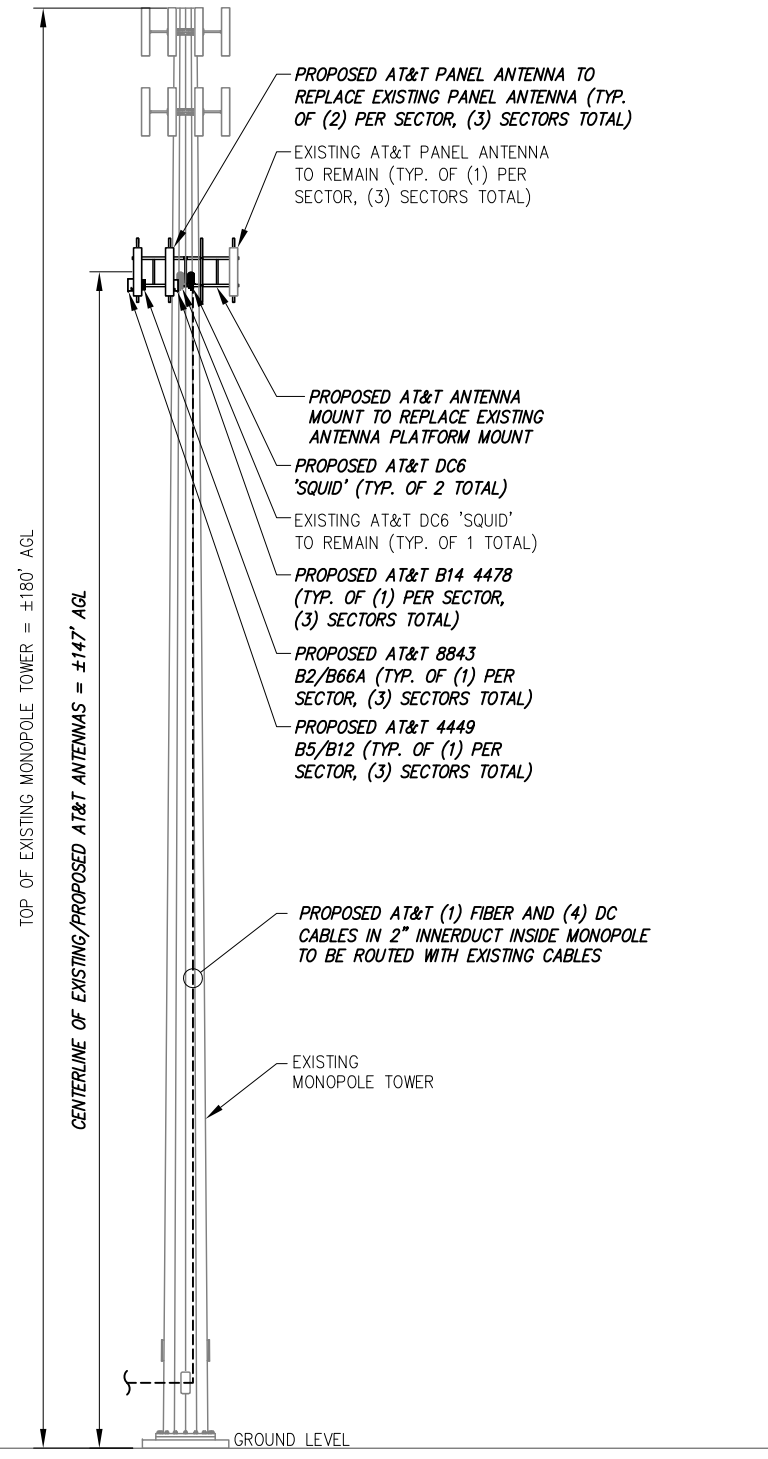
Drawing Number
C2A

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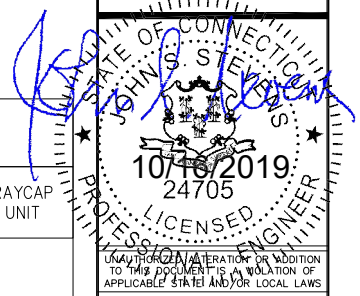
NOTE:

- 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
- 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS



