



October 25, 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: 230 Clover Mill Road, Storrs Mansfield, CT 06268
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 six (6) wireless telecommunication antennas at an antenna center line height of 168-feet on an existing 178-foot monopole, owned by American Tower Corporation at 10 Presidential Way, Woburn, MA 01801. AT&T now intends to remove three (3) 6' KMW AM-X-CD-16-65-00T-RET Panel Antennas, each currently installed in position [2] all sectors, and swap these for three (3) 6' CCI DMP65R-BU6DA Panel Antennas and three (3) 6' Andrew NNH4-65B-R6 Panel Antennas, each to be installed in position [3 + 4], all sectors. In addition, AT&T intends to remove (6) RRUS-11 and add one (1) RRUS-4478 B14, one (1) RRUS-8843 B2/B66A and (1) RRUS-4449 B5/B12 in position [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 to their equipment configuration. All the changes will take place on the existing antenna 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 Michael Nintean– Building Director, Town of Mansfield, CT at 4 South Eagleville Road, Storrs Mansfield, CT 06268 and Paul Shapiro– Mayor, Town of Mansfield, CT at 4 South Eagleville Road, Storrs Mansfield, CT 06268. A copy of this letter is being sent to the property owner, Town of Mansfield Board of Education & Reference at 4 South Eagleville Road, Storrs, CT 06268 and to the tower company American Tower Corporation at 10 Presidential Way, Woburn, MA 01801.

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

- **TS-AT&T-078-030925** - AT&T Wireless PCS LLC request for an order to approve tower sharing for a proposed telecommunications facility to be constructed at 230 Clover Mill Road, Mansfield, Connecticut.
- **EM-CING-078-080612** – New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 230 Clover Mill Road, Mansfield, Connecticut.
- **EM-AT&T-078-120919** – AT&T Mobility notice of intent to modify an existing telecommunications facility located at 230 Clover Mill Road, Mansfield, 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:

Michael Nintean— Building Director, Town of Mansfield, CT

Paul Shapiro— Mayor, Town of Mansfield, CT

Town of Mansfield Board of Education & Reference – Property Owners

ATC – Tower Company

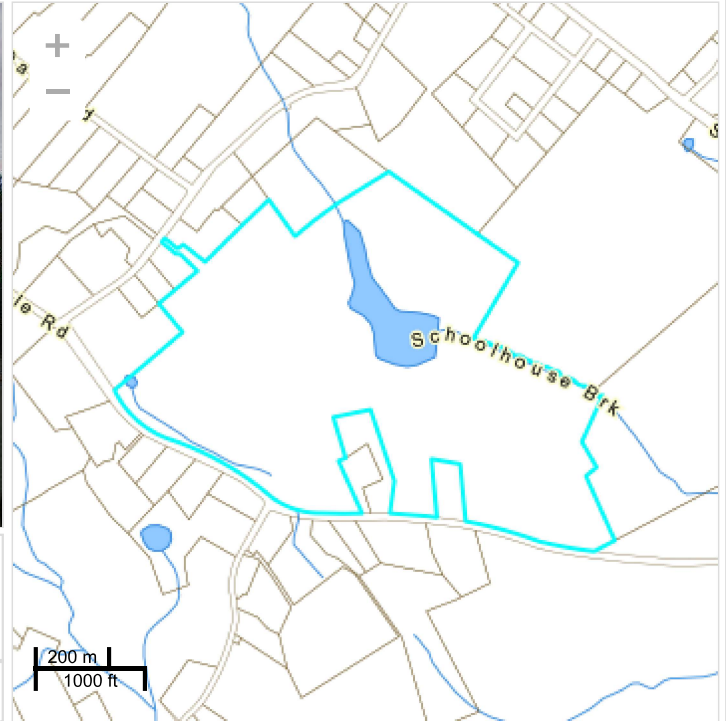


Town of Mansfield, Connecticut

Property Record Card

205 SPRING HILL RD

ID: 2799

ID: **23.60.7** Account #: **23 60 7**

Owner: MANSFIELD TOWN OF & BOARD OF EDUCATION &
Co-Owner: MANSFIELD MIDDLE SCHOOL
Address: 4 SOUTH EAGLEVILLE RD
STORRS CT 06268

Assessment: Total: \$7,716,700
Improvements: \$6,419,000 Land: \$1,297,700

Sales History

Grantee	Book / Page	Sale Date	Sale Price
MANSFIELD TOWN OF & BOARD OF EDUCATION & REFERENCE	663 / 347	2009-01-20	\$0
	113 / 428	1971-04-16	\$0
	106 / 136	1967-12-13	\$0
MANSFIELD TOWN OF	83 / 413	1957-05-10	\$0



Land Information

Land Area: 93.53 AC
Zoning: RAR90 (See Map)
Land Use: 901 - Town MDL-Com

Building Information

Style:
Year Built:
Stories:
Rooms: Bedrooms:
Baths: Half Baths:
Living Area:
Grade:
Condition:

Heat Type:
Heat Fuel:
AC Type:
Fireplaces:
Roof Structure:
Roof Covering:
Exterior Wall:
Interior Floor:
Basement:

Extra Features

Description	Area / Units	Assessment
FNC Fence	200.00 L.F.	\$800
KEN2 Kennel-Good	150.00 S.F.	\$900
SHD1 Shed	3600.00 S.F.	\$21,100
PAV1 Paving	112400.00 S.F.	\$99,100
FGR4 Gar w/Loft	6333.00 S.F.	\$77,600
FGR1 Garage	6435.00 S.F.	\$75,700
WDK Wood Deck	416.00 S.F.	\$1,600
SHD1 Shed	120.00 S.F.	\$1,200
BTH1 Cabana	462.00 S.F.	\$4,600
TEN Tennis Court	1.00 UNIT	\$3,500
SHD1 Shed	800.00 S.F.	\$4,700
FNC Fence	280.00 L.F.	\$1,100
SHD1 Shed	100.00 S.F.	\$600
LT5 Light 5	15.00 UNIT	\$19,900

Sub Areas

Description	Living Area	Gross Area
BAS First Floor	66700	66700
GRN Greenhouse	0	360
UBM Basement	0	66700
BAS First Floor	1536	1536
BAS First Floor	6000	6000
BAS First Floor	9600	9600
BAS First Floor	512	512

Printed on 10/25/2019 from: <http://www.mainstreetmaps.com/ct/mansfield/>

BAS First Floor	3600	3600
FOP Framed Open Porch	0	320



AMERICAN TOWER®
C O R P O R A T I O N

Structural Analysis Report

Structure : 178 ft Monopole
ATC Site Name : MANSFIELD CENTER 1 CT, CT
ATC Asset Number : 376046
Engineering Number : OAA751997_C3_03
Proposed Carrier : AT&T MOBILITY
Carrier Site Name : Mansfield Central-Clover Mill
Carrier Site Number : CTL05858 / FA#10071107
Site Location : 230 Clover Mill Road
STORRS MANSFIELD, CT 06268-2826
41.775800,-72.222500
County : Tolland
Date : October 16, 2019
Max Usage : 64%
Result : Pass

Prepared By:
Rohith Koduru
Structural Engineer

Reviewed By:

COA: PEC.0001553



Table of Contents

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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 178 ft monopole to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower Drawings	PST Job #29203-0151, Revision 1, dated December 23, 2003
Foundation Drawing	PJF Job #29203-0151, Revision 1, dated December 23, 2003
Geotechnical Report	JGI Project #01133G, dated May 14, 2001
Mount Analysis	Infinigy Job #1106-A0001-B, dated October 2, 2019

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	101 mph (3-Second Gust, V_{asd}) / 130 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" radial ice concurrent
Code:	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	$S_s = 0.17$, $S_1 = 0.06$
Site Class:	D - Stiff Soil

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
192.0	1	Generic 20' Omni	Platform with Handrails	(3) 7/8" Coax	OTHER
191.0	2	Generic 18' Dipole		(1) 7/8" Coax	
186.0	1	Generic 8' Yagi		(1) 7/8" Coax	
180.0	1	Generic 2' x 4' Rectangular Grid Dish		(12) 1 5/8" Coax (2) 1 5/8" Hybriflex	VERIZON WIRELESS
178.0	3	Alcatel-Lucent RRH2X60-1900			
	6	RFS FD9R6004/2C-3L			
	3	Alcatel-Lucent RRH2X60-AWS			
	6	Commscope HBXX-6517DS-A2M			
	3	Commscope LNX-8513DS-VTM (39.2 lb)			
168.0	2	RFS DB-T1-6Z-8AB-OZ			
	3	Commscope LNX-6514DS-A1M			
	1	Raycap DC6-48-60-18-8F	-	(1) 0.39" (10mm) Fiber Trunk (2) 0.78" (19.7mm) 8 AWG 6 (6) 1 5/8" Coax	AT&T MOBILITY
	6	Powerwave Allgon LGP21401			
	3	Powerwave Allgon 7770.00			
158.0	3	Alcatel-Lucent 2X50W RRH w/o Filter	Low Profile Platform	(4) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
	3	Alcatel-Lucent 1900MHz RRH (65MHz)			
	3	Commscope DT465B-2XR			
	3	RFS APXVSP18-C-A20			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	Alcatel-Lucent 800 MHz RRH w/ Notch Filter			
148.0	3	Ericsson KRY 112 489/2	Low Profile Platform	(1) 1 5/8" (1.63"- 41.3mm) Fiber (6) 1 5/8" Coax	T-MOBILE
	3	Ericsson Radio 4449 B12,B71			
	3	RFS APXV18-209014-C-A20			
	3	RFS APXVAARR24_43-U-NA20			
120.0	2	Generic 18' Dipole	T-Arm	(7) 7/8" Coax	OTHER
116.0	1	Generic 8' Yagi			
113.0	1	Generic 8' Yagi			
	1	Generic 9' Omni			
111.0	1	Generic 22' Dipole			
	1	Generic 2' x 4' Rectangular Grid Dish			
76.0	1	Generic GPS	Stand-Off	(1) 1/2" Coax	SPRINT NEXTEL

Equipment to be Removed

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
168.0	3	KMW AM-X-CD-16-65-00T-RET	Stand-Off	-	AT&T MOBILITY
	6	Ericsson RRU11			



Proposed Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
168.0	2	Raycap DC6-48-60-18-8F	Site Pro 1 P/N RMQP-396	(1) 0.39" (10mm) Fiber Trunk (4) 0.78" (19.7mm) 8 AWG 6	AT&T MOBILITY
	3	Ericsson RRUS 8843 B2, B66A			
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 4449 B5, B12			
	3	Commscope NNH4-65B-R6			
	3	CCI DMP65R-BU6DA			

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	52%	Pass
Shaft	64%	Pass
Base Plate	44%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	6,250.0	8,437.5	5,006.9	59%
Shear (Kips)	48.0	64.8	38.5	59%
* The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1				

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
180.0	Generic 2' x 4' Rectangular Grid Dish	Other	0.000	0.000
168.0	Raycap DC6-48-60-18-8F	AT&T MOBILITY	1.457	0.998
	Ericsson RRUS 8843 B2, B66A			
	Ericsson RRUS 4478 B14			
	Ericsson RRUS 4449 B5, B12			
	Commscope NNH4-65B-R6			
	CCI DMP65R-BU6DA			
111.0	Generic 2' x 4' Rectangular Grid Dish	Other	0.614	0.671

*Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

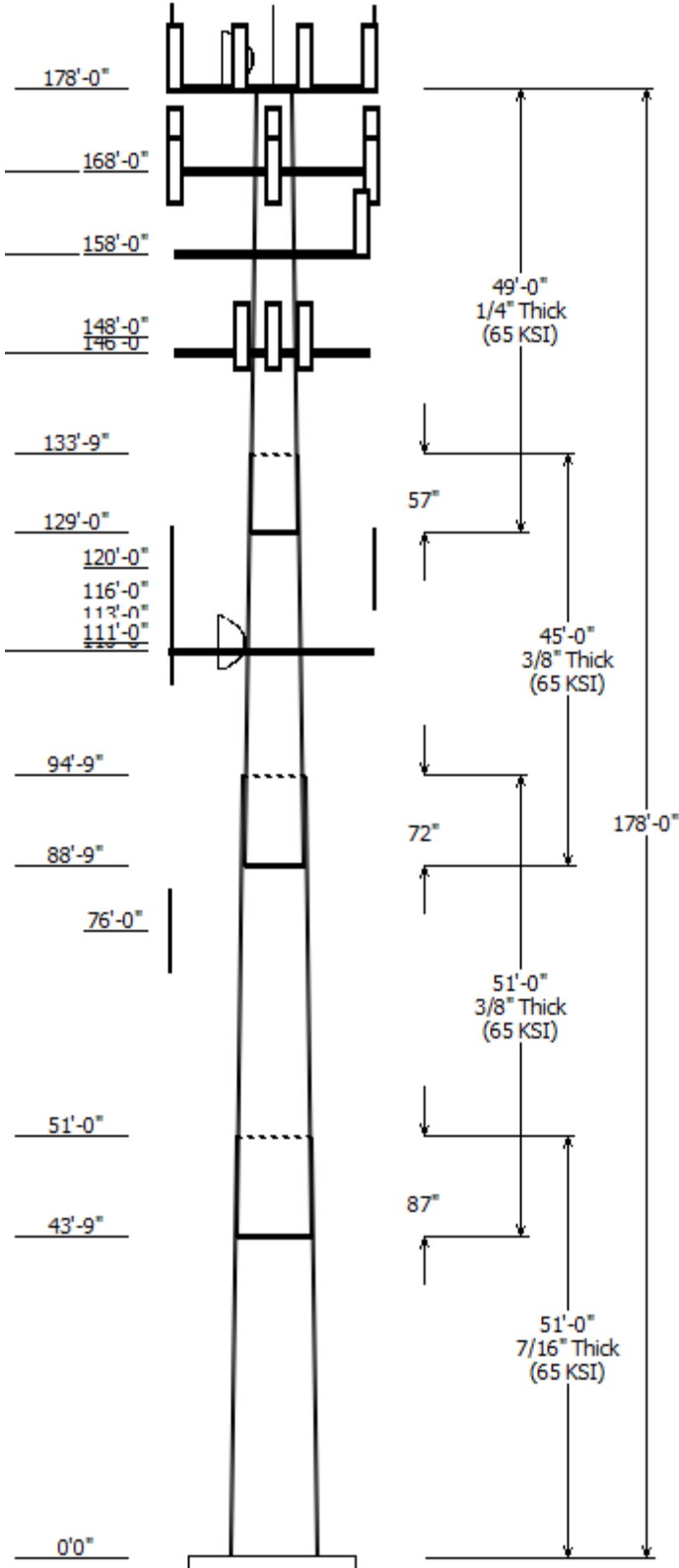
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively “American Tower”) are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Job Information

Client : AT&T MOBILITY

Pole : 376046

Code: ANSI/TIA-222-G

Location : MANSFIELD CENTER 1 CT, CT

Description : 178 ft PennSummit Monopole

Shape : 18 Sides

Splice Class : II

Exposure : B

Height : 178.00 (ft)