FINAL ANTENNA CONFIGURATION & CABLE SCHEDULE BASED ON LTE RFDS DATED 07/30/19, V 2.00

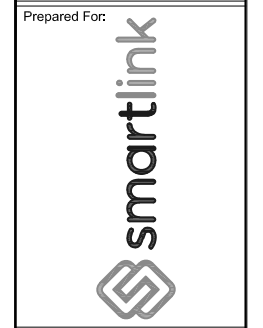
SECTOR	ANTENNA POSITION	ANTENNA STATUS & TECHNOLOGY	ANTENNA MANF/MODEL	TMA/DIPLEXER	RRUS	AZIMUTH	ANTENNA C. HEIGHT	CABLE FEEDER		RAYCAP UNIT
								TYPE	LENGTH	
ALPHA	A-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) TT08-19DB111-001	--	143°	±147'	(2) (E) 1-5/8" COAX CABLES	±185'	(1) (E) DC6 'SQUID' (2) (P) DC6 'SQUID'
	A-2	--	--	--	--	--	--	(2) (E) 1-5/8" COAX CABLES	±185'	
	A-3	(P) LTE 700/AWS	CCI DMP65R-BU8DA	--	(1) (P) B14 4478	30°	±147'	(1) (E) FIBER CABLE (2) (E) DC CABLES	--	
	A-4	(P) LTE 700/850/1900/5G 850	CCI DMP65R-BU8DA	--	(1) (P) 4449 B5/B12 (1) (P) 8843 B2/B66A	30°	±147'	SEE A-3 FOR CABLE INFORMATION	--	
BETA	B-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) TT08-19DB111-001	--	263°	±147'	(2) (E) 1-5/8" COAX CABLES	±185'	
	B-2	--	--	--	--	--	--	(2) (E) 1-5/8" COAX CABLES	±185'	
	B-3	(P) LTE 700/AWS	CCI DMP65R-BU8DA	--	(1) (P) B14 4478	160°	±147'	(1) (P) FIBER CABLE (4) (P) DC CABLES	--	
	B-4	(P) LTE 700/850/1900/5G 850	CCI DMP65R-BU8DA	--	(1) (P) 4449 B5/B12 (1) (P) 8843 B2/B66A	160°	±147'	SEE A-3 FOR CABLE INFORMATION	--	
GAMMA	G-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) TT08-19DB111-001	--	23°	±147'	(2) (E) 1-5/8" COAX CABLES	±185'	
	G-2	--	--	--	--	--	--	(2) (E) 1-5/8" COAX CABLES	±185'	
	G-3	(P) LTE 700/AWS	CCI DMP65R-BU8DA	--	(1) (P) B14 4478	270°	±147'	SEE A-3 FOR CABLE INFORMATION	--	
	G-4	(P) LTE 700/850/1900/5G 850	CCI DMP65R-BU8DA	--	(1) (P) 4449 B5/B12 (1) (P) 8843 B2/B66A	270°	±147'	SEE A-3 FOR CABLE INFORMATION	--	



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Project Title: WINDHAM WINDHAM CTR CTL01064 FA# 10035442 193 WINDHAM CENTER ROAD WINDHAM, CT 06280			



Drawing Scale: AS NOTED
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Drawing Title: **ELEVATION VIEW**

Drawing Number: **C3**

2 AT&T ANTENNA SCHEDULE
 NOT TO SCALE

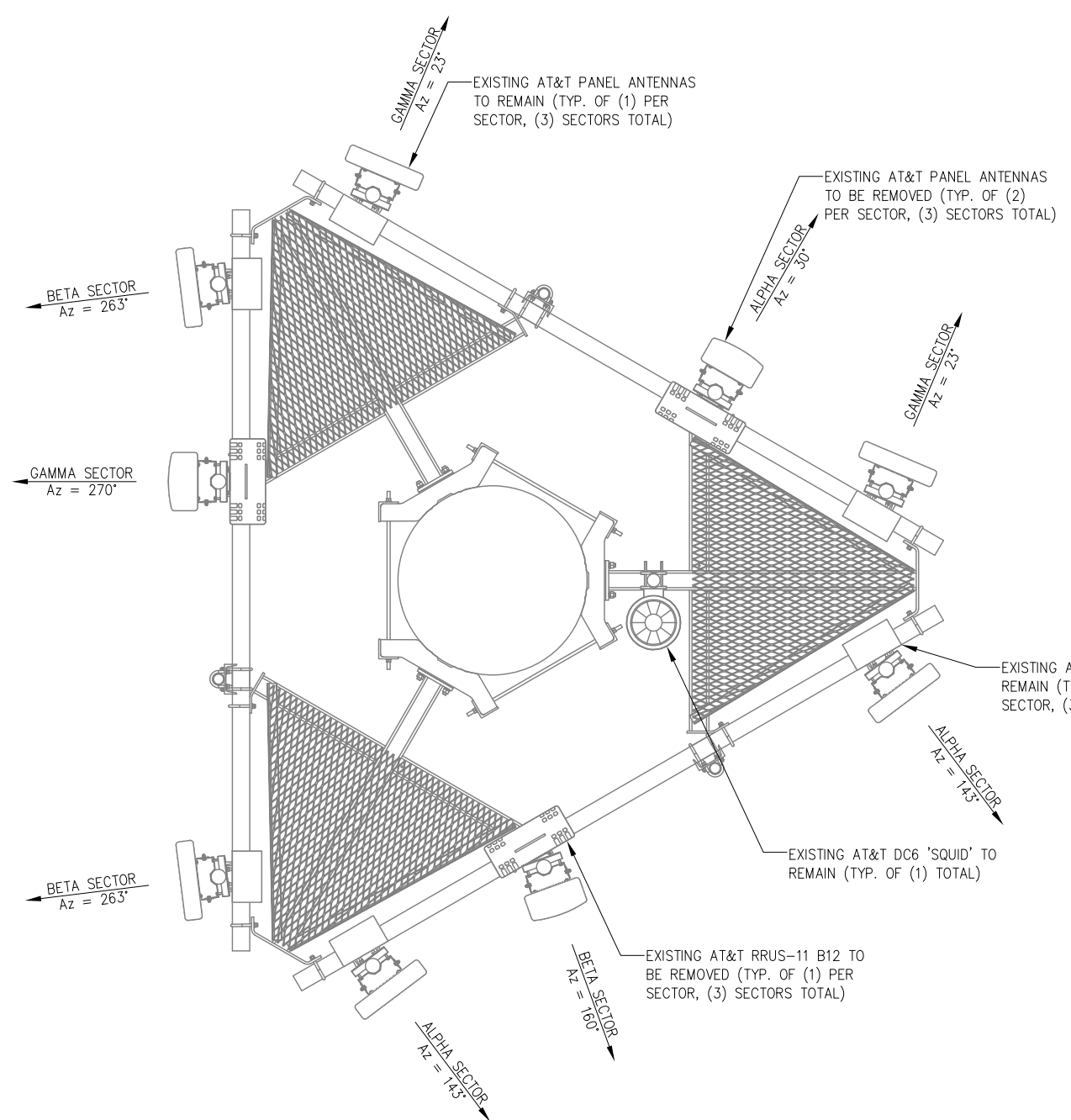
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NOTE:

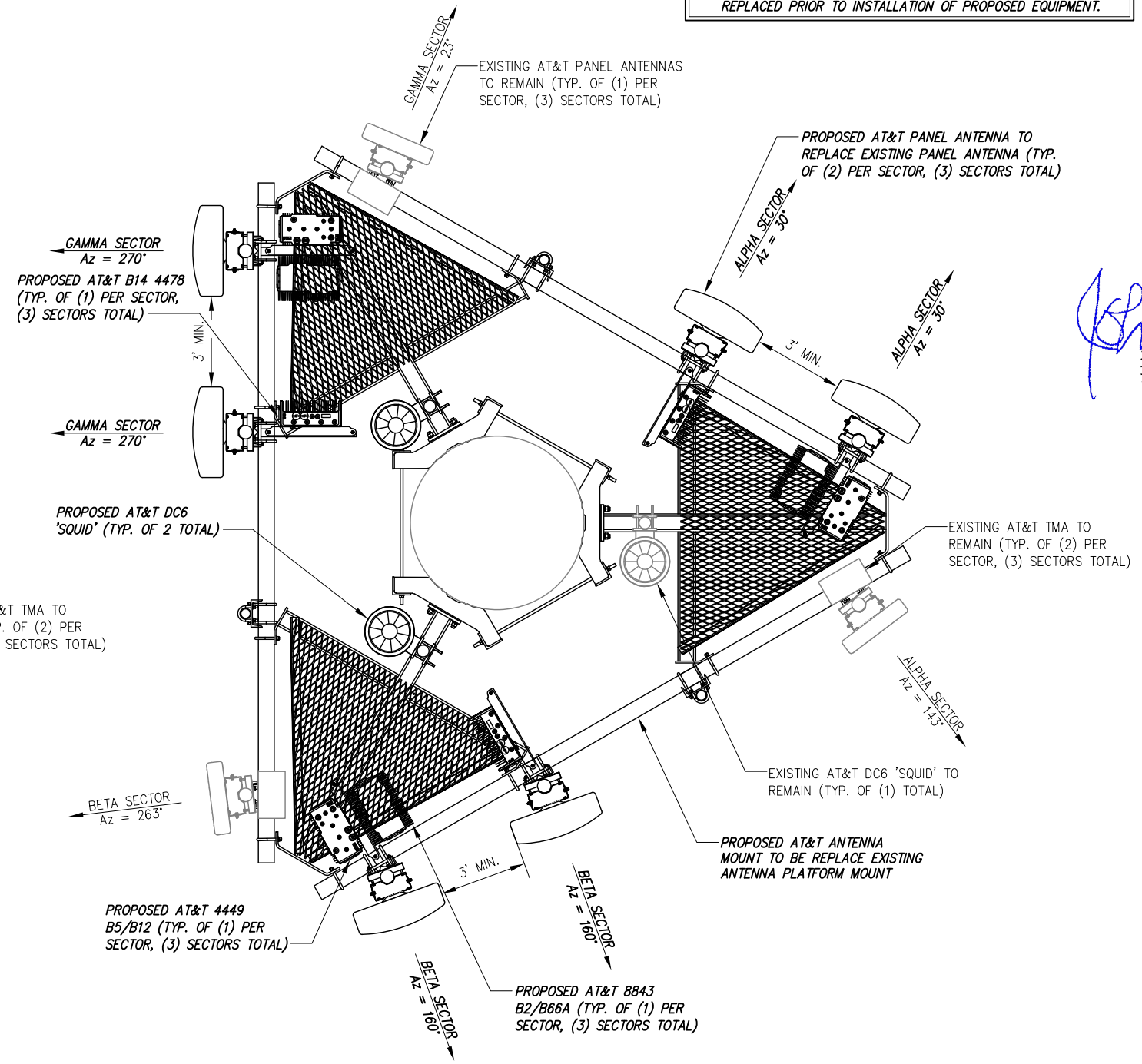
- 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
- 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS

NOTE:

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1 EXISTING ANTENNA ORIENTATION PLAN
--- NOT TO SCALE



2 PROPOSED ANTENNA ORIENTATION PLAN
--- NOT TO SCALE

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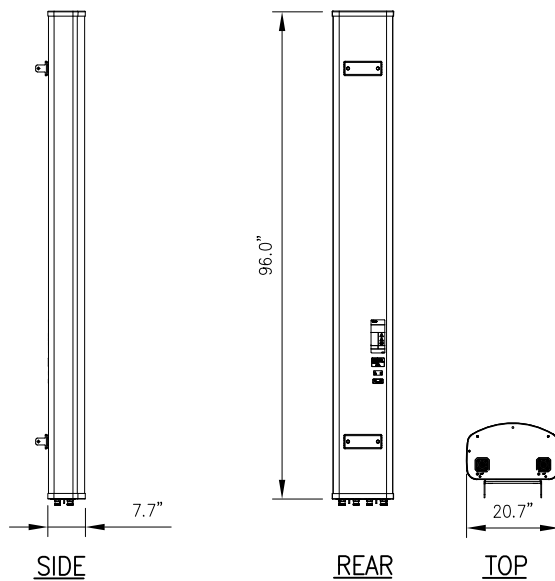
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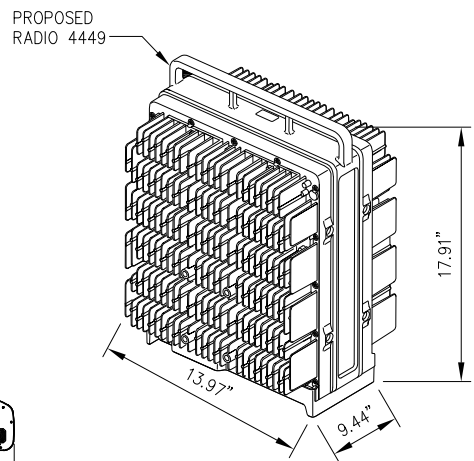
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ANTENNA ORIENTATION PLAN

Drawing Number:
C4



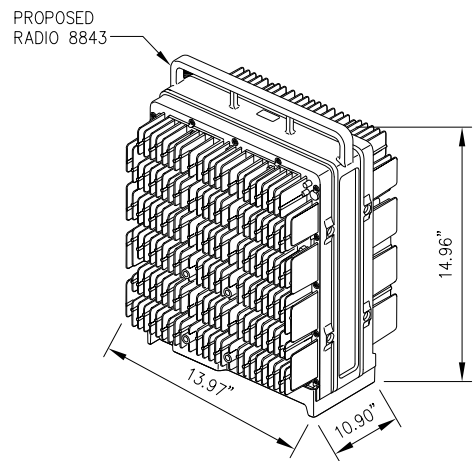
CCI MODEL NO.:	DMP65R-BU8DA
RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	(96.0"x20.7"x7.7")
WEIGHT, W/ PRE-MOUNTED BRACKETS:	95.7 LBS
CONNECTOR:	7-16 DIN FEMALE

1 ANTENNA DETAIL
--- NOT TO SCALE



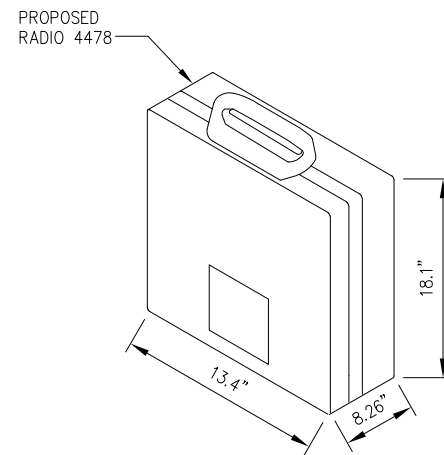
RADIO 4449 SPECIFICATIONS
• HxWxD, (INCHES) : 17.91"x13.97"x9.44"
• WEIGHT (LBS) : 70.54
• COLOR : GRAY

2 ERICSSON RADIO 4449 DETAIL
--- NOT TO SCALE



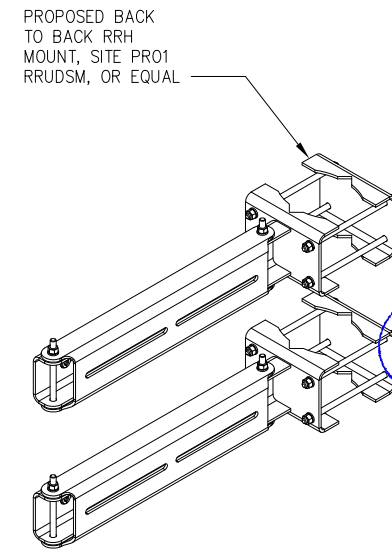
RADIO 8843 SPECIFICATIONS
• HxWxD, (INCHES) : 14.96"x13.97"x10.90"
• WEIGHT (LBS) : 71.87
• COLOR : GRAY