Topo : 1

Base Elev (ft): 0.00

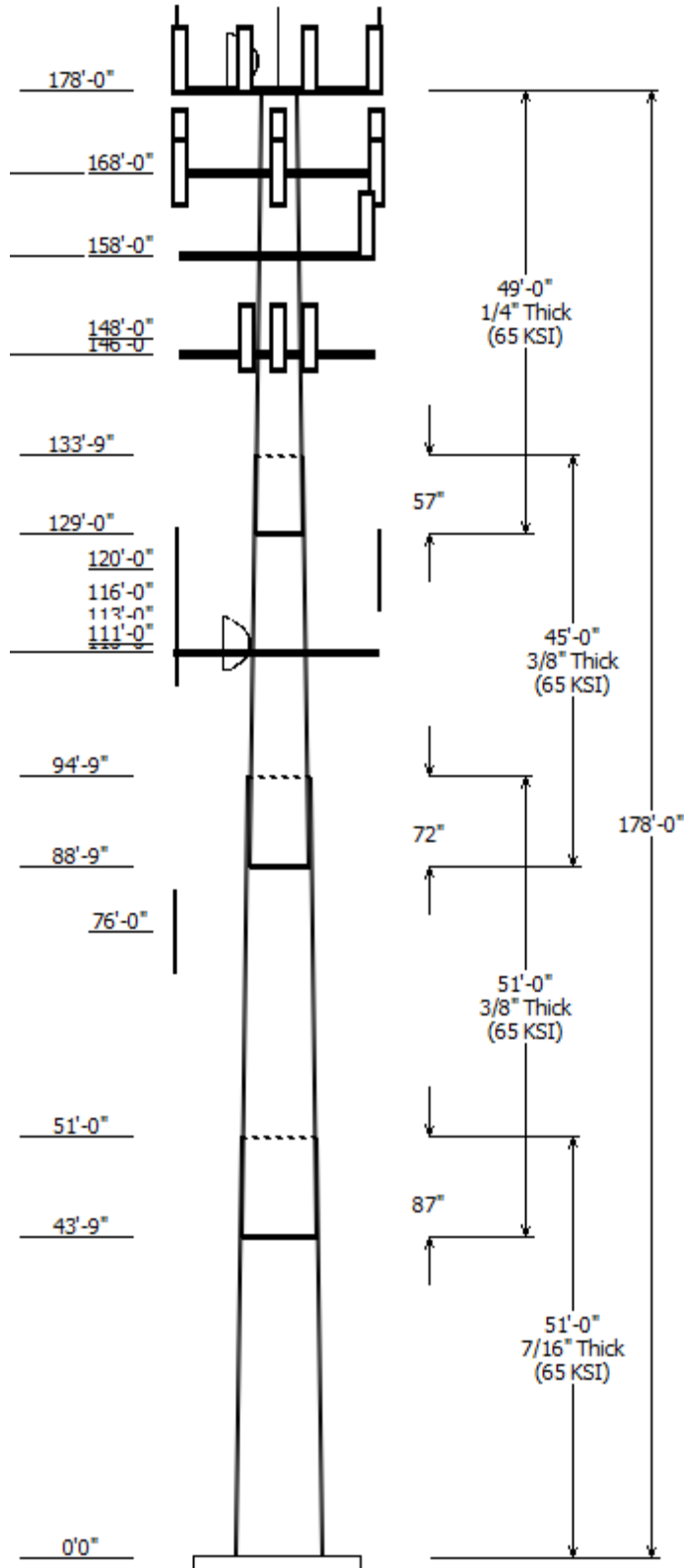
Taper: 0.252021in/ft)

Sections Properties

Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Steel Grade
		Top	Bottom				
1	51.000	55.50	68.36	0.438		0.000	18 Sides 65
2	51.000	45.23	58.08	0.375	Slip Joint	87.000	18 Sides 65
3	45.000	36.15	47.49	0.375	Slip Joint	72.000	18 Sides 65
4	49.000	25.50	37.84	0.250	Slip Joint	57.000	18 Sides 65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
178.000	180.000	1	Generic 2' x 4' Rectangular Gr
178.000	186.000	1	Generic 8' Yagi
178.000	191.000	2	Generic 18' Dipole
178.000	192.000	1	Generic 20' Omni
178.000	178.000	1	Flat Platform w/ Handrails
178.000	179.000	6	Commscope HBXX-6517DS-
178.000	179.000	3	Commscope LNX-8513DS-
178.000	179.000	3	Commscope LNX-6514DS-A1M
178.000	179.000	2	RFS DB-T1-6Z-8AB-0Z
178.000	178.000	3	Alcatel-Lucent RRH2X60-AWS
178.000	178.000	3	Alcatel-Lucent RRH2X60-1900
178.000	179.000	6	RFS FD9R6004/2C-3L
168.000	168.000	1	Site Pro 1 P/N RMQP-396
168.000	168.000	3	CCI DMP65R-BU6DA
168.000	168.000	3	Commscope NNH4-65B-R6
168.000	169.000	3	Powerwave Allgon 7770.00
168.000	168.000	3	Ericsson RRUS 4449 B5, B12
168.000	168.000	3	Ericsson RRUS 4478 B14
168.000	168.000	3	Ericsson RRUS 8843 B2, B66A
168.000	169.000	2	Raycap DC6-48-60-18-8F
168.000	169.000	1	Raycap DC6-48-60-18-8F
168.000	169.000	6	Powerwave Allgon LGP21401
158.000	158.000	1	Round Low Profile Platform
158.000	159.000	3	Commscope DT465B-2XR
158.000	159.000	3	RFS APXVSP18-C-A20
158.000	158.000	3	Alcatel-Lucent TD-RRH8x20-25
158.000	158.000	3	Alcatel-Lucent 800 MHz RRH
158.000	158.000	3	Alcatel-Lucent 1900MHz RRH
158.000	158.000	3	Alcatel-Lucent 2X50W RRH w/o
148.000	148.000	3	RFS APXVAARR24_43-U-NA20
148.000	148.000	3	RFS APXV18-209014-C-A20
148.000	148.000	3	Ericsson Radio 4449 B12,B71
148.000	148.000	3	Ericsson KRY 112 489/2
146.000	146.000	1	Round Low Profile Platform
120.000	120.000	2	Generic 18' Dipole
116.000	116.000	1	Generic 8' Yagi
113.000	113.000	1	Generic 8' Yagi
113.000	113.000	1	Generic 9' Omni
111.000	111.000	1	Generic 22' Dipole
111.000	111.000	1	Generic 2' x 4' Rectangular Gr
110.000	110.000	3	Flat T-Arm
76.000	76.000	1	Generic GPS



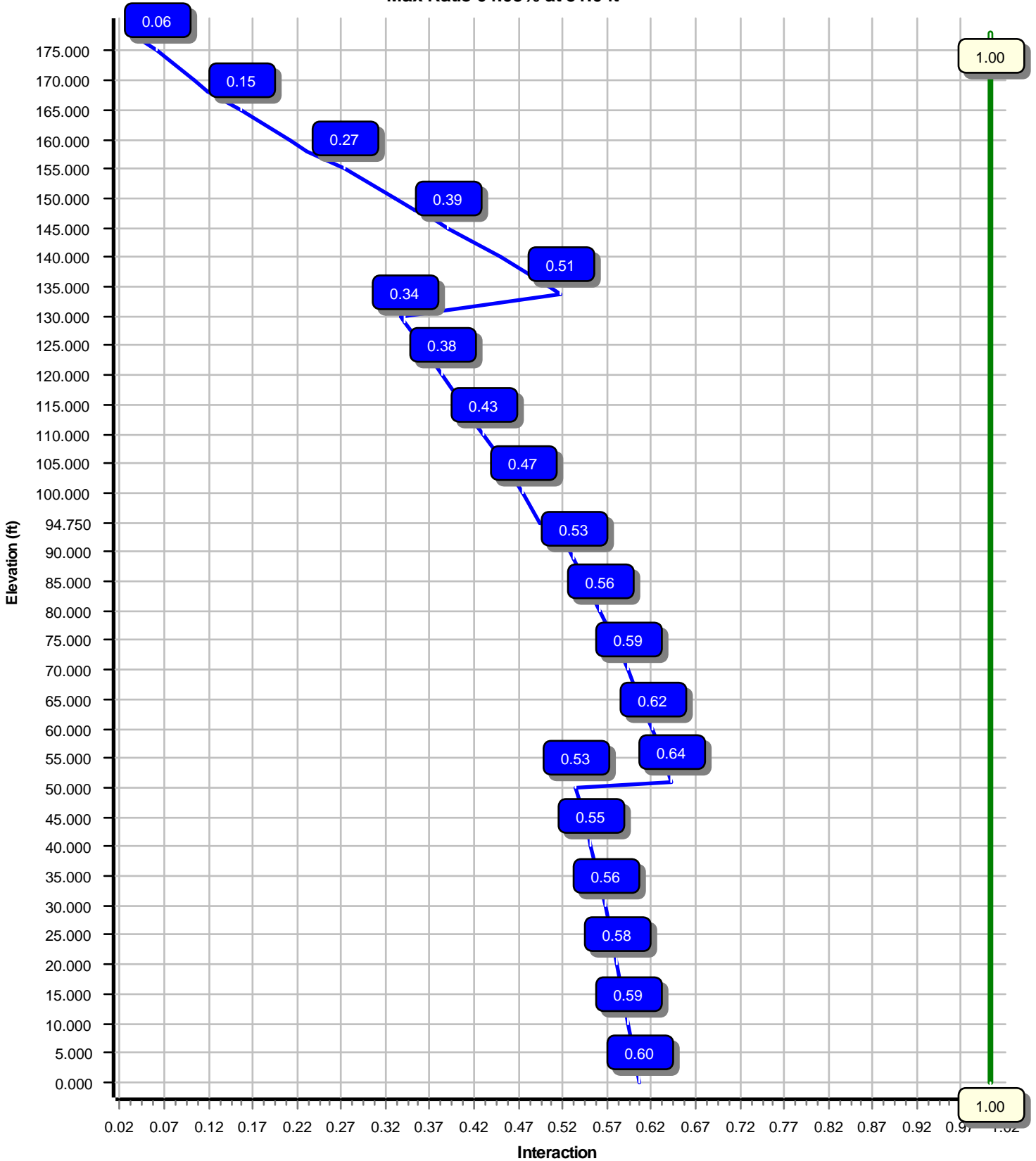
Linear Appurtenance			
Elev (ft)		Description	Exposed To Wind
From	To		
0.000	76.000	1/2" Coax	No
0.000	111.0	7/8" Coax	No
0.000	113.0	7/8" Coax	No
0.000	116.0	7/8" Coax	No
0.000	120.0	7/8" Coax	No
0.000	148.0	1 5/8" (1.63"-	No
0.000	148.0	1 5/8" Coax	No
0.000	158.0	1 1/4" Hybriflex	No
0.000	168.0	0.39" (10mm)	No
0.000	168.0	0.39" (10mm)	No
0.000	168.0	0.78" (19.7mm) 8	No
0.000	168.0	0.78" (19.7mm) 8	No
0.000	168.0	1 5/8" Coax	No
0.000	178.0	1 5/8" Coax	No
0.000	178.0	1 5/8" Hybriflex	No
0.000	180.0	7/8" Coax	No
0.000	186.0	7/8" Coax	No
0.000	191.0	7/8" Coax	No
0.000	192.0	7/8" Coax	No

Load Cases	
1.2D + 1.6W	101 mph with No Ice
0.9D + 1.6W	101 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	5006.86	38.50	65.64
0.9D + 1.6W	4956.94	38.48	49.22
1.2D + 1.0Di + 1.0Wi	1738.78	12.84	105.23
(1.2 + 0.2Sds) * DL + E ELFM	237.43	1.64	65.49
(1.2 + 0.2Sds) * DL + E EMAM	328.48	2.35	65.49
(0.9 - 0.2Sds) * DL + E ELFM	234.58	1.64	45.75
(0.9 - 0.2Sds) * DL + E EMAM	324.24	2.35	45.75
1.0D + 1.0W	982.47	7.60	54.74

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	111.00	7.366	0.671
1.0D + 1.0W	178.00	19.596	1.015

Load Case : 1.2D + 1.6W
Max Ratio 64.03% at 51.0 ft



Site Number: 376046	Code: ANSI/TIA-222-G	© 2007 - 2019 by ATC IP LLC. All rights reserved.
Site Name: MANSFIELD CENTER 1 CT, CT	Engineering Number: OAA751997_C3_03	10/18/2019 9:54:48 AM
Customer: AT&T MOBILITY		

Analysis Parameters

Location :	Tolland County, CT	Height (ft) :	178
Code :	ANSI/TIA-222-G	Base Diameter (in) :	68.36
Shape :	18 Sides	Top Diameter (in) :	25.50
Pole Type :	Taper	Taper (in/ft) :	0.252
Pole Manufacturer :	PennSummit Tub	Rotation (deg) :	0.00

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	101 mph
Exposure Category:	B	Design Wind Speed With Ice:	50 mph
Topographic Category:	1	Operational Wind Speed:	60 mph
Crest Height:	0 ft	Design Ice Thickness:	1.00 in

Seismic Parameters

Analysis Method: Equivalent Modal Analysis & Equivalent Lateral Force Methods			
Site Class: D - Stiff Soil			
Period Based on Rayleigh Method (sec):		2.36	
T_L (sec):	6	p :	1
S_s :	0.170	S_1 :	0.060
F_a :	1.600	F_v :	2.400
S_{ds} :	0.181	S_{d1} :	0.096
		C_s :	0.030
		C_s Max:	0.030
		C_s Min:	0.030

Load Cases

1.2D + 1.6W	101 mph with No Ice
0.9D + 1.6W	101 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
(1.2 + 0.2S _{ds}) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2S _{ds}) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2S _{ds}) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2S _{ds}) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:54:48 AM

Customer: AT&T MOBILITY

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip		Weight (lb)	Bottom				Top				W/t Ratio	D/t Ratio	Taper (in/ft)
					Joint Len (in)	Joint (in)		Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)			
1-18	51.000	0.4375	65			0.00	14,819	68.36	0.00	94.32	54974.8	25.79	156.25	55.50	51.00	76.47	29298.9	0.252023
2-18	51.000	0.3750	65	Slip	87.00		10,592	58.08	43.75	68.69	28900.5	25.55	154.89	45.23	94.75	53.39	13571.6	0.252023
3-18	45.000	0.3750	65	Slip	72.00		7,554	47.49	88.75	56.08	15730.2	20.57	126.65	36.15	133.75	42.58	6886.3	0.252023
4-18	49.000	0.2500	65	Slip	57.00		4,157	37.84	129.00	29.83	5328.6	24.93	151.40	25.50	178.00	20.04	1613.8	0.252023
Shaft Weight							37,123											

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor	Weight (lb)	Ice EPAa (sf)	Orientation Factor
178.00	RFS FD9R6004/2C-3L	6	0.75	1.000	2.60	0.310	0.50	13.48	0.827	0.50
178.00	Alcatel-Lucent RRH2X60-1900	3	0.75	0.000	43.00	1.880	0.50	118.14	3.155	0.50
178.00	Alcatel-Lucent RRH2X60-AWS	3	0.75	0.000	44.00	1.880	0.50	121.09	3.155	0.50
178.00	RFS DB-T1-6Z-8AB-0Z	2	0.75	1.000	44.00	4.800	0.72	214.92	6.730	0.72
178.00	Generic 20' Omni	1	1.00	14.000	55.00	6.000	1.00	259.18	15.616	1.00
178.00	Generic 18' Dipole	2	1.00	13.000	55.00	6.770	1.00	325.67	21.283	1.00
178.00	Generic 2' x 4' Rectangular Grid	1	1.00	2.000	40.00	7.460	1.00	345.12	75.233	1.00
178.00	Commscope LNX-6514DS-A1M	3	0.75	1.000	38.80	8.170	0.69	277.72	11.996	0.69
178.00	Commscope LNX-8513DS-VTM	3	0.75	1.000	39.20	8.170	0.69	277.32	12.011	0.69
178.00	Commscope HBXX-6517DS-A2M	6	0.75	1.000	40.80	8.530	0.68	279.65	12.476	0.68
178.00	Generic 8' Yagi	1	1.00	8.000	30.00	12.000	1.00	489.92	57.354	1.00
178.00	Flat Platform w/ Handrails	1	1.00	0.000	2,000.00	42.400	1.00	3,929.94	70.880	1.00
168.00	Powerwave Allgon LGP21401	6	0.80	1.000	14.10	1.100	0.50	47.78	2.060	0.50
168.00	Raycap DC6-48-60-18-8F	1	0.80	1.000	20.00	1.260	1.00	91.09	2.149	1.00
168.00	Raycap DC6-48-60-18-8F	2	0.80	1.000	20.00	1.260	1.00	91.09	2.149	1.00
168.00	Ericsson RRUS 8843 B2, B66A	3	0.80	0.000	72.00	1.640	0.50	154.75	2.781	0.50
168.00	Ericsson RRUS 4478 B14	3	0.80	0.000	59.90	1.840	0.50	134.55	3.050	0.50
168.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.970	0.50	158.01	3.230	0.50
168.00	Powerwave Allgon 7770.00	3	0.80	1.000	35.00	5.510	0.65	231.75	6.968	0.65
168.00	Commscope NNH4-65B-R6	3	0.80	0.000	89.70	12.270	0.64	428.94	16.055	0.64
168.00	CCI DMP65R-BU6DA	3	0.80	0.000	79.40	12.710	0.63	427.18	16.476	0.63
168.00	Site Pro 1 P/N RMQP-396	1	1.00	0.000	1,500.00	21.700	1.00	2,374.71	47.620	1.00
158.00	Alcatel-Lucent 2X50W RRH w/o	3	0.80	0.000	53.00	2.060	0.50	138.41	3.346	0.50
158.00	Alcatel-Lucent 1900MHz RRH	3	0.80	0.000	60.00	2.370	0.50	171.72	3.823	0.50
158.00	Alcatel-Lucent 800 MHz RRH w/	3	0.80	0.000	61.80	2.500	0.50	183.11	3.900	0.50
158.00	Alcatel-Lucent TD-RRH8x20-25	3	0.80	0.000	70.00	4.050	0.50	196.81	5.833	0.50
158.00	RFS APXVSPP18-C-A20	3	0.80	1.000	57.00	8.020	0.69	288.45	11.761	0.69
158.00	Commscope DT465B-2XR	3	0.80	1.000	58.00	9.100	0.69	329.07	12.817	0.69
158.00	Round Low Profile Platform	1	1.00	0.000	1,500.00	21.700	1.00	2,369.31	47.460	1.00
148.00	Ericsson KRY 112 489/2	3	0.80	0.000	15.40	0.560	0.50	38.95	1.261	0.50
148.00	Ericsson Radio 4449 B12,B71	3	0.80	0.000	74.00	1.640	0.50	148.65	2.766	0.50
148.00	RFS APXV18-209014-C-A20	3	0.80	0.000	18.70	3.530	0.67	110.23	5.930	0.67
148.00	RFS APXVAARR24_43-U-NA20	3	0.80	0.000	127.90	20.240	0.63	651.36	25.185	0.63
146.00	Round Low Profile Platform	1	1.00	0.000	1,500.00	21.700	1.00	2,362.99	47.273	1.00
120.00	Generic 18' Dipole	2	1.00	0.000	55.00	6.770	1.00	314.99	20.710	1.00
116.00	Generic 8' Yagi	1	1.00	0.000	30.00	12.000	1.00	470.83	55.471	1.00
113.00	Generic 9' Omni	1	1.00	0.000	25.00	2.700	1.00	113.82	6.918	1.00
113.00	Generic 8' Yagi	1	1.00	0.000	30.00	12.000	1.00	469.47	55.337	1.00
111.00	Generic 2' x 4' Rectangular Grid	1	1.00	0.000	40.00	7.460	1.00	331.16	72.133	1.00
111.00	Generic 22' Dipole	1	1.00	0.000	66.00	8.270	1.00	381.25	25.158	1.00
110.00	Flat T-Arm	3	0.75	0.000	250.00	12.900	0.67	520.09	23.468	0.67
76.00	Generic GPS	1	1.00	0.000	10.00	0.900	1.00	46.50	1.698	1.00
Totals	Num Loadings:42	103			11,792.40			33,292.98		

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT Engineering Number: OAA751997_C3_03

10/18/2019 9:54:48 AM

Customer: AT&T MOBILITY

Linear Appurtenance Properties Load Case Azimuth (deg) :

Elev From	Elev To	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Max Coax / Flat	Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	192.00	1	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	Other
0.00	191.00	2	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	Other
0.00	186.00	1	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	Other
0.00	180.00	1	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	Other
0.00	178.00	12	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	178.00	2	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	168.00	1	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	168.00	1	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	168.00	2	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	168.00	4	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	168.00	6	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	158.00	4	1 1/4" Hybriflex Cable	1.54	1.00	N	0	0.00	0.00	0	0.00	N	SPRINT NEXTEL
0.00	148.00	1	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	148.00	6	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	120.00	2	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	Other
0.00	116.00	1	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	Other
0.00	113.00	2	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	Other
0.00	111.00	2	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	Other
0.00	76.00	1	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	SPRINT NEXTEL

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:54:48 AM

Customer: AT&T MOBILITY

Segment Properties (Max Len : 5.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)
0.00		0.4375	68.360	94.315	54,974.8	25.79	156.25	71.1	1584.	0.0	0.0
5.00		0.4375	67.100	92.566	51,971.5	25.28	153.37	71.7	1525.	0.0	1,589.8
10.00		0.4375	65.840	90.816	49,079.6	24.77	150.49	72.3	1468.	0.0	1,560.0
15.00		0.4375	64.580	89.066	46,297.0	24.26	147.61	72.9	1412.	0.0	1,530.2
20.00		0.4375	63.320	87.316	43,621.7	23.76	144.73	73.5	1356.	0.0	1,500.5
25.00		0.4375	62.059	85.567	41,051.4	23.25	141.85	74.1	1302.	0.0	1,470.7
30.00		0.4375	60.799	83.817	38,584.2	22.74	138.97	74.7	1249.	0.0	1,440.9
35.00		0.4375	59.539	82.067	36,217.8	22.23	136.09	75.3	1198.	0.0	1,411.2
40.00		0.4375	58.279	80.317	33,950.2	21.73	133.21	75.8	1147.	0.0	1,381.4
43.75	Bot - Section 2	0.4375	57.334	79.005	32,313.1	21.34	131.05	76.3	1110.	0.0	1,016.5
45.00		0.4375	57.019	78.568	31,779.3	21.22	130.33	76.4	1097.	0.0	626.5
50.00		0.4375	55.759	76.818	29,703.0	20.71	127.45	77.0	1049.	0.0	2,471.3
51.00	Top - Section 1	0.3750	56.257	66.511	26,241.4	24.69	150.02	72.4	918.7	0.0	487.6
55.00		0.3750	55.249	65.311	24,846.7	24.21	147.33	72.9	885.8	0.0	897.1
60.00		0.3750	53.989	63.811	23,174.0	23.62	143.97	73.6	845.4	0.0	1,098.4
65.00		0.3750	52.728	62.312	21,578.1	23.03	140.61	74.3	806.0	0.0	1,072.9
70.00		0.3750	51.468	60.812	20,057.2	22.44	137.25	75.0	767.6	0.0	1,047.4
75.00		0.3750	50.208	59.312	18,609.5	21.84	133.89	75.7	730.0	0.0	1,021.9
76.00		0.3750	49.956	59.012	18,328.5	21.73	133.22	75.8	722.6	0.0	201.3
80.00		0.3750	48.948	57.812	17,233.1	21.25	130.53	76.4	693.4	0.0	795.1
85.00		0.3750	47.688	56.312	15,926.4	20.66	127.17	77.1	657.8	0.0	970.9
88.75	Bot - Section 3	0.3750	46.743	55.187	14,991.0	20.22	124.65	77.6	631.7	0.0	711.4
90.00		0.3750	46.428	54.813	14,687.5	20.07	123.81	77.8	623.1	0.0	471.7
94.75	Top - Section 2	0.3750	45.981	54.280	14,263.8	19.86	122.62	78.0	611.0	0.0	1,763.3
95.00		0.3750	45.918	54.205	14,204.8	19.83	122.45	78.1	609.3	0.0	46.1
100.0		0.3750	44.658	52.706	13,058.0	19.24	119.09	78.8	575.9	0.0	909.5
105.0		0.3750	43.398	51.206	11,974.7	18.64	115.73	79.5	543.5	0.0	884.0
110.0		0.3750	42.137	49.706	10,953.0	18.05	112.37	80.2	512.0	0.0	858.5
111.0		0.3750	41.885	49.406	10,755.9	17.93	111.69	80.3	505.8	0.0	168.6
113.0		0.3750	41.381	48.806	10,368.8	17.69	110.35	80.6	493.5	0.0	334.2
115.0		0.3750	40.877	48.206	9,991.2	17.46	109.01	80.9	481.4	0.0	330.1
116.0		0.3750	40.625	47.906	9,805.8	17.34	108.33	81.0	475.4	0.0	163.5
120.0		0.3750	39.617	46.706	9,087.3	16.86	105.65	81.6	451.8	0.0	643.9
125.0		0.3750	38.357	45.207	8,239.7	16.27	102.29	82.3	423.1	0.0	781.9
129.0	Bot - Section 4	0.3750	37.349	44.007	7,600.9	15.80	99.60	82.6	400.8	0.0	607.1
130.0		0.3750	37.097	43.707	7,446.5	15.68	98.93	82.6	395.4	0.0	250.4
133.7	Top - Section 3	0.2500	36.652	28.884	4,835.7	24.09	146.61	73.1	259.9	0.0	923.9
135.0		0.2500	36.337	28.634	4,711.2	23.87	145.35	73.3	255.4	0.0	122.3
140.0		0.2500	35.077	27.634	4,234.7	22.98	140.31	74.4	237.8	0.0	478.7
145.0		0.2500	33.817	26.634	3,791.5	22.09	135.27	75.4	220.8	0.0	461.7
146.0		0.2500	33.565	26.434	3,706.7	21.91	134.26	75.6	217.5	0.0	90.3
148.0		0.2500	33.061	26.034	3,541.0	21.55	132.24	76.0	211.0	0.0	178.5
150.0		0.2500	32.557	25.634	3,380.3	21.20	130.23	76.5	204.5	0.0	175.8
155.0		0.2500	31.296	24.634	3,000.0	20.31	125.19	77.5	188.8	0.0	427.6
158.0		0.2500	30.540	24.035	2,786.1	19.78	122.16	78.1	179.7	0.0	248.4
160.0		0.2500	30.036	23.635	2,649.3	19.42	120.15	78.6	173.7	0.0	162.2
165.0		0.2500	28.776	22.635	2,327.1	18.53	115.10	79.6	159.3	0.0	393.6
168.0		0.2500	28.020	22.035	2,146.9	18.00	112.08	80.2	150.9	0.0	228.0
170.0		0.2500	27.516	21.635	2,032.1	17.64	110.06	80.6	145.5	0.0	148.6
175.0		0.2500	26.256	20.635	1,763.2	16.76	105.02	81.7	132.3	0.0	359.6
178.0		0.2500	25.500	20.035	1,613.8	16.22	102.00	82.3	124.7	0.0	207.6
											37,122.7

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:54:48 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W

101 mph with No Ice

24 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		284.7	0.0					0.0	0.0	284.7	0.0	0.0	0.0
5.00		564.0	1,907.7					0.0	214.0	564.0	2,121.7	0.0	0.0
10.00		553.4	1,872.0					0.0	214.0	553.4	2,086.0	0.0	0.0
15.00		542.8	1,836.3					0.0	214.0	542.8	2,050.3	0.0	0.0
20.00		532.2	1,800.6					0.0	214.0	532.2	2,014.5	0.0	0.0
25.00		521.6	1,764.8					0.0	214.0	521.6	1,978.8	0.0	0.0
30.00		517.1	1,729.1					0.0	214.0	517.1	1,943.1	0.0	0.0
35.00		523.1	1,693.4					0.0	214.0	523.1	1,907.4	0.0	0.0
40.00		464.7	1,657.7					0.0	214.0	464.7	1,871.6	0.0	0.0
43.75	Bot - Section 2	268.7	1,219.8					0.0	160.5	268.7	1,380.3	0.0	0.0
45.00		342.2	751.8					0.0	53.5	342.2	805.3	0.0	0.0
50.00		329.1	2,965.6					0.0	214.0	329.1	3,179.6	0.0	0.0
51.00	Top - Section 1	275.8	585.2					0.0	42.8	275.8	627.9	0.0	0.0
55.00		497.4	1,076.5					0.0	171.2	497.4	1,247.7	0.0	0.0
60.00		553.5	1,318.1					0.0	214.0	553.5	1,532.1	0.0	0.0
65.00		553.1	1,287.5					0.0	214.0	553.1	1,501.5	0.0	0.0
70.00		551.4	1,256.9					0.0	214.0	551.4	1,470.8	0.0	0.0
75.00		330.0	1,226.3					0.0	214.0	330.0	1,440.2	0.0	0.0
76.00	Appurtenance(s)	273.5	241.6	35.9	0.0	0.0	12.0	0.0	42.8	309.4	296.4	0.0	0.0
80.00		490.0	954.1					0.0	170.4	490.0	1,124.5	0.0	0.0
85.00		473.2	1,165.0					0.0	213.1	473.2	1,378.1	0.0	0.0
88.75	Bot - Section 3	269.8	853.7					0.0	159.8	269.8	1,013.5	0.0	0.0
90.00		324.7	566.0					0.0	53.3	324.7	619.3	0.0	0.0
94.75	Top - Section 2	270.1	2,115.9					0.0	202.4	270.1	2,318.4	0.0	0.0
95.00		280.2	55.4					0.0	10.7	280.2	66.0	0.0	0.0
100.00		529.9	1,091.4					0.0	213.1	529.9	1,304.4	0.0	0.0
105.00		522.1	1,060.8					0.0	213.1	522.1	1,273.8	0.0	0.0
110.00	Appurtenance(s)	310.3	1,030.1	862.3	0.0	0.0	900.0	0.0	213.1	1,172.6	2,143.2	0.0	0.0
111.00	Appurtenance(s)	153.4	202.4	699.3	0.0	0.0	127.2	0.0	42.6	852.6	372.2	0.0	0.0
113.00	Appurtenance(s)	203.4	401.0	656.8	0.0	0.0	66.0	0.0	83.6	860.2	550.7	0.0	0.0
115.00		151.7	396.1					0.0	82.1	151.7	478.2	0.0	0.0
116.00	Appurtenance(s)	250.1	196.2	540.2	0.0	0.0	36.0	0.0	41.0	790.3	273.3	0.0	0.0
120.00	Appurtenance(s)	444.8	772.7	615.5	0.0	0.0	132.0	0.0	162.5	1,060.3	1,067.2	0.0	0.0
125.00		437.5	938.3					0.0	199.2	437.5	1,137.5	0.0	0.0
129.00	Bot - Section 4	240.6	728.6					0.0	159.4	240.6	887.9	0.0	0.0
130.00		227.0	300.5					0.0	39.8	227.0	340.3	0.0	0.0
133.75	Top - Section 3	237.7	1,108.7					0.0	149.4	237.7	1,258.1	0.0	0.0
135.00		290.9	146.8					0.0	49.8	290.9	196.6	0.0	0.0
140.00		458.2	574.4					0.0	199.2	458.2	773.6	0.0	0.0
145.00		270.6	554.0					0.0	199.2	270.6	753.2	0.0	0.0
146.00	Appurtenance(s)	132.8	108.3	1,043.3	0.0	0.0	1,800.0	0.0	39.8	1,176.0	1,948.2	0.0	0.0
148.00	Appurtenance(s)	175.5	214.2	1,878.4	0.0	0.0	849.6	0.0	79.7	2,053.9	1,143.5	0.0	0.0
150.00		301.0	211.0					0.0	64.0	301.0	275.0	0.0	0.0
155.00		338.8	513.2					0.0	160.0	338.8	673.2	0.0	0.0
158.00	Appurtenance(s)	207.2	298.1	3,111.6	0.0	1,396.6	3,095.3	0.0	96.0	3,318.8	3,489.4	0.0	0.0
160.00		282.5	194.6					0.0	54.4	282.5	249.1	0.0	0.0
165.00		317.4	472.3					0.0	136.0	317.4	608.4	0.0	0.0
168.00	Appurtenance(s)	193.5	273.6	4,032.9	0.0	714.8	3,438.7	0.0	81.6	4,226.5	3,793.9	0.0	0.0