3 ERICSSON RADIO 8843 DETAIL
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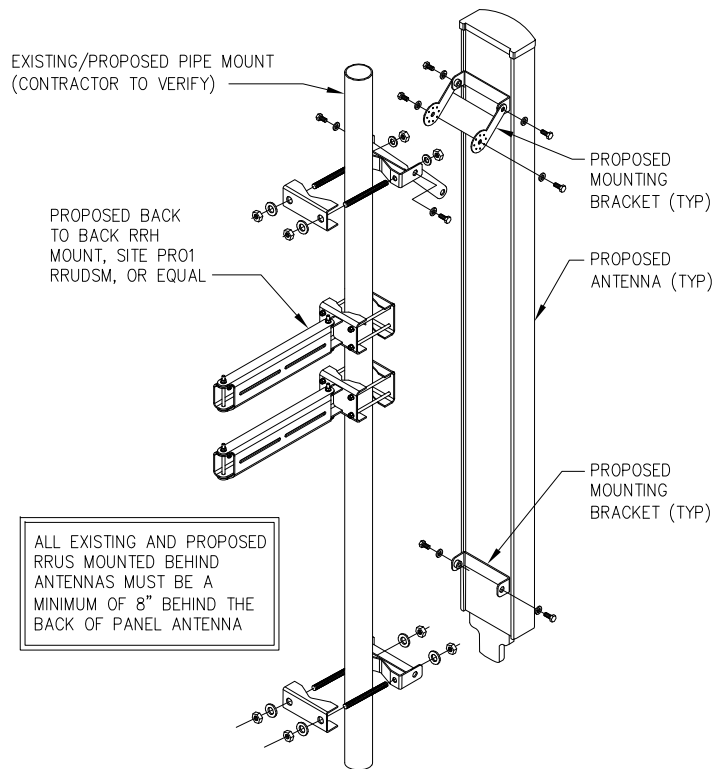


RADIO 4478-B14 SPECIFICATIONS
• HxWxD, (INCHES) : 18.1"x13.4"x8.26"
• WEIGHT (LBS) : 59.5
• COLOR : GRAY
• MOUNTING BRACKET: SXK1250244/1

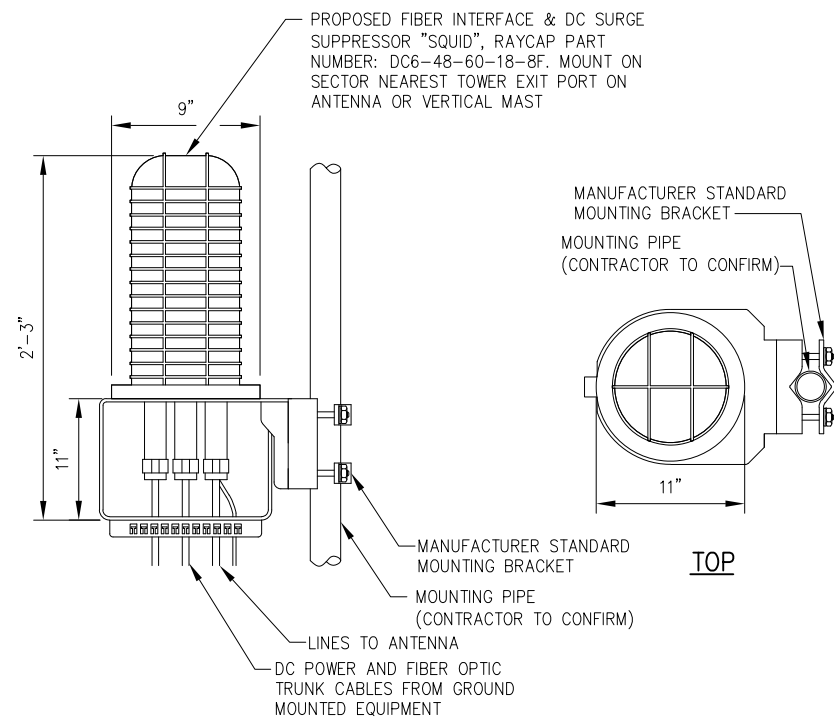
4 ERICSSON RADIO 4478-B14 DETAIL
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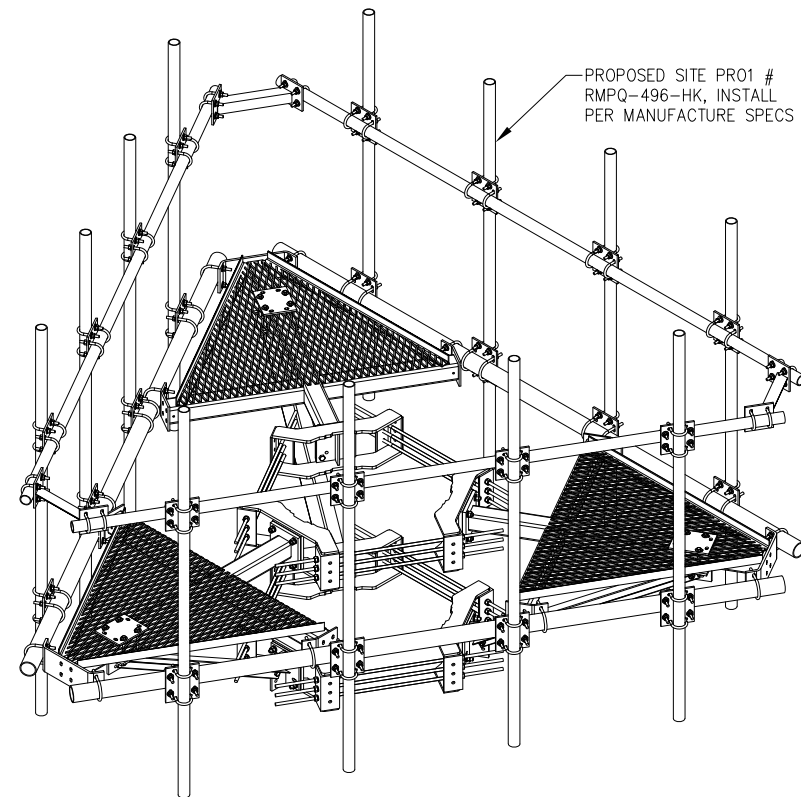
5 BACK TO BACK PIPE MOUNT DETAIL
--- NOT TO SCALE