<u>Load Case:</u> 1.2D + 1.6W				101 mph with No Ice				24 Iterations			
Gust Response Factor :1.10								Wind Importance Factor :1.00			
Dead Load Factor :1.20											
Wind Load Factor :1.60											
170.00	263.0	178.3				0.0	33.8	263.0	212.1	0.0	0.0
175.00	294.8	431.5				0.0	84.5	294.8	516.0	0.0	0.0
178.00	Appurtenance(s)	108.4	249.1	7,308.8	0.0	22,134.9	3,694.1	0.0	50.7	7,417.2	3,993.9
Totals:								38,714.4	65,687.6	0.00	0.00

Load Case: 1.2D + 1.6W

101 mph with No Ice

24 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Calculated Forces

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 (deg)	Ratio
0.00	-65.64	-38.50	0.00	-5,006.86	0.00	5,006.86	6,032.65	3,016.33	16,860.5	8,442.81	0.00	0.00	0.604
5.00	-63.44	-38.08	0.00	-4,814.35	0.00	4,814.35	5,970.50	2,985.25	16,375.2	8,199.81	0.07	-0.13	0.598
10.00	-61.27	-37.66	0.00	-4,623.95	0.00	4,623.95	5,906.46	2,953.23	15,891.4	7,957.52	0.27	-0.26	0.592
15.00	-59.13	-37.24	0.00	-4,435.66	0.00	4,435.66	5,840.54	2,920.27	15,409.2	7,716.10	0.61	-0.39	0.585
20.00	-57.04	-36.83	0.00	-4,249.46	0.00	4,249.46	5,772.74	2,886.37	14,929.1	7,475.68	1.09	-0.52	0.578
25.00	-54.98	-36.42	0.00	-4,065.34	0.00	4,065.34	5,703.06	2,851.53	14,451.3	7,236.42	1.71	-0.66	0.572
30.00	-52.95	-36.00	0.00	-3,883.26	0.00	3,883.26	5,631.49	2,815.75	13,976.1	6,998.46	2.47	-0.79	0.564
35.00	-50.97	-35.58	0.00	-3,703.25	0.00	3,703.25	5,558.05	2,779.02	13,503.8	6,761.96	3.38	-0.93	0.557
40.00	-49.03	-35.19	0.00	-3,525.37	0.00	3,525.37	5,482.72	2,741.36	13,034.7	6,527.05	4.43	-1.08	0.549
43.75	-47.61	-34.95	0.00	-3,393.43	0.00	3,393.43	5,424.99	2,712.50	12,685.1	6,352.01	5.32	-1.18	0.543
45.00	-46.76	-34.67	0.00	-3,349.74	0.00	3,349.74	5,405.52	2,702.76	12,569.1	6,293.89	5.64	-1.22	0.541
50.00	-43.53	-34.33	0.00	-3,176.41	0.00	3,176.41	5,326.43	2,663.21	12,107.2	6,062.63	6.99	-1.37	0.532
51.00	-42.87	-34.10	0.00	-3,142.08	0.00	3,142.08	4,331.58	2,165.79	9,957.52	4,986.16	7.28	-1.40	0.640
55.00	-41.55	-33.67	0.00	-3,005.70	0.00	3,005.70	4,286.21	2,143.11	9,674.28	4,844.33	8.51	-1.52	0.630
60.00	-39.93	-33.19	0.00	-2,837.34	0.00	2,837.34	4,227.81	2,113.90	9,321.84	4,667.85	10.19	-1.68	0.618
65.00	-38.35	-32.71	0.00	-2,671.37	0.00	2,671.37	4,167.52	2,083.76	8,971.44	4,492.39	12.04	-1.85	0.604
70.00	-36.81	-32.22	0.00	-2,507.83	0.00	2,507.83	4,105.35	2,052.68	8,623.38	4,318.10	14.08	-2.02	0.590
75.00	-35.32	-31.90	0.00	-2,346.74	0.00	2,346.74	4,041.30	2,020.65	8,277.95	4,145.13	16.29	-2.20	0.575
76.00	-34.99	-31.63	0.00	-2,314.84	0.00	2,314.84	4,028.27	2,014.13	8,209.21	4,110.71	16.75	-2.23	0.572
80.00	-33.80	-31.19	0.00	-2,188.32	0.00	2,188.32	3,975.37	1,987.69	7,935.46	3,973.63	18.68	-2.37	0.559
85.00	-32.36	-30.74	0.00	-2,032.37	0.00	2,032.37	3,907.56	1,953.78	7,596.19	3,803.74	21.26	-2.55	0.543
88.75	-31.31	-30.48	0.00	-1,917.08	0.00	1,917.08	3,855.46	1,927.73	7,344.03	3,677.47	23.32	-2.68	0.530
90.00	-30.65	-30.18	0.00	-1,878.98	0.00	1,878.98	3,837.86	1,918.93	7,260.44	3,635.61	24.02	-2.72	0.525
94.75	-28.31	-29.84	0.00	-1,735.62	0.00	1,735.62	3,812.68	1,906.34	7,142.21	3,576.41	26.82	-2.89	0.493
95.00	-28.21	-29.60	0.00	-1,728.16	0.00	1,728.16	3,809.11	1,904.56	7,125.59	3,568.09	26.97	-2.90	0.492
100.00	-26.85	-29.08	0.00	-1,580.16	0.00	1,580.16	3,736.78	1,868.39	6,795.28	3,402.69	30.09	-3.06	0.472
105.00	-25.53	-28.56	0.00	-1,434.76	0.00	1,434.76	3,662.56	1,831.28	6,469.20	3,239.41	33.39	-3.23	0.450
110.00	-23.41	-27.31	0.00	-1,291.95	0.00	1,291.95	3,586.46	1,793.23	6,147.63	3,078.39	36.86	-3.39	0.426
111.00	-23.07	-26.45	0.00	-1,264.64	0.00	1,264.64	3,571.01	1,785.51	6,083.89	3,046.47	37.57	-3.42	0.422
113.00	-22.54	-25.59	0.00	-1,211.74	0.00	1,211.74	3,539.90	1,769.95	5,956.99	2,982.92	39.02	-3.49	0.413
115.00	-22.05	-25.43	0.00	-1,160.56	0.00	1,160.56	3,508.48	1,754.24	5,830.89	2,919.78	40.50	-3.55	0.404
116.00	-21.79	-24.65	0.00	-1,135.14	0.00	1,135.14	3,492.66	1,746.33	5,768.14	2,888.36	41.24	-3.59	0.399
120.00	-20.74	-23.58	0.00	-1,036.53	0.00	1,036.53	3,428.62	1,714.31	5,519.25	2,763.73	44.30	-3.71	0.381
125.00	-19.57	-23.11	0.00	-918.66	0.00	918.66	3,346.87	1,673.44	5,213.02	2,610.39	48.27	-3.87	0.358
129.00	-18.68	-22.83	0.00	-826.22	0.00	826.22	3,269.48	1,634.74	4,956.00	2,481.68	51.56	-3.99	0.339
130.00	-18.32	-22.61	0.00	-803.39	0.00	803.39	3,247.19	1,623.60	4,888.33	2,447.80	52.40	-4.02	0.334
133.75	-17.06	-22.30	0.00	-718.62	0.00	718.62	1,899.47	949.74	2,843.96	1,424.09	55.60	-4.13	0.514
135.00	-16.84	-22.03	0.00	-690.74	0.00	690.74	1,889.77	944.89	2,804.78	1,404.47	56.68	-4.16	0.501
140.00	-16.03	-21.57	0.00	-580.59	0.00	580.59	1,849.78	924.89	2,648.90	1,326.42	61.14	-4.35	0.447
145.00	-15.26	-21.27	0.00	-472.74	0.00	472.74	1,807.91	903.95	2,494.59	1,249.15	65.80	-4.53	0.387
146.00	-13.40	-19.95	0.00	-451.48	0.00	451.48	1,799.31	899.65	2,463.95	1,233.81	66.75	-4.57	0.374
148.00	-12.40	-17.83	0.00	-411.57	0.00	411.57	1,781.88	890.94	2,402.89	1,203.23	68.68	-4.63	0.349
150.00	-12.12	-17.53	0.00	-375.92	0.00	375.92	1,764.15	882.08	2,342.16	1,172.82	70.63	-4.70	0.328

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:54:55 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W

101 mph with No Ice

24 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

155.00	-11.45	-17.16	0.00	-288.28	0.00	288.28	1,718.52	859.26	2,191.90	1,097.58	75.62	-4.84	0.270
158.00	-8.24	-13.56	0.00	-235.42	0.00	235.42	1,690.24	845.12	2,102.91	1,053.02	78.68	-4.91	0.229
160.00	-8.00	-13.27	0.00	-208.30	0.00	208.30	1,671.00	835.50	2,044.10	1,023.57	80.75	-4.96	0.209
165.00	-7.40	-12.91	0.00	-141.96	0.00	141.96	1,621.61	810.80	1,899.05	950.94	85.98	-5.05	0.154
168.00	-3.99	-8.36	0.00	-102.53	0.00	102.53	1,591.06	795.53	1,813.47	908.08	89.17	-5.09	0.116
170.00	-3.80	-8.09	0.00	-85.80	0.00	85.80	1,570.33	785.16	1,757.06	879.84	91.31	-5.12	0.100
175.00	-3.31	-7.75	0.00	-45.38	0.00	45.38	1,517.17	758.58	1,618.41	810.41	96.69	-5.17	0.058
178.00	0.00	-7.42	0.00	-22.13	0.00	22.13	1,484.37	742.18	1,536.95	769.62	99.94	-5.18	0.029

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:54:55 AM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.6W

101 mph with No Ice (Reduced DL)

24 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
Seg			Dead		Torsion	Moment	Dead		Dead		Torsion	Moment	
Elev		Wind FX	Load	Wind FX	MY	MZ	Load	Wind FX	Load	Wind FX	Load	MY	MZ
(ft)	Description	(lb)	(lb)	(lb)	(lb-ft)	(lb-ft)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb-ft)	(lb)
0.00		284.7	0.0					0.0	0.0	284.7	0.0	0.0	0.0
5.00		564.0	1,430.8					0.0	160.5	564.0	1,591.3	0.0	0.0
10.00		553.4	1,404.0					0.0	160.5	553.4	1,564.5	0.0	0.0
15.00		542.8	1,377.2					0.0	160.5	542.8	1,537.7	0.0	0.0
20.00		532.2	1,350.4					0.0	160.5	532.2	1,510.9	0.0	0.0
25.00		521.6	1,323.6					0.0	160.5	521.6	1,484.1	0.0	0.0
30.00		517.1	1,296.8					0.0	160.5	517.1	1,457.3	0.0	0.0
35.00		523.1	1,270.0					0.0	160.5	523.1	1,430.5	0.0	0.0
40.00		464.7	1,243.3					0.0	160.5	464.7	1,403.7	0.0	0.0
43.75	Bot - Section 2	268.7	914.9					0.0	120.4	268.7	1,035.2	0.0	0.0
45.00		342.2	563.8					0.0	40.1	342.2	603.9	0.0	0.0
50.00		329.1	2,224.2					0.0	160.5	329.1	2,384.7	0.0	0.0
51.00	Top - Section 1	275.8	438.9					0.0	32.1	275.8	471.0	0.0	0.0
55.00		497.4	807.4					0.0	128.4	497.4	935.8	0.0	0.0
60.00		553.5	988.6					0.0	160.5	553.5	1,149.1	0.0	0.0
65.00		553.1	965.6					0.0	160.5	553.1	1,126.1	0.0	0.0
70.00		551.4	942.7					0.0	160.5	551.4	1,103.1	0.0	0.0
75.00		330.0	919.7					0.0	160.5	330.0	1,080.2	0.0	0.0
76.00	Appurtenance(s)	273.5	181.2	35.9	0.0	0.0	9.0	0.0	32.1	309.4	222.3	0.0	0.0
80.00		490.0	715.5					0.0	127.8	490.0	843.4	0.0	0.0
85.00		473.2	873.8					0.0	159.8	473.2	1,033.6	0.0	0.0
88.75	Bot - Section 3	269.8	640.3					0.0	119.8	269.8	760.1	0.0	0.0
90.00		324.7	424.5					0.0	39.9	324.7	464.5	0.0	0.0
94.75	Top - Section 2	270.1	1,587.0					0.0	151.8	270.1	1,738.8	0.0	0.0
95.00		280.2	41.5					0.0	8.0	280.2	49.5	0.0	0.0
100.00		529.9	818.5					0.0	159.8	529.9	978.3	0.0	0.0
105.00		522.1	795.6					0.0	159.8	522.1	955.4	0.0	0.0
110.00	Appurtenance(s)	310.3	772.6	862.3	0.0	0.0	675.0	0.0	159.8	1,172.6	1,607.4	0.0	0.0
111.00	Appurtenance(s)	153.4	151.8	699.3	0.0	0.0	95.4	0.0	32.0	852.6	279.1	0.0	0.0
113.00	Appurtenance(s)	203.4	300.8	656.8	0.0	0.0	49.5	0.0	62.7	860.2	413.0	0.0	0.0
115.00		151.7	297.1					0.0	61.5	151.7	358.6	0.0	0.0
116.00	Appurtenance(s)	250.1	147.2	540.2	0.0	0.0	27.0	0.0	30.8	790.3	204.9	0.0	0.0
120.00	Appurtenance(s)	444.8	579.5	615.5	0.0	0.0	99.0	0.0	121.9	1,060.3	800.4	0.0	0.0
125.00		437.5	703.7					0.0	149.4	437.5	853.1	0.0	0.0
129.00	Bot - Section 4	240.6	546.4					0.0	119.5	240.6	666.0	0.0	0.0
130.00		227.0	225.4					0.0	29.9	227.0	255.3	0.0	0.0
133.75	Top - Section 3	237.7	831.5					0.0	112.0	237.7	943.6	0.0	0.0
135.00		290.9	110.1					0.0	37.3	290.9	147.4	0.0	0.0
140.00		458.2	430.8					0.0	149.4	458.2	580.2	0.0	0.0
145.00		270.6	415.5					0.0	149.4	270.6	564.9	0.0	0.0
146.00	Appurtenance(s)	132.8	81.3	1,043.3	0.0	0.0	1,350.0	0.0	29.9	1,176.0	1,461.1	0.0	0.0
148.00	Appurtenance(s)	175.5	160.7	1,878.4	0.0	0.0	637.2	0.0	59.8	2,053.9	857.6	0.0	0.0
150.00		301.0	158.2					0.0	48.0	301.0	206.2	0.0	0.0
155.00		338.8	384.9					0.0	120.0	338.8	504.9	0.0	0.0
158.00	Appurtenance(s)	207.2	223.6	3,111.6	0.0	1,396.6	2,321.5	0.0	72.0	3,318.8	2,617.0	0.0	0.0
160.00		282.5	146.0					0.0	40.8	282.5	186.8	0.0	0.0
165.00		317.4	354.2					0.0	102.0	317.4	456.3	0.0	0.0
168.00	Appurtenance(s)	193.5	205.2	4,032.9	0.0	714.8	2,579.0	0.0	61.2	4,226.5	2,845.4	0.0	0.0

<u>Load Case:</u> 0.9D + 1.6W				101 mph with No Ice (Reduced DL)				24 Iterations	
Gust Response Factor :1.10								Wind Importance Factor :1.00	
Dead Load Factor :0.90									
Wind Load Factor :1.60									
170.00	263.0	133.7			0.0	25.4	263.0	159.1	0.0
175.00	294.8	323.6			0.0	63.4	294.8	387.0	0.0
178.00	Appurtenance(s)	108.4	186.8	7,308.8	0.0	22,134.9	2,770.6		0.0
						Totals:	38,714.4	49,265.7	0.00

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:55:02 AM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.6W

101 mph with No Ice (Reduced DL)

24 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Calculated Forces

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 (deg)	Ratio
0.00	-49.22	-38.48	0.00	-4,956.94	0.00	4,956.94	6,032.65	3,016.33	16,860.5	8,442.81	0.00	0.00	0.595
5.00	-47.55	-38.02	0.00	-4,764.52	0.00	4,764.52	5,970.50	2,985.25	16,375.2	8,199.81	0.07	-0.13	0.589
10.00	-45.90	-37.57	0.00	-4,574.41	0.00	4,574.41	5,906.46	2,953.23	15,891.4	7,957.52	0.27	-0.25	0.583
15.00	-44.28	-37.12	0.00	-4,386.56	0.00	4,386.56	5,840.54	2,920.27	15,409.2	7,716.10	0.60	-0.38	0.576
20.00	-42.69	-36.67	0.00	-4,200.97	0.00	4,200.97	5,772.74	2,886.37	14,929.1	7,475.68	1.08	-0.52	0.570
25.00	-41.13	-36.23	0.00	-4,017.61	0.00	4,017.61	5,703.06	2,851.53	14,451.3	7,236.42	1.69	-0.65	0.563
30.00	-39.59	-35.79	0.00	-3,836.44	0.00	3,836.44	5,631.49	2,815.75	13,976.1	6,998.46	2.44	-0.79	0.555
35.00	-38.08	-35.34	0.00	-3,657.47	0.00	3,657.47	5,558.05	2,779.02	13,503.8	6,761.96	3.34	-0.92	0.548
40.00	-36.61	-34.93	0.00	-3,480.77	0.00	3,480.77	5,482.72	2,741.36	13,034.7	6,527.05	4.38	-1.06	0.540
43.75	-35.54	-34.69	0.00	-3,349.77	0.00	3,349.77	5,424.99	2,712.50	12,685.1	6,352.01	5.26	-1.17	0.534
45.00	-34.89	-34.39	0.00	-3,306.41	0.00	3,306.41	5,405.52	2,702.76	12,569.1	6,293.89	5.57	-1.21	0.532
50.00	-32.46	-34.05	0.00	-3,134.48	0.00	3,134.48	5,326.43	2,663.21	12,107.2	6,062.63	6.92	-1.35	0.523
51.00	-31.95	-33.81	0.00	-3,100.42	0.00	3,100.42	4,331.58	2,165.79	9,957.52	4,986.16	7.20	-1.38	0.629
55.00	-30.94	-33.37	0.00	-2,965.19	0.00	2,965.19	4,286.21	2,143.11	9,674.28	4,844.33	8.41	-1.50	0.620
60.00	-29.72	-32.87	0.00	-2,798.36	0.00	2,798.36	4,227.81	2,113.90	9,321.84	4,667.85	10.07	-1.66	0.607
65.00	-28.51	-32.36	0.00	-2,634.03	0.00	2,634.03	4,167.52	2,083.76	8,971.44	4,492.39	11.90	-1.83	0.593
70.00	-27.33	-31.86	0.00	-2,472.22	0.00	2,472.22	4,105.35	2,052.68	8,623.38	4,318.10	13.91	-2.00	0.579
75.00	-26.21	-31.53	0.00	-2,312.94	0.00	2,312.94	4,041.30	2,020.65	8,277.95	4,145.13	16.10	-2.17	0.565
76.00	-25.95	-31.25	0.00	-2,281.41	0.00	2,281.41	4,028.27	2,014.13	8,209.21	4,110.71	16.56	-2.20	0.562
80.00	-25.05	-30.80	0.00	-2,156.40	0.00	2,156.40	3,975.37	1,987.69	7,935.46	3,973.63	18.46	-2.34	0.549
85.00	-23.95	-30.35	0.00	-2,002.40	0.00	2,002.40	3,907.56	1,953.78	7,596.19	3,803.74	21.01	-2.51	0.533
88.75	-23.16	-30.08	0.00	-1,888.60	0.00	1,888.60	3,855.46	1,927.73	7,344.03	3,677.47	23.03	-2.64	0.520
90.00	-22.66	-29.77	0.00	-1,851.01	0.00	1,851.01	3,837.86	1,918.93	7,260.44	3,635.61	23.73	-2.69	0.515
94.75	-20.89	-29.45	0.00	-1,709.59	0.00	1,709.59	3,812.68	1,906.34	7,142.21	3,576.41	26.49	-2.85	0.484
95.00	-20.81	-29.20	0.00	-1,702.22	0.00	1,702.22	3,809.11	1,904.56	7,125.59	3,568.09	26.64	-2.86	0.483
100.00	-19.78	-28.68	0.00	-1,556.23	0.00	1,556.23	3,736.78	1,868.39	6,795.28	3,402.69	29.72	-3.02	0.463
105.00	-18.78	-28.16	0.00	-1,412.85	0.00	1,412.85	3,662.56	1,831.28	6,469.20	3,239.41	32.98	-3.19	0.442
110.00	-17.19	-26.92	0.00	-1,272.07	0.00	1,272.07	3,586.46	1,793.23	6,147.63	3,078.39	36.40	-3.35	0.418
111.00	-16.94	-26.07	0.00	-1,245.15	0.00	1,245.15	3,571.01	1,785.51	6,083.89	3,046.47	37.10	-3.38	0.414
113.00	-16.55	-25.20	0.00	-1,193.01	0.00	1,193.01	3,539.90	1,769.95	5,956.99	2,982.92	38.53	-3.44	0.405
115.00	-16.18	-25.04	0.00	-1,142.60	0.00	1,142.60	3,508.48	1,754.24	5,830.89	2,919.78	39.99	-3.51	0.396
116.00	-15.99	-24.27	0.00	-1,117.56	0.00	1,117.56	3,492.66	1,746.33	5,768.14	2,888.36	40.73	-3.54	0.392
120.00	-15.21	-23.19	0.00	-1,020.50	0.00	1,020.50	3,428.62	1,714.31	5,519.25	2,763.73	43.74	-3.66	0.374
125.00	-14.33	-22.74	0.00	-904.53	0.00	904.53	3,346.87	1,673.44	5,213.02	2,610.39	47.66	-3.81	0.351
129.00	-13.65	-22.47	0.00	-813.59	0.00	813.59	3,269.48	1,634.74	4,956.00	2,481.68	50.90	-3.93	0.332
130.00	-13.39	-22.24	0.00	-791.12	0.00	791.12	3,247.19	1,623.60	4,888.33	2,447.80	51.73	-3.96	0.328
133.75	-12.44	-21.95	0.00	-707.72	0.00	707.72	1,899.47	949.74	2,843.96	1,424.09	54.89	-4.07	0.504
135.00	-12.27	-21.68	0.00	-680.28	0.00	680.28	1,889.77	944.89	2,804.78	1,404.47	55.95	-4.11	0.491
140.00	-11.65	-21.21	0.00	-571.91	0.00	571.91	1,849.78	924.89	2,648.90	1,326.42	60.36	-4.29	0.438
145.00	-11.07	-20.92	0.00	-465.84	0.00	465.84	1,807.91	903.95	2,494.59	1,249.15	64.95	-4.47	0.380
146.00	-9.69	-19.64	0.00	-444.92	0.00	444.92	1,799.31	899.65	2,463.95	1,233.81	65.88	-4.50	0.366
148.00	-8.98	-17.54	0.00	-405.63	0.00	405.63	1,781.88	890.94	2,402.89	1,203.23	67.78	-4.57	0.343
150.00	-8.77	-17.24	0.00	-370.56	0.00	370.56	1,764.15	882.08	2,342.16	1,172.82	69.71	-4.63	0.321

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:55:02 AM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.6W

101 mph with No Ice (Reduced DL)

24 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

155.00	-8.26	-16.87	0.00	-284.38	0.00	284.38	1,718.52	859.26	2,191.90	1,097.58	74.63	-4.77	0.264
158.00	-5.92	-13.35	0.00	-232.37	0.00	232.37	1,690.24	845.12	2,102.91	1,053.02	77.65	-4.84	0.224
160.00	-5.74	-13.06	0.00	-205.67	0.00	205.67	1,671.00	835.50	2,044.10	1,023.57	79.69	-4.89	0.205
165.00	-5.30	-12.71	0.00	-140.36	0.00	140.36	1,621.61	810.80	1,899.05	950.94	84.85	-4.98	0.151
168.00	-2.83	-8.26	0.00	-101.51	0.00	101.51	1,591.06	795.53	1,813.47	908.08	87.99	-5.02	0.114
170.00	-2.69	-7.98	0.00	-85.00	0.00	85.00	1,570.33	785.16	1,757.06	879.84	90.10	-5.05	0.098
175.00	-2.32	-7.65	0.00	-45.10	0.00	45.10	1,517.17	758.58	1,618.41	810.41	95.41	-5.09	0.057
178.00	0.00	-7.42	0.00	-22.13	0.00	22.13	1,484.37	742.18	1,536.95	769.62	98.61	-5.11	0.029

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:55:03 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

24 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
Seg			Dead	Torsion		Moment	Dead		Dead	Torsion		Moment	
Elev		Wind FX	Load	Wind FX	MY	MZ	Load	Wind FX	Load	Wind FX	Load	MY	MZ
(ft)	Description	(lb)	(lb)	(lb)	(lb-ft)	(lb-ft)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb-ft)	(lb)
0.00		84.1	0.0					0.0	0.0	84.1	0.0	0.0	0.0
5.00		167.1	2,572.2					0.0	214.0	167.1	2,786.2	0.0	0.0
10.00		164.8	2,601.9					0.0	214.0	164.8	2,815.9	0.0	0.0
15.00		162.1	2,591.1					0.0	214.0	162.1	2,805.1	0.0	0.0
20.00		159.4	2,567.1					0.0	214.0	159.4	2,781.1	0.0	0.0
25.00		156.6	2,536.3					0.0	214.0	156.6	2,750.3	0.0	0.0
30.00		155.6	2,501.2					0.0	214.0	155.6	2,715.1	0.0	0.0
35.00		157.8	2,463.1					0.0	214.0	157.8	2,677.1	0.0	0.0
40.00		140.4	2,422.8					0.0	214.0	140.4	2,636.8	0.0	0.0
43.75	Bot - Section 2	81.3	1,791.2					0.0	160.5	81.3	1,951.6	0.0	0.0
45.00		103.7	944.8					0.0	53.5	103.7	998.3	0.0	0.0
50.00		99.7	3,726.7					0.0	214.0	99.7	3,940.6	0.0	0.0
51.00	Top - Section 1	83.7	737.7					0.0	42.8	83.7	780.5	0.0	0.0
55.00		151.2	1,679.1					0.0	171.2	151.2	1,850.3	0.0	0.0
60.00		168.6	2,061.0					0.0	214.0	168.6	2,275.0	0.0	0.0
65.00		168.9	2,020.0					0.0	214.0	168.9	2,234.0	0.0	0.0
70.00		168.8	1,978.3					0.0	214.0	168.8	2,192.2	0.0	0.0
75.00		101.2	1,936.0					0.0	214.0	101.2	2,149.9	0.0	0.0
76.00	Appurtenance(s)	84.0	383.4	10.4	0.0	0.0	40.0	0.0	42.8	94.4	466.2	0.0	0.0
80.00		150.8	1,512.4					0.0	170.4	150.8	1,682.8	0.0	0.0
85.00		145.9	1,849.7					0.0	213.1	145.9	2,062.8	0.0	0.0
88.75	Bot - Section 3	83.3	1,360.2					0.0	159.8	83.3	1,520.0	0.0	0.0
90.00		100.4	736.9					0.0	53.3	100.4	790.1	0.0	0.0
94.75	Top - Section 2	83.5	2,751.6					0.0	202.4	83.5	2,954.0	0.0	0.0
95.00		86.9	88.9					0.0	10.7	86.9	99.5	0.0	0.0
100.00		164.6	1,745.8					0.0	213.1	164.6	1,958.9	0.0	0.0
105.00		162.7	1,700.9					0.0	213.1	162.7	1,914.0	0.0	0.0
110.00	Appurtenance(s)	96.9	1,655.7	240.3	0.0	0.0	1,560.3	0.0	213.1	337.2	3,429.0	0.0	0.0
111.00	Appurtenance(s)	48.0	327.1	662.5	0.0	0.0	619.2	0.0	42.6	710.5	988.9	0.0	0.0
113.00	Appurtenance(s)	63.7	648.1	426.1	0.0	0.0	367.8	0.0	83.6	489.8	1,099.6	0.0	0.0
115.00		47.6	640.8					0.0	82.1	47.6	722.8	0.0	0.0
116.00	Appurtenance(s)	78.6	318.0	382.5	0.0	0.0	269.8	0.0	41.0	461.1	628.8	0.0	0.0
120.00	Appurtenance(s)	140.1	1,249.4	288.4	0.0	0.0	574.7	0.0	162.5	428.5	1,986.5	0.0	0.0
125.00		138.2	1,518.5					0.0	199.2	138.2	1,717.7	0.0	0.0
129.00	Bot - Section 4	76.1	1,182.9					0.0	159.4	76.1	1,342.3	0.0	0.0
130.00		72.0	415.0					0.0	39.8	72.0	454.9	0.0	0.0
133.75	Top - Section 3	75.4	1,528.8					0.0	149.4	75.4	1,678.2	0.0	0.0
135.00		92.7	286.0					0.0	49.8	92.7	335.8	0.0	0.0
140.00		146.4	1,114.3					0.0	199.2	146.4	1,313.5	0.0	0.0
145.00		86.7	1,077.7					0.0	199.2	86.7	1,276.9	0.0	0.0
146.00	Appurtenance(s)	42.7	212.6	348.1	0.0	0.0	2,463.0	0.0	39.8	390.8	2,715.4	0.0	0.0
148.00	Appurtenance(s)	56.5	420.0	387.7	0.0	0.0	2,528.5	0.0	79.7	444.2	3,028.2	0.0	0.0
150.00		97.2	414.1					0.0	64.0	97.2	478.1	0.0	0.0
155.00		109.8	1,003.8					0.0	160.0	109.8	1,163.8	0.0	0.0
158.00	Appurtenance(s)	67.4	586.7	817.4	0.0	307.1	5,899.4	0.0	96.0	884.7	6,582.1	0.0	0.0
160.00		92.3	384.4					0.0	54.4	92.3	438.8	0.0	0.0
165.00		104.0	929.3					0.0	136.0	104.0	1,065.3	0.0	0.0
168.00	Appurtenance(s)	63.7	541.8	989.4	0.0	161.0	7,218.5	0.0	81.6	1,053.1	7,841.9	0.0	0.0

<u>Load Case:</u> 1.2D + 1.0Di + 1.0Wi				50 mph with 1.00 in Radial Ice				24 Iterations			
Gust Response Factor :1.10				Ice Dead Load Factor :1.00				Wind Importance Factor :1.00			
Dead Load Factor :1.20								Ice Importance Factor :1.00			
Wind Load Factor :1.00											
170.00	87.1	354.4		0.0	33.8	87.1	388.2	0.0	0.0		
175.00	98.0	854.1		0.0	84.5	98.0	938.7	0.0	0.0		
178.00	Appurtenance(s)	36.2	496.6	2,771.5	0.0	11,598.4	9,279.5	0.0	50.7	2,807.6	9,826.8
Totals:								12,878.7	105,230.	0.00	0.00

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:55:10 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