6 ANTENNA MOUNTING DETAIL
--- NOT TO SCALE

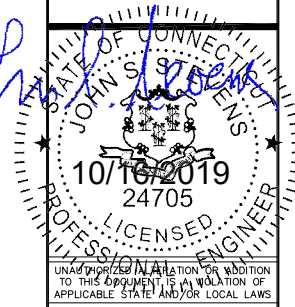


7 SQUID DETAIL
--- NOT TO SCALE



8 PLATFORM MOUNT DETAIL
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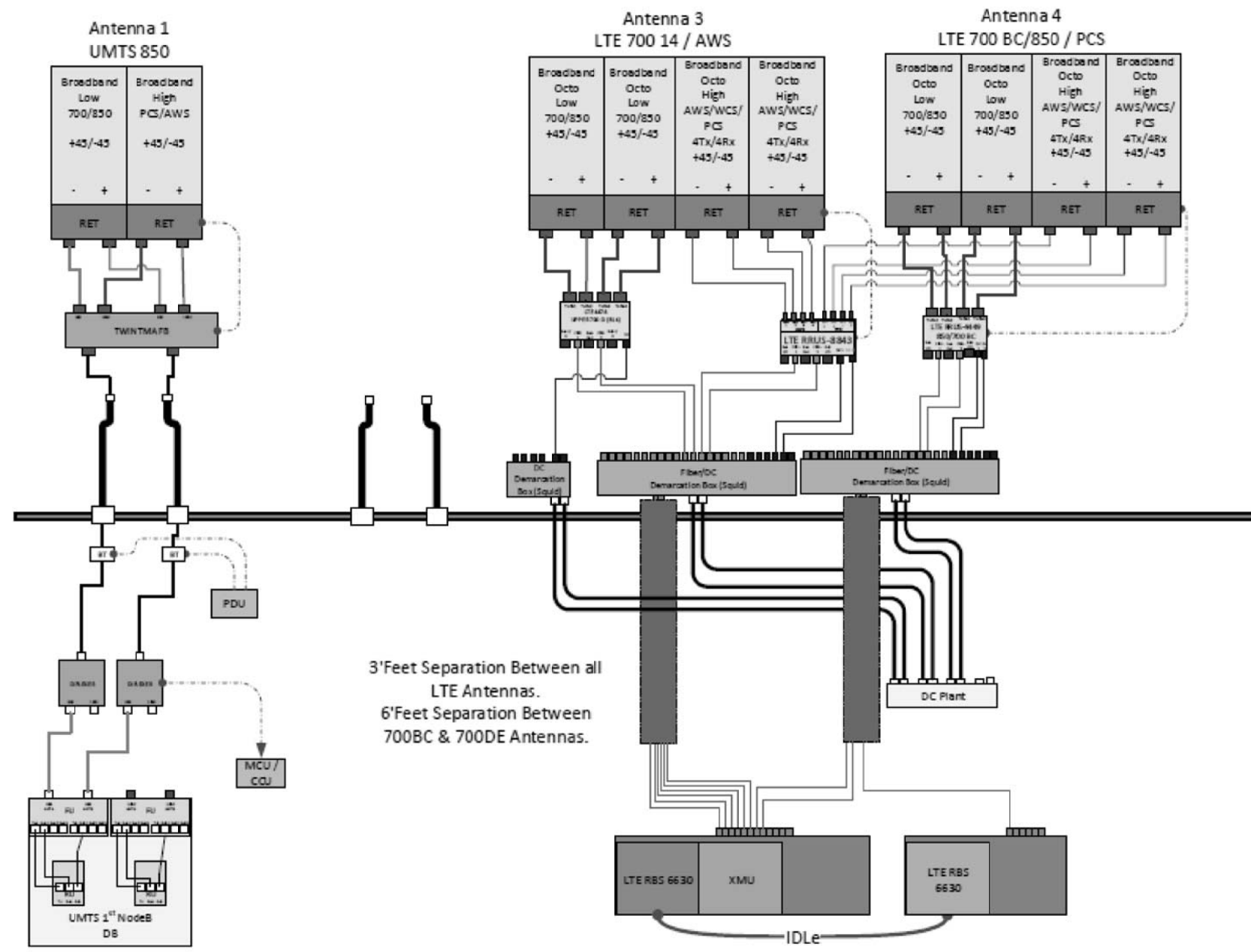
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CTL01064			
FA# 10035442			
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Prepared For: smartlink			