24 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Calculated Forces

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 (deg)	Ratio
0.00	-105.23	-12.84	0.00	-1,738.78	0.00	1,738.78	6,032.65	3,016.33	16,860.5	8,442.81	0.00	0.00	0.223
5.00	-102.43	-12.75	0.00	-1,674.61	0.00	1,674.61	5,970.50	2,985.25	16,375.2	8,199.81	0.02	-0.04	0.221
10.00	-99.60	-12.66	0.00	-1,610.87	0.00	1,610.87	5,906.46	2,953.23	15,891.4	7,957.52	0.09	-0.09	0.219
15.00	-96.79	-12.57	0.00	-1,547.58	0.00	1,547.58	5,840.54	2,920.27	15,409.2	7,716.10	0.21	-0.13	0.217
20.00	-94.00	-12.48	0.00	-1,484.74	0.00	1,484.74	5,772.74	2,886.37	14,929.1	7,475.68	0.38	-0.18	0.215
25.00	-91.24	-12.39	0.00	-1,422.35	0.00	1,422.35	5,703.06	2,851.53	14,451.3	7,236.42	0.59	-0.23	0.213
30.00	-88.51	-12.30	0.00	-1,360.41	0.00	1,360.41	5,631.49	2,815.75	13,976.1	6,998.46	0.86	-0.28	0.210
35.00	-85.83	-12.20	0.00	-1,298.94	0.00	1,298.94	5,558.05	2,779.02	13,503.8	6,761.96	1.18	-0.33	0.208
40.00	-83.18	-12.11	0.00	-1,237.95	0.00	1,237.95	5,482.72	2,741.36	13,034.7	6,527.05	1.55	-0.38	0.205
43.75	-81.22	-12.05	0.00	-1,192.56	0.00	1,192.56	5,424.99	2,712.50	12,685.1	6,352.01	1.86	-0.41	0.203
45.00	-80.22	-11.98	0.00	-1,177.50	0.00	1,177.50	5,405.52	2,702.76	12,569.1	6,293.89	1.97	-0.43	0.202
50.00	-76.27	-11.89	0.00	-1,117.60	0.00	1,117.60	5,326.43	2,663.21	12,107.2	6,062.63	2.44	-0.48	0.199
51.00	-75.49	-11.84	0.00	-1,105.70	0.00	1,105.70	4,331.58	2,165.79	9,957.52	4,986.16	2.54	-0.49	0.239
55.00	-73.63	-11.73	0.00	-1,058.36	0.00	1,058.36	4,286.21	2,143.11	9,674.28	4,844.33	2.97	-0.53	0.236
60.00	-71.35	-11.62	0.00	-999.70	0.00	999.70	4,227.81	2,113.90	9,321.84	4,667.85	3.56	-0.59	0.231
65.00	-69.10	-11.50	0.00	-941.62	0.00	941.62	4,167.52	2,083.76	8,971.44	4,492.39	4.21	-0.65	0.226
70.00	-66.90	-11.37	0.00	-884.15	0.00	884.15	4,105.35	2,052.68	8,623.38	4,318.10	4.92	-0.71	0.221
75.00	-64.74	-11.28	0.00	-827.30	0.00	827.30	4,041.30	2,020.65	8,277.95	4,145.13	5.70	-0.77	0.216
76.00	-64.27	-11.22	0.00	-816.02	0.00	816.02	4,028.27	2,014.13	8,209.21	4,110.71	5.86	-0.78	0.214
80.00	-62.58	-11.10	0.00	-771.15	0.00	771.15	3,975.37	1,987.69	7,935.46	3,973.63	6.54	-0.83	0.210
85.00	-60.51	-10.98	0.00	-715.64	0.00	715.64	3,907.56	1,953.78	7,596.19	3,803.74	7.44	-0.89	0.204
88.75	-58.99	-10.91	0.00	-674.45	0.00	674.45	3,855.46	1,927.73	7,344.03	3,677.47	8.16	-0.94	0.199
90.00	-58.19	-10.83	0.00	-660.82	0.00	660.82	3,837.86	1,918.93	7,260.44	3,635.61	8.41	-0.96	0.197
94.75	-55.23	-10.73	0.00	-609.37	0.00	609.37	3,812.68	1,906.34	7,142.21	3,576.41	9.39	-1.01	0.185
95.00	-55.13	-10.67	0.00	-606.69	0.00	606.69	3,809.11	1,904.56	7,125.59	3,568.09	9.45	-1.02	0.185
100.00	-53.16	-10.52	0.00	-553.35	0.00	553.35	3,736.78	1,868.39	6,795.28	3,402.69	10.55	-1.08	0.177
105.00	-51.24	-10.37	0.00	-500.74	0.00	500.74	3,662.56	1,831.28	6,469.20	3,239.41	11.70	-1.13	0.169
110.00	-47.82	-9.99	0.00	-448.88	0.00	448.88	3,586.46	1,793.23	6,147.63	3,078.39	12.92	-1.19	0.159
111.00	-46.84	-9.28	0.00	-438.89	0.00	438.89	3,571.01	1,785.51	6,083.89	3,046.47	13.17	-1.20	0.157
113.00	-45.75	-8.78	0.00	-420.33	0.00	420.33	3,539.90	1,769.95	5,956.99	2,982.92	13.68	-1.22	0.154
115.00	-45.02	-8.73	0.00	-402.77	0.00	402.77	3,508.48	1,754.24	5,830.89	2,919.78	14.20	-1.25	0.151
116.00	-44.40	-8.28	0.00	-394.04	0.00	394.04	3,492.66	1,746.33	5,768.14	2,888.36	14.46	-1.26	0.149
120.00	-42.42	-7.84	0.00	-360.92	0.00	360.92	3,428.62	1,714.31	5,519.25	2,763.73	15.53	-1.30	0.143
125.00	-40.70	-7.70	0.00	-321.71	0.00	321.71	3,346.87	1,673.44	5,213.02	2,610.39	16.92	-1.36	0.135
129.00	-39.35	-7.61	0.00	-290.92	0.00	290.92	3,269.48	1,634.74	4,956.00	2,481.68	18.08	-1.40	0.129
130.00	-38.90	-7.54	0.00	-283.31	0.00	283.31	3,247.19	1,623.60	4,888.33	2,447.80	18.37	-1.41	0.128
133.75	-37.22	-7.44	0.00	-255.03	0.00	255.03	1,899.47	949.74	2,843.96	1,424.09	19.49	-1.45	0.199
135.00	-36.88	-7.37	0.00	-245.73	0.00	245.73	1,889.77	944.89	2,804.78	1,404.47	19.87	-1.46	0.195
140.00	-35.56	-7.23	0.00	-208.90	0.00	208.90	1,849.78	924.89	2,648.90	1,326.42	21.44	-1.53	0.177
145.00	-34.28	-7.13	0.00	-172.76	0.00	172.76	1,807.91	903.95	2,494.59	1,249.15	23.08	-1.59	0.157
146.00	-31.58	-6.67	0.00	-165.63	0.00	165.63	1,799.31	899.65	2,463.95	1,233.81	23.41	-1.61	0.152
148.00	-28.56	-6.15	0.00	-152.29	0.00	152.29	1,781.88	890.94	2,402.89	1,203.23	24.09	-1.63	0.143
150.00	-28.08	-6.06	0.00	-139.98	0.00	139.98	1,764.15	882.08	2,342.16	1,172.82	24.78	-1.65	0.135

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:55:10 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

24 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

155.00	-26.92	-5.94	0.00	-109.66	0.00	109.66	1,718.52	859.26	2,191.90	1,097.58	26.54	-1.71	0.116
158.00	-20.36	-4.86	0.00	-91.54	0.00	91.54	1,690.24	845.12	2,102.91	1,053.02	27.62	-1.73	0.099
160.00	-19.92	-4.77	0.00	-81.82	0.00	81.82	1,671.00	835.50	2,044.10	1,023.57	28.35	-1.75	0.092
165.00	-18.86	-4.64	0.00	-57.98	0.00	57.98	1,621.61	810.80	1,899.05	950.94	30.21	-1.79	0.073
168.00	-11.05	-3.34	0.00	-43.89	0.00	43.89	1,591.06	795.53	1,813.47	908.08	31.34	-1.81	0.055
170.00	-10.67	-3.25	0.00	-37.20	0.00	37.20	1,570.33	785.16	1,757.06	879.84	32.10	-1.82	0.049
175.00	-9.73	-3.12	0.00	-20.97	0.00	20.97	1,517.17	758.58	1,618.41	810.41	34.01	-1.84	0.032
178.00	0.00	-2.81	0.00	-11.60	0.00	11.60	1,484.37	742.18	1,536.95	769.62	35.17	-1.85	0.015

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:55:10 AM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W

Serviceability 60 mph

23 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
Seg			Dead	Torsion		Moment	Dead		Dead		Torsion	Moment	
Elev		Wind FX	Load	Wind FX	MY	MZ	Load	Wind FX	Load	Wind FX	Load	MY	MZ
(ft)	Description	(lb)	(lb)	(lb)	(lb-ft)	(lb-ft)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb-ft)	(lb)
0.00		56.2	0.0					0.0	0.0	56.2	0.0	0.0	0.0
5.00		111.3	1,589.8					0.0	178.3	111.3	1,768.1	0.0	0.0
10.00		109.2	1,560.0					0.0	178.3	109.2	1,738.3	0.0	0.0
15.00		107.1	1,530.2					0.0	178.3	107.1	1,708.5	0.0	0.0
20.00		105.0	1,500.5					0.0	178.3	105.0	1,678.8	0.0	0.0
25.00		102.9	1,470.7					0.0	178.3	102.9	1,649.0	0.0	0.0
30.00		102.1	1,440.9					0.0	178.3	102.1	1,619.2	0.0	0.0
35.00		103.2	1,411.2					0.0	178.3	103.2	1,589.5	0.0	0.0
40.00		91.7	1,381.4					0.0	178.3	91.7	1,559.7	0.0	0.0
43.75	Bot - Section 2	53.0	1,016.5					0.0	133.7	53.0	1,150.2	0.0	0.0
45.00		67.5	626.5					0.0	44.6	67.5	671.0	0.0	0.0
50.00		64.9	2,471.3					0.0	178.3	64.9	2,649.6	0.0	0.0
51.00	Top - Section 1	54.4	487.6					0.0	35.7	54.4	523.3	0.0	0.0
55.00		98.2	897.1					0.0	142.6	98.2	1,039.8	0.0	0.0
60.00		109.2	1,098.4					0.0	178.3	109.2	1,276.7	0.0	0.0
65.00		109.2	1,072.9					0.0	178.3	109.2	1,251.2	0.0	0.0
70.00		108.8	1,047.4					0.0	178.3	108.8	1,225.7	0.0	0.0
75.00		65.1	1,021.9					0.0	178.3	65.1	1,200.2	0.0	0.0
76.00	Appurtenance(s)	54.0	201.3	7.1	0.0	0.0	10.0	0.0	35.7	61.1	247.0	0.0	0.0
80.00		96.7	795.1					0.0	142.0	96.7	937.1	0.0	0.0
85.00		93.4	970.9					0.0	177.6	93.4	1,148.4	0.0	0.0
88.75	Bot - Section 3	53.2	711.4					0.0	133.2	53.2	844.6	0.0	0.0
90.00		64.1	471.7					0.0	44.4	64.1	516.1	0.0	0.0
94.75	Top - Section 2	53.3	1,763.3					0.0	168.7	53.3	1,932.0	0.0	0.0
95.00		55.3	46.1					0.0	8.9	55.3	55.0	0.0	0.0
100.00		104.6	909.5					0.0	177.6	104.6	1,087.0	0.0	0.0
105.00		103.0	884.0					0.0	177.6	103.0	1,061.5	0.0	0.0
110.00	Appurtenance(s)	61.2	858.5	170.2	0.0	0.0	750.0	0.0	177.6	231.4	1,786.0	0.0	0.0
111.00	Appurtenance(s)	30.3	168.6	138.0	0.0	0.0	106.0	0.0	35.5	168.3	310.1	0.0	0.0
113.00	Appurtenance(s)	40.1	334.2	129.6	0.0	0.0	55.0	0.0	69.7	169.8	458.9	0.0	0.0
115.00		29.9	330.1					0.0	68.4	29.9	398.5	0.0	0.0
116.00	Appurtenance(s)	49.3	163.5	106.6	0.0	0.0	30.0	0.0	34.2	156.0	227.7	0.0	0.0
120.00	Appurtenance(s)	87.8	643.9	121.5	0.0	0.0	110.0	0.0	135.4	209.2	889.3	0.0	0.0
125.00		86.3	781.9					0.0	166.0	86.3	947.9	0.0	0.0
129.00	Bot - Section 4	47.5	607.1					0.0	132.8	47.5	739.9	0.0	0.0
130.00		44.8	250.4					0.0	33.2	44.8	283.6	0.0	0.0
133.75	Top - Section 3	46.9	923.9					0.0	124.5	46.9	1,048.4	0.0	0.0
135.00		57.4	122.3					0.0	41.5	57.4	163.8	0.0	0.0
140.00		90.4	478.7					0.0	166.0	90.4	644.7	0.0	0.0
145.00		53.4	461.7					0.0	166.0	53.4	627.7	0.0	0.0
146.00	Appurtenance(s)	26.2	90.3	205.9	0.0	0.0	1,500.0	0.0	33.2	232.1	1,623.5	0.0	0.0
148.00	Appurtenance(s)	34.6	178.5	370.7	0.0	0.0	708.0	0.0	66.4	405.3	952.9	0.0	0.0
150.00		59.4	175.8					0.0	53.3	59.4	229.2	0.0	0.0
155.00		66.9	427.6					0.0	133.4	66.9	561.0	0.0	0.0
158.00	Appurtenance(s)	40.9	248.4	614.1	0.0	275.6	2,579.4	0.0	80.0	655.0	2,907.8	0.0	0.0
160.00		55.8	162.2					0.0	45.3	55.8	207.5	0.0	0.0
165.00		62.6	393.6					0.0	113.4	62.6	507.0	0.0	0.0
168.00	Appurtenance(s)	38.2	228.0	795.9	0.0	141.1	2,865.6	0.0	68.0	834.1	3,161.6	0.0	0.0

<u>Load Case:</u> 1.0D + 1.0W				Serviceability 60 mph				23 Iterations					
Gust Response Factor :1.10								Wind Importance Factor :1.00					
Dead Load Factor :1.00													
Wind Load Factor :1.00													
170.00		51.9	148.6					0.0	28.2	51.9	176.8	0.0	0.0
175.00		58.2	359.6					0.0	70.5	58.2	430.0	0.0	0.0
178.00	Appurtenance(s)	21.4	207.6	1,442.4	0.0	4,368.3	3,078.4	0.0	42.3	1,463.8	3,328.3	0.0	0.0
								Totals:		7,640.26	54,739.7	0.00	0.00

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:55:17 AM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W

Serviceability 60 mph

23 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Calculated Forces

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 (deg)	Ratio
0.00	-54.74	-7.60	0.00	-982.47	0.00	982.47	6,032.65	3,016.33	16,860.5	8,442.81	0.00	0.00	0.125
5.00	-52.97	-7.51	0.00	-944.49	0.00	944.49	5,970.50	2,985.25	16,375.2	8,199.81	0.01	-0.02	0.124
10.00	-51.23	-7.42	0.00	-906.96	0.00	906.96	5,906.46	2,953.23	15,891.4	7,957.52	0.05	-0.05	0.123
15.00	-49.51	-7.33	0.00	-869.86	0.00	869.86	5,840.54	2,920.27	15,409.2	7,716.10	0.12	-0.08	0.121
20.00	-47.83	-7.25	0.00	-833.19	0.00	833.19	5,772.74	2,886.37	14,929.1	7,475.68	0.21	-0.10	0.120
25.00	-46.18	-7.16	0.00	-796.95	0.00	796.95	5,703.06	2,851.53	14,451.3	7,236.42	0.33	-0.13	0.118
30.00	-44.56	-7.08	0.00	-761.14	0.00	761.14	5,631.49	2,815.75	13,976.1	6,998.46	0.48	-0.16	0.117
35.00	-42.96	-6.99	0.00	-725.75	0.00	725.75	5,558.05	2,779.02	13,503.8	6,761.96	0.66	-0.18	0.115
40.00	-41.40	-6.91	0.00	-690.80	0.00	690.80	5,482.72	2,741.36	13,034.7	6,527.05	0.87	-0.21	0.113
43.75	-40.25	-6.86	0.00	-664.88	0.00	664.88	5,424.99	2,712.50	12,685.1	6,352.01	1.04	-0.23	0.112
45.00	-39.58	-6.81	0.00	-656.30	0.00	656.30	5,405.52	2,702.76	12,569.1	6,293.89	1.11	-0.24	0.112
50.00	-36.93	-6.74	0.00	-622.27	0.00	622.27	5,326.43	2,663.21	12,107.2	6,062.63	1.37	-0.27	0.110
51.00	-36.40	-6.69	0.00	-615.53	0.00	615.53	4,331.58	2,165.79	9,957.52	4,986.16	1.43	-0.27	0.132
55.00	-35.36	-6.61	0.00	-588.76	0.00	588.76	4,286.21	2,143.11	9,674.28	4,844.33	1.67	-0.30	0.130
60.00	-34.08	-6.51	0.00	-555.72	0.00	555.72	4,227.81	2,113.90	9,321.84	4,667.85	2.00	-0.33	0.127
65.00	-32.82	-6.41	0.00	-523.17	0.00	523.17	4,167.52	2,083.76	8,971.44	4,492.39	2.36	-0.36	0.124
70.00	-31.60	-6.31	0.00	-491.11	0.00	491.11	4,105.35	2,052.68	8,623.38	4,318.10	2.76	-0.40	0.121
75.00	-30.39	-6.25	0.00	-459.54	0.00	459.54	4,041.30	2,020.65	8,277.95	4,145.13	3.19	-0.43	0.118
76.00	-30.15	-6.20	0.00	-453.29	0.00	453.29	4,028.27	2,014.13	8,209.21	4,110.71	3.28	-0.44	0.118
80.00	-29.21	-6.11	0.00	-428.50	0.00	428.50	3,975.37	1,987.69	7,935.46	3,973.63	3.66	-0.46	0.115
85.00	-28.06	-6.02	0.00	-397.96	0.00	397.96	3,907.56	1,953.78	7,596.19	3,803.74	4.17	-0.50	0.112
88.75	-27.21	-5.97	0.00	-375.38	0.00	375.38	3,855.46	1,927.73	7,344.03	3,677.47	4.57	-0.52	0.109
90.00	-26.69	-5.91	0.00	-367.92	0.00	367.92	3,837.86	1,918.93	7,260.44	3,635.61	4.71	-0.53	0.108
94.75	-24.76	-5.84	0.00	-339.85	0.00	339.85	3,812.68	1,906.34	7,142.21	3,576.41	5.26	-0.57	0.102
95.00	-24.70	-5.80	0.00	-338.39	0.00	338.39	3,809.11	1,904.56	7,125.59	3,568.09	5.29	-0.57	0.101
100.00	-23.61	-5.69	0.00	-309.41	0.00	309.41	3,736.78	1,868.39	6,795.28	3,402.69	5.90	-0.60	0.097
105.00	-22.55	-5.59	0.00	-280.95	0.00	280.95	3,662.56	1,831.28	6,469.20	3,239.41	6.55	-0.63	0.093
110.00	-20.77	-5.35	0.00	-252.99	0.00	252.99	3,586.46	1,793.23	6,147.63	3,078.39	7.23	-0.66	0.088
111.00	-20.46	-5.18	0.00	-247.64	0.00	247.64	3,571.01	1,785.51	6,083.89	3,046.47	7.37	-0.67	0.087
113.00	-20.00	-5.01	0.00	-237.28	0.00	237.28	3,539.90	1,769.95	5,956.99	2,982.92	7.65	-0.68	0.085
115.00	-19.60	-4.98	0.00	-227.27	0.00	227.27	3,508.48	1,754.24	5,830.89	2,919.78	7.94	-0.70	0.083
116.00	-19.37	-4.82	0.00	-222.29	0.00	222.29	3,492.66	1,746.33	5,768.14	2,888.36	8.09	-0.70	0.083
120.00	-18.48	-4.61	0.00	-203.00	0.00	203.00	3,428.62	1,714.31	5,519.25	2,763.73	8.68	-0.73	0.079
125.00	-17.53	-4.52	0.00	-179.94	0.00	179.94	3,346.87	1,673.44	5,213.02	2,610.39	9.46	-0.76	0.074
129.00	-16.79	-4.47	0.00	-161.86	0.00	161.86	3,269.48	1,634.74	4,956.00	2,481.68	10.11	-0.78	0.070
130.00	-16.51	-4.42	0.00	-157.39	0.00	157.39	3,247.19	1,623.60	4,888.33	2,447.80	10.27	-0.79	0.069
133.75	-15.46	-4.37	0.00	-140.80	0.00	140.80	1,899.47	949.74	2,843.96	1,424.09	10.90	-0.81	0.107
135.00	-15.30	-4.31	0.00	-135.35	0.00	135.35	1,889.77	944.89	2,804.78	1,404.47	11.11	-0.82	0.104
140.00	-14.65	-4.22	0.00	-113.79	0.00	113.79	1,849.78	924.89	2,648.90	1,326.42	11.99	-0.85	0.094
145.00	-14.02	-4.16	0.00	-92.68	0.00	92.68	1,807.91	903.95	2,494.59	1,249.15	12.90	-0.89	0.082
146.00	-12.40	-3.91	0.00	-88.52	0.00	88.52	1,799.31	899.65	2,463.95	1,233.81	13.09	-0.89	0.079
148.00	-11.45	-3.49	0.00	-80.70	0.00	80.70	1,781.88	890.94	2,402.89	1,203.23	13.46	-0.91	0.074
150.00	-11.23	-3.43	0.00	-73.72	0.00	73.72	1,764.15	882.08	2,342.16	1,172.82	13.85	-0.92	0.069

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

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Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W

Serviceability 60 mph

23 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

155.00	-10.66	-3.36	0.00	-56.56	0.00	56.56	1,718.52	859.26	2,191.90	1,097.58	14.83	-0.95	0.058
158.00	-7.77	-2.66	0.00	-46.21	0.00	46.21	1,690.24	845.12	2,102.91	1,053.02	15.43	-0.96	0.048
160.00	-7.56	-2.60	0.00	-40.89	0.00	40.89	1,671.00	835.50	2,044.10	1,023.57	15.83	-0.97	0.044
165.00	-7.05	-2.53	0.00	-27.89	0.00	27.89	1,621.61	810.80	1,899.05	950.94	16.86	-0.99	0.034
168.00	-3.91	-1.64	0.00	-20.16	0.00	20.16	1,591.06	795.53	1,813.47	908.08	17.48	-1.00	0.025
170.00	-3.73	-1.59	0.00	-16.87	0.00	16.87	1,570.33	785.16	1,757.06	879.84	17.90	-1.00	0.022
175.00	-3.30	-1.52	0.00	-8.94	0.00	8.94	1,517.17	758.58	1,618.41	810.41	18.96	-1.01	0.013
178.00	0.00	-1.46	0.00	-4.37	0.00	4.37	1,484.37	742.18	1,536.95	769.62	19.60	-1.02	0.006

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

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Customer: AT&T MOBILITY

Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period (S_s):	0.17
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.18
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s	0.03
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	2.36
Redundancy Factor (p):	1.00
Seismic Force Distribution Exponent (k):	1.93
Total Unfactored Dead Load:	54.74 k
Seismic Base Shear (E):	1.64 k

Load Case (1.2 + 0.2Sds) * DL + E ELFM**Seismic Equivalent Lateral Forces Method**

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
50	176.50	250	5,448	0.013	21	309
49	172.50	430	8,970	0.021	34	532
48	169.00	177	3,544	0.008	13	219
47	166.50	296	5,766	0.013	22	366
46	162.50	507	9,423	0.022	36	627
45	159.00	208	3,699	0.008	14	257
44	156.50	328	5,677	0.013	21	406
43	152.50	561	9,223	0.021	35	694
42	149.00	229	3,603	0.008	14	283
41	147.00	245	3,751	0.009	14	303
40	145.50	123	1,854	0.004	7	153
39	142.50	628	9,053	0.021	34	776
38	137.50	645	8,679	0.020	33	797
37	134.38	164	2,110	0.005	8	203
36	131.88	1,048	13,020	0.030	49	1,296
35	129.50	284	3,401	0.008	13	351
34	127.00	740	8,545	0.020	32	915
33	122.50	948	10,209	0.023	39	1,172
32	118.00	779	7,809	0.018	29	963
31	115.50	198	1,901	0.004	7	244
30	114.00	398	3,736	0.009	14	493
29	112.00	404	3,659	0.008	14	499
28	110.50	204	1,802	0.004	7	252

Site Number: 376046

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Engineering Number: OAA751997_C3_03

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Customer: AT&T MOBILITY

27	107.50	1,036	8,671	0.020	33	1,281
26	102.50	1,062	8,104	0.019	31	1,312
25	97.50	1,087	7,535	0.017	28	1,344
24	94.88	55	362	0.001	1	68
23	92.38	1,932	12,065	0.028	46	2,388
22	89.38	516	3,024	0.007	11	638
21	86.88	845	4,685	0.011	18	1,044
20	82.50	1,148	5,765	0.013	22	1,420
19	78.00	937	4,221	0.010	16	1,158
18	75.50	237	1,002	0.002	4	293
17	72.50	1,200	4,695	0.011	18	1,484
16	67.50	1,226	4,176	0.010	16	1,515
15	62.50	1,251	3,675	0.008	14	1,547
14	57.50	1,277	3,192	0.007	12	1,578
13	53.00	1,040	2,221	0.005	8	1,285
12	50.50	523	1,018	0.002	4	647
11	47.50	2,650	4,581	0.011	17	3,276
10	44.38	671	1,017	0.002	4	830
9	41.88	1,150	1,559	0.004	6	1,422
8	37.50	1,560	1,708	0.004	6	1,928
7	32.50	1,589	1,320	0.003	5	1,965
6	27.50	1,619	974	0.002	4	2,002
5	22.50	1,649	673	0.002	3	2,039
4	17.50	1,679	422	0.001	2	2,075
3	12.50	1,709	224	0.001	1	2,112
2	7.50	1,738	85	0.000	0	2,149
1	2.50	1,768	10	0.000	0	2,186
RFS FD9R6004/2C-3L	178.00	16	346	0.001	1	19
Alcatel-Lucent RRH2X	178.00	129	2,859	0.007	11	159
Alcatel-Lucent RRH2X	178.00	132	2,925	0.007	11	163
RFS DB-T1-6Z-8AB-0Z	178.00	88	1,950	0.004	7	109
Generic 20' Omni	178.00	55	1,219	0.003	5	68
Generic 18' Dipole	178.00	110	2,438	0.006	9	136
Generic 2' x 4' Rect	178.00	40	886	0.002	3	49
Commscope LNX-6514DS	178.00	116	2,580	0.006	10	144
Commscope LNX-8513DS	178.00	118	2,606	0.006	10	145
Commscope HBXX-6517D	178.00	245	5,425	0.012	20	303
Generic 8' Yagi	178.00	30	665	0.002	3	37
Flat Platform w/ Han	178.00	2,000	44,324	0.102	167	2,473
Powerwave Allgon LGP	168.00	85	1,677	0.004	6	105
Raycap DC6-48-60-18-	168.00	20	396	0.001	1	25
Raycap DC6-48-60-18-	168.00	40	793	0.002	3	49
Ericsson RRUS 8843 B	168.00	216	4,281	0.010	16	267
Ericsson RRUS 4478 B	168.00	180	3,562	0.008	13	222
Ericsson RRUS 4449 B	168.00	213	4,222	0.010	16	263
Powerwave Allgon 777	168.00	105	2,081	0.005	8	130
Commscope NNH4-65B-R	168.00	269	5,334	0.012	20	333
CCI DMP65R-BU6DA	168.00	238	4,721	0.011	18	294
Site Pro 1 P/N RMQP-	168.00	1,500	29,731	0.068	112	1,854
Alcatel-Lucent 2X50W	158.00	159	2,799	0.006	11	197
Alcatel-Lucent 1900M	158.00	180	3,169	0.007	12	223
Alcatel-Lucent 800 M	158.00	185	3,264	0.007	12	229
Alcatel-Lucent TD-RR	158.00	210	3,697	0.008	14	260
RFS APXVSP18-C-A20	158.00	171	3,011	0.007	11	211
Commscope DT465B-2XR	158.00	174	3,063	0.007	12	215
Round Low Profile PI	158.00	1,500	26,409	0.061	100	1,854
Ericsson KRY 112 489	148.00	46	717	0.002	3	57
Ericsson Radio 4449	148.00	222	3,445	0.008	13	274
RFS APXV18-209014-C-	148.00	56	871	0.002	3	69
RFS APXVAARR24_43-U-	148.00	384	5,954	0.014	22	474
Round Low Profile PI	146.00	1,500	22,673	0.052	86	1,854
Generic 18' Dipole	120.00	110	1,139	0.003	4	136
Generic 8' Yagi	116.00	30	291	0.001	1	37
Generic 9' Omni	113.00	25	230	0.001	1	31

Site Number: 376046

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Customer: AT&T MOBILITY

Generic 8' Yagi	113.00	30	276	0.001	1	37
Generic 2' x 4' Rect	111.00	40	356	0.001	1	49
Generic 22' Dipole	111.00	66	588	0.001	2	82
Flat T-Arm	110.00	750	6,562	0.015	25	927
Generic GPS	76.00	10	43	0.000	0	12
		54,740	435,444	1.000	1,642	67,673

Load Case (0.9 - 0.2Sds) * DL + E ELFM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
50	176.50	250	5,448	0.013	21	216
49	172.50	430	8,970	0.021	34	371
48	169.00	177	3,544	0.008	13	153
47	166.50	296	5,766	0.013	22	256
46	162.50	507	9,423	0.022	36	438
45	159.00	208	3,699	0.008	14	179
44	156.50	328	5,677	0.013	21	284
43	152.50	561	9,223	0.021	35	485
42	149.00	229	3,603	0.008	14	198
41	147.00	245	3,751	0.009	14	212
40	145.50	123	1,854	0.004	7	107
39	142.50	628	9,053	0.021	34	542
38	137.50	645	8,679	0.020	33	557
37	134.38	164	2,110	0.005	8	142
36	131.88	1,048	13,020	0.030	49	906
35	129.50	284	3,401	0.008	13	245
34	127.00	740	8,545	0.020	32	639
33	122.50	948	10,209	0.023	39	819
32	118.00	779	7,809	0.018	29	673
31	115.50	198	1,901	0.004	7	171
30	114.00	398	3,736	0.009	14	344
29	112.00	404	3,659	0.008	14	349
28	110.50	204	1,802	0.004	7	176
27	107.50	1,036	8,671	0.020	33	895
26	102.50	1,062	8,104	0.019	31	917
25	97.50	1,087	7,535	0.017	28	939
24	94.88	55	362	0.001	1	48
23	92.38	1,932	12,065	0.028	46	1,669
22	89.38	516	3,024	0.007	11	446
21	86.88	845	4,685	0.011	18	729
20	82.50	1,148	5,765	0.013	22	992
19	78.00	937	4,221	0.010	16	809
18	75.50	237	1,002	0.002	4	205
17	72.50	1,200	4,695	0.011	18	1,037
16	67.50	1,226	4,176	0.010	16	1,059
15	62.50	1,251	3,675	0.008	14	1,081
14	57.50	1,277	3,192	0.007	12	1,103
13	53.00	1,040	2,221	0.005	8	898
12	50.50	523	1,018	0.002	4	452
11	47.50	2,650	4,581	0.011	17	2,289
10	44.38	671	1,017	0.002	4	580
9	41.88	1,150	1,559	0.004	6	993
8	37.50	1,560	1,708	0.004	6	1,347
7	32.50	1,589	1,320	0.003	5	1,373
6	27.50	1,619	974	0.002	4	1,399
5	22.50	1,649	673	0.002	3	1,424
4	17.50	1,679	422	0.001	2	1,450
3	12.50	1,709	224	0.001	1	1,476
2	7.50	1,738	85	0.000	0	1,501