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Drawing Title: **EQUIPMENT DETAILS**

Drawing Number: **C5**

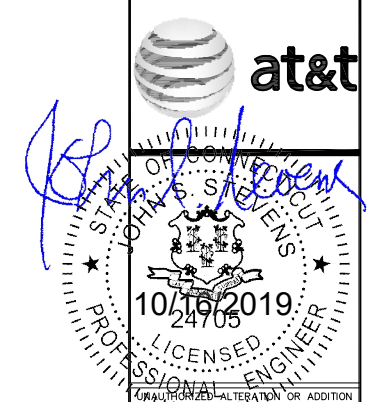


3' Feet Separation Between all
LTE Antennas.
6' Feet Separation Between
700BC & 700DE Antennas.

ALPHA/BETA/GAMMA

1 PLUMBING DIAGRAM (FINAL CONFIGURATION)
NOT TO SCALE

*BASED ON LTE RFDS,
DATED 07/30/2019, V2.00

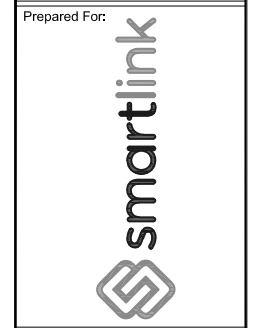


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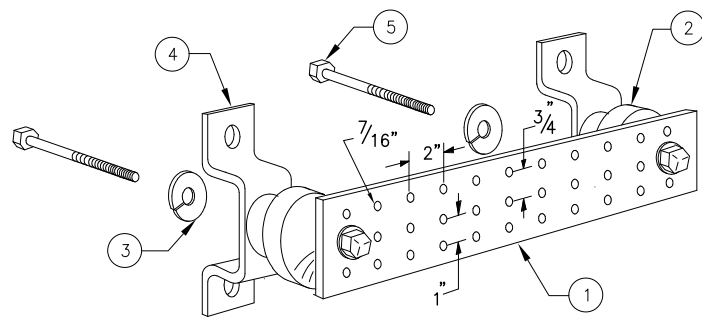


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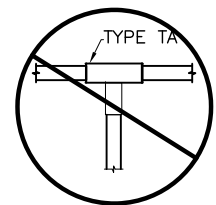
Drawing Title
**PLUMBING
DIAGRAM**

Drawing Number
C6

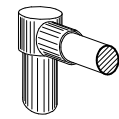


LEGEND

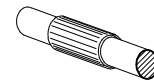
- 1 - SOLID TINNED COPPER GROUND BAR, 1/4"x 4"x 20" MIN., NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
- 2 - INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
- 3 - 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8
- 4 - WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056
- 5 - 5/8-11 X 1" H.H.C.S. BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1
- 6 - GROUND BAR SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY
- 7 - GROUND BARS SHALL NEITHER BE FIELD FABRICATED NOR NEW HOLES DRILLED
- 8 - GROUND LUGS SHALL MATCH THE HOLE SPACING ON THE BAR
- 9 - HARDWARE DIAMETER SHALL BE MINIMUM 3/8"



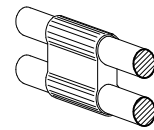
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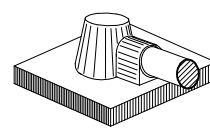
TYPE GR



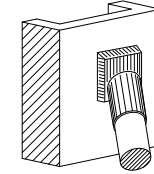
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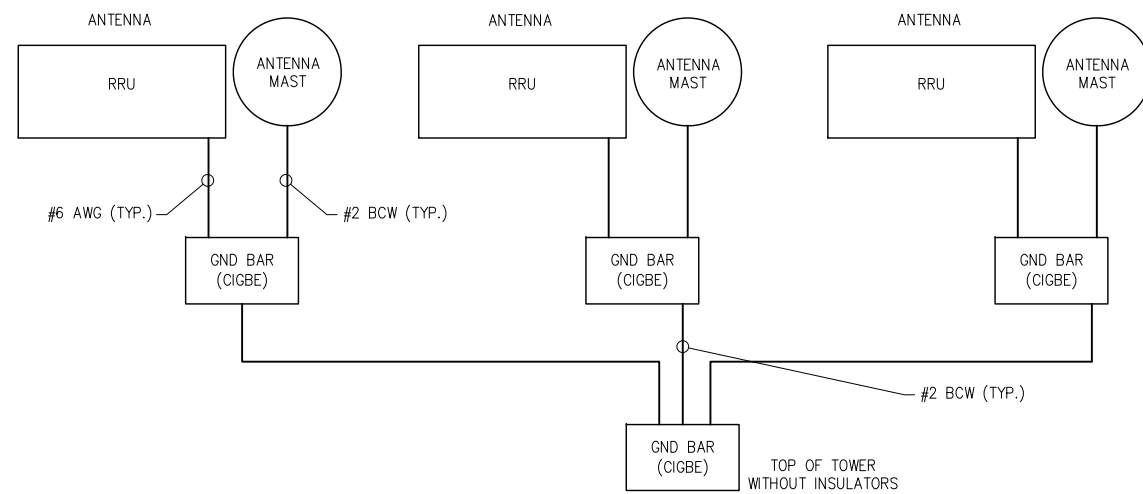
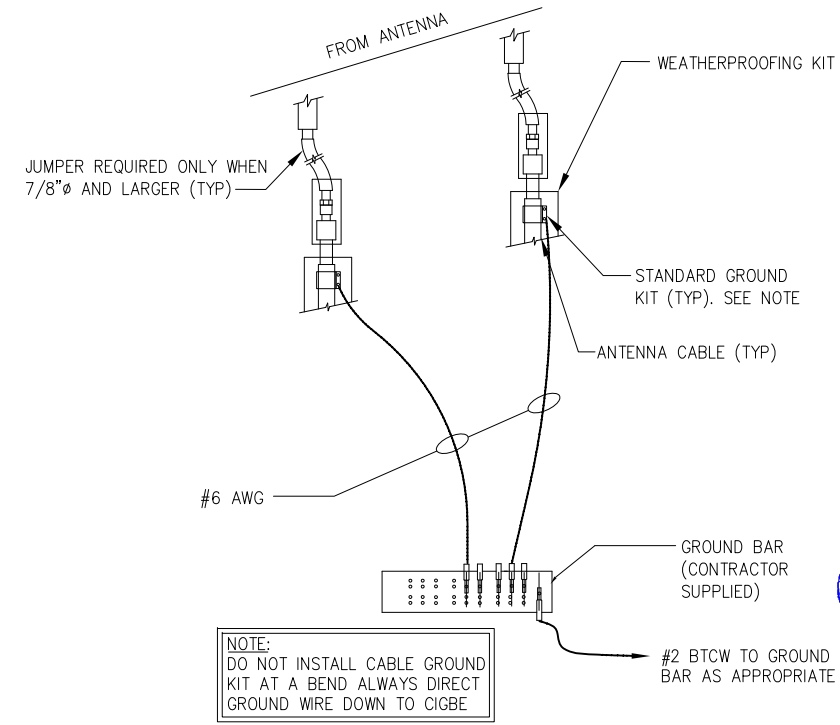
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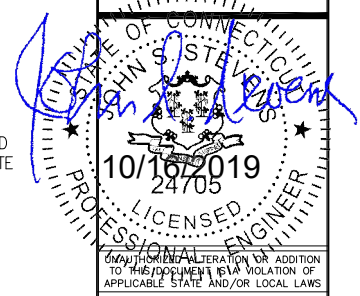
TYPE KA



TYPE VS



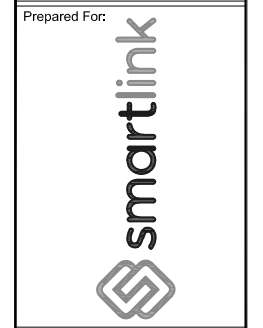
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2	REVISED FOR PERMIT	BMM	10/16/19
1	ISSUED FOR PERMIT	ASW	10/04/19
0	ISSUED FOR REVIEW	BMM	09/13/19
No.	Submittal / Revision	App'd	Date
Drawn:	BMM	Date:	09/13/19
Designed:	ASW	Date:	09/13/19
Checked:	ASW	Date:	09/13/19
Project Number:			
499-006			

Project Title:
 WINDHAM
 WINDHAM CTR
 CTL01064
 FA# 10035442
 193 WINDHAM CENTER ROAD
 WINDHAM, CT 06280



Drawing Scale:
 AS NOTED
 Date:
 10/16/19

CD

Drawing Title
**GROUNDING
 DETAILS**

Drawing Number
C7