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Customer: AT&T MOBILITY

1	2.50	1,768	10	0.000	0	1,527
RFS FD9R6004/2C-3L	178.00	16	346	0.001	1	13
Alcatel-Lucent RRH2X	178.00	129	2,859	0.007	11	111
Alcatel-Lucent RRH2X	178.00	132	2,925	0.007	11	114
RFS DB-T1-6Z-8AB-0Z	178.00	88	1,950	0.004	7	76
Generic 20' Omni	178.00	55	1,219	0.003	5	48
Generic 18' Dipole	178.00	110	2,438	0.006	9	95
Generic 2' x 4' Rect	178.00	40	886	0.002	3	35
Commscope LNX-6514DS	178.00	116	2,580	0.006	10	101
Commscope LNX-8513DS	178.00	118	2,606	0.006	10	102
Commscope HBXX-6517D	178.00	245	5,425	0.012	20	211
Generic 8' Yagi	178.00	30	665	0.002	3	26
Flat Platform w/ Han	178.00	2,000	44,324	0.102	167	1,727
Powerwave Allgon LGP	168.00	85	1,677	0.004	6	73
Raycap DC6-48-60-18-	168.00	20	396	0.001	1	17
Raycap DC6-48-60-18-	168.00	40	793	0.002	3	35
Ericsson RRUS 8843 B	168.00	216	4,281	0.010	16	187
Ericsson RRUS 4478 B	168.00	180	3,562	0.008	13	155
Ericsson RRUS 4449 B	168.00	213	4,222	0.010	16	184
Powerwave Allgon 777	168.00	105	2,081	0.005	8	91
Commscope NNH4-65B-R	168.00	269	5,334	0.012	20	232
CCI DMP65R-BU6DA	168.00	238	4,721	0.011	18	206
Site Pro 1 P/N RMQP-	168.00	1,500	29,731	0.068	112	1,296
Alcatel-Lucent 2X50W	158.00	159	2,799	0.006	11	137
Alcatel-Lucent 1900M	158.00	180	3,169	0.007	12	155
Alcatel-Lucent 800 M	158.00	185	3,264	0.007	12	160
Alcatel-Lucent TD-RR	158.00	210	3,697	0.008	14	181
RFS APXVSP18-C-A20	158.00	171	3,011	0.007	11	148
Commscope DT465B-2XR	158.00	174	3,063	0.007	12	150
Round Low Profile PI	158.00	1,500	26,409	0.061	100	1,296
Ericsson KRY 112 489	148.00	46	717	0.002	3	40
Ericsson Radio 4449	148.00	222	3,445	0.008	13	192
RFS APXV18-209014-C-	148.00	56	871	0.002	3	48
RFS APXVAARR24_43-U-	148.00	384	5,954	0.014	22	331
Round Low Profile PI	146.00	1,500	22,673	0.052	86	1,296
Generic 18' Dipole	120.00	110	1,139	0.003	4	95
Generic 8' Yagi	116.00	30	291	0.001	1	26
Generic 9' Omni	113.00	25	230	0.001	1	22
Generic 8' Yagi	113.00	30	276	0.001	1	26
Generic 2' x 4' Rect	111.00	40	356	0.001	1	35
Generic 22' Dipole	111.00	66	588	0.001	2	57
Flat T-Arm	110.00	750	6,562	0.015	25	648
Generic GPS	76.00	10	43	0.000	0	9
		54,740	435,444	1.000	1,642	47,281

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Load Case (1.2 + 0.2Sds) * DL + E ELFM

Seismic Equivalent Lateral Forces Method

Calculated Forces

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 (deg)	Ratio
0.00	-65.49	-1.64	0.00	-237.43	0.00	237.43	6,032.65	3,016.33	16,860.5	8,442.81	0.00	0.00	0.039
5.00	-63.34	-1.65	0.00	-229.21	0.00	229.21	5,970.50	2,985.25	16,375.2	8,199.81	0.00	-0.01	0.039
10.00	-61.23	-1.66	0.00	-220.96	0.00	220.96	5,906.46	2,953.23	15,891.4	7,957.52	0.01	-0.01	0.038
15.00	-59.15	-1.66	0.00	-212.68	0.00	212.68	5,840.54	2,920.27	15,409.2	7,716.10	0.03	-0.02	0.038
20.00	-57.11	-1.66	0.00	-204.38	0.00	204.38	5,772.74	2,886.37	14,929.1	7,475.68	0.05	-0.02	0.037
25.00	-55.11	-1.67	0.00	-196.06	0.00	196.06	5,703.06	2,851.53	14,451.3	7,236.42	0.08	-0.03	0.037
30.00	-53.14	-1.67	0.00	-187.73	0.00	187.73	5,631.49	2,815.75	13,976.1	6,998.46	0.12	-0.04	0.036
35.00	-51.22	-1.66	0.00	-179.41	0.00	179.41	5,558.05	2,779.02	13,503.8	6,761.96	0.16	-0.04	0.036
40.00	-49.79	-1.66	0.00	-171.09	0.00	171.09	5,482.72	2,741.36	13,034.7	6,527.05	0.21	-0.05	0.035
43.75	-48.96	-1.66	0.00	-164.86	0.00	164.86	5,424.99	2,712.50	12,685.1	6,352.01	0.25	-0.06	0.035
45.00	-45.69	-1.64	0.00	-162.79	0.00	162.79	5,405.52	2,702.76	12,569.1	6,293.89	0.27	-0.06	0.034
50.00	-45.04	-1.64	0.00	-154.57	0.00	154.57	5,326.43	2,663.21	12,107.2	6,062.63	0.34	-0.07	0.034
51.00	-43.76	-1.63	0.00	-152.93	0.00	152.93	4,331.58	2,165.79	9,957.52	4,986.16	0.35	-0.07	0.041
55.00	-42.18	-1.63	0.00	-146.39	0.00	146.39	4,286.21	2,143.11	9,674.28	4,844.33	0.41	-0.07	0.040
60.00	-40.63	-1.62	0.00	-138.26	0.00	138.26	4,227.81	2,113.90	9,321.84	4,667.85	0.49	-0.08	0.039
65.00	-39.11	-1.60	0.00	-130.18	0.00	130.18	4,167.52	2,083.76	8,971.44	4,492.39	0.58	-0.09	0.038
70.00	-37.63	-1.59	0.00	-122.17	0.00	122.17	4,105.35	2,052.68	8,623.38	4,318.10	0.68	-0.10	0.037
75.00	-37.34	-1.59	0.00	-114.22	0.00	114.22	4,041.30	2,020.65	8,277.95	4,145.13	0.78	-0.11	0.037
76.00	-36.17	-1.57	0.00	-112.63	0.00	112.63	4,028.27	2,014.13	8,209.21	4,110.71	0.81	-0.11	0.036
80.00	-34.75	-1.55	0.00	-106.35	0.00	106.35	3,975.37	1,987.69	7,935.46	3,973.63	0.90	-0.11	0.036
85.00	-33.70	-1.54	0.00	-98.58	0.00	98.58	3,907.56	1,953.78	7,596.19	3,803.74	1.03	-0.12	0.035
88.75	-33.06	-1.53	0.00	-92.82	0.00	92.82	3,855.46	1,927.73	7,344.03	3,677.47	1.12	-0.13	0.034
90.00	-30.68	-1.48	0.00	-90.91	0.00	90.91	3,837.86	1,918.93	7,260.44	3,635.61	1.16	-0.13	0.033
94.75	-30.61	-1.48	0.00	-83.89	0.00	83.89	3,812.68	1,906.34	7,142.21	3,576.41	1.29	-0.14	0.031
95.00	-29.26	-1.45	0.00	-83.52	0.00	83.52	3,809.11	1,904.56	7,125.59	3,568.09	1.30	-0.14	0.031
100.00	-27.95	-1.42	0.00	-76.27	0.00	76.27	3,736.78	1,868.39	6,795.28	3,402.69	1.45	-0.15	0.030
105.00	-26.67	-1.39	0.00	-69.17	0.00	69.17	3,662.56	1,831.28	6,469.20	3,239.41	1.61	-0.16	0.029
110.00	-25.49	-1.35	0.00	-62.24	0.00	62.24	3,586.46	1,793.23	6,147.63	3,078.39	1.78	-0.16	0.027
111.00	-24.86	-1.34	0.00	-60.88	0.00	60.88	3,571.01	1,785.51	6,083.89	3,046.47	1.82	-0.17	0.027
113.00	-24.30	-1.32	0.00	-58.21	0.00	58.21	3,539.90	1,769.95	5,956.99	2,982.92	1.89	-0.17	0.026
115.00	-24.06	-1.31	0.00	-55.57	0.00	55.57	3,508.48	1,754.24	5,830.89	2,919.78	1.96	-0.17	0.026
116.00	-23.05	-1.28	0.00	-54.26	0.00	54.26	3,492.66	1,746.33	5,768.14	2,888.36	1.99	-0.17	0.025
120.00	-21.75	-1.24	0.00	-49.13	0.00	49.13	3,428.62	1,714.31	5,519.25	2,763.73	2.14	-0.18	0.024
125.00	-20.83	-1.20	0.00	-42.95	0.00	42.95	3,346.87	1,673.44	5,213.02	2,610.39	2.33	-0.19	0.023
129.00	-20.48	-1.19	0.00	-38.13	0.00	38.13	3,269.48	1,634.74	4,956.00	2,481.68	2.49	-0.19	0.022
130.00	-19.19	-1.14	0.00	-36.94	0.00	36.94	3,247.19	1,623.60	4,888.33	2,447.80	2.53	-0.19	0.021
133.75	-18.98	-1.13	0.00	-32.67	0.00	32.67	1,899.47	949.74	2,843.96	1,424.09	2.69	-0.20	0.033
135.00	-18.19	-1.10	0.00	-31.25	0.00	31.25	1,889.77	944.89	2,804.78	1,404.47	2.74	-0.20	0.032
140.00	-17.41	-1.06	0.00	-25.76	0.00	25.76	1,849.78	924.89	2,648.90	1,326.42	2.95	-0.21	0.029
145.00	-17.26	-1.06	0.00	-20.44	0.00	20.44	1,807.91	903.95	2,494.59	1,249.15	3.18	-0.22	0.026
146.00	-15.10	-0.95	0.00	-19.39	0.00	19.39	1,799.31	899.65	2,463.95	1,233.81	3.22	-0.22	0.024
148.00	-13.94	-0.89	0.00	-17.49	0.00	17.49	1,781.88	890.94	2,402.89	1,203.23	3.31	-0.22	0.022
150.00	-13.25	-0.86	0.00	-15.70	0.00	15.70	1,764.15	882.08	2,342.16	1,172.82	3.41	-0.22	0.021
155.00	-12.84	-0.83	0.00	-11.43	0.00	11.43	1,718.52	859.26	2,191.90	1,097.58	3.64	-0.23	0.018
158.00	-9.40	-0.63	0.00	-8.93	0.00	8.93	1,690.24	845.12	2,102.91	1,053.02	3.79	-0.23	0.014
160.00	-8.77	-0.60	0.00	-7.66	0.00	7.66	1,671.00	835.50	2,044.10	1,023.57	3.89	-0.23	0.013
165.00	-8.41	-0.57	0.00	-4.68	0.00	4.68	1,621.61	810.80	1,899.05	950.94	4.13	-0.24	0.010

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

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168.00	-4.64	-0.33	0.00	-2.96	0.00	2.96	1,591.06	795.53	1,813.47	908.08	4.28	-0.24	0.006
170.00	-4.11	-0.29	0.00	-2.29	0.00	2.29	1,570.33	785.16	1,757.06	879.84	4.38	-0.24	0.005
175.00	-3.80	-0.27	0.00	-0.82	0.00	0.82	1,517.17	758.58	1,618.41	810.41	4.64	-0.24	0.004
178.00	0.00	-0.26	0.00	0.00	0.00	0.00	1,484.37	742.18	1,536.95	769.62	4.79	-0.24	0.000

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Site Name: MANSFIELD CENTER 1 CT, CT

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Load Case (0.9 - 0.2Sds) * DL + E ELFM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

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 (deg)	Ratio
0.00	-45.75	-1.64	0.00	-234.58	0.00	234.58	6,032.65	3,016.33	16,860.5	8,442.81	0.00	0.00	0.035
5.00	-44.25	-1.65	0.00	-226.37	0.00	226.37	5,970.50	2,985.25	16,375.2	8,199.81	0.00	-0.01	0.035
10.00	-42.78	-1.65	0.00	-218.13	0.00	218.13	5,906.46	2,953.23	15,891.4	7,957.52	0.01	-0.01	0.035
15.00	-41.33	-1.65	0.00	-209.88	0.00	209.88	5,840.54	2,920.27	15,409.2	7,716.10	0.03	-0.02	0.034
20.00	-39.90	-1.65	0.00	-201.61	0.00	201.61	5,772.74	2,886.37	14,929.1	7,475.68	0.05	-0.02	0.034
25.00	-38.50	-1.65	0.00	-193.34	0.00	193.34	5,703.06	2,851.53	14,451.3	7,236.42	0.08	-0.03	0.033
30.00	-37.13	-1.65	0.00	-185.06	0.00	185.06	5,631.49	2,815.75	13,976.1	6,998.46	0.12	-0.04	0.033
35.00	-35.78	-1.65	0.00	-176.80	0.00	176.80	5,558.05	2,779.02	13,503.8	6,761.96	0.16	-0.04	0.033
40.00	-34.79	-1.65	0.00	-168.55	0.00	168.55	5,482.72	2,741.36	13,034.7	6,527.05	0.21	-0.05	0.032
43.75	-34.21	-1.64	0.00	-162.37	0.00	162.37	5,424.99	2,712.50	12,685.1	6,352.01	0.25	-0.06	0.032
45.00	-31.92	-1.63	0.00	-160.31	0.00	160.31	5,405.52	2,702.76	12,569.1	6,293.89	0.27	-0.06	0.031
50.00	-31.47	-1.63	0.00	-152.18	0.00	152.18	5,326.43	2,663.21	12,107.2	6,062.63	0.33	-0.06	0.031
51.00	-30.57	-1.62	0.00	-150.55	0.00	150.55	4,331.58	2,165.79	9,957.52	4,986.16	0.34	-0.07	0.037
55.00	-29.47	-1.61	0.00	-144.08	0.00	144.08	4,286.21	2,143.11	9,674.28	4,844.33	0.40	-0.07	0.037
60.00	-28.39	-1.60	0.00	-136.04	0.00	136.04	4,227.81	2,113.90	9,321.84	4,667.85	0.48	-0.08	0.036
65.00	-27.33	-1.58	0.00	-128.05	0.00	128.05	4,167.52	2,083.76	8,971.44	4,492.39	0.57	-0.09	0.035
70.00	-26.29	-1.57	0.00	-120.13	0.00	120.13	4,105.35	2,052.68	8,623.38	4,318.10	0.67	-0.10	0.034
75.00	-26.09	-1.57	0.00	-112.29	0.00	112.29	4,041.30	2,020.65	8,277.95	4,145.13	0.77	-0.10	0.034
76.00	-25.27	-1.55	0.00	-110.73	0.00	110.73	4,028.27	2,014.13	8,209.21	4,110.71	0.80	-0.11	0.033
80.00	-24.27	-1.53	0.00	-104.53	0.00	104.53	3,975.37	1,987.69	7,935.46	3,973.63	0.89	-0.11	0.032
85.00	-23.55	-1.51	0.00	-96.88	0.00	96.88	3,907.56	1,953.78	7,596.19	3,803.74	1.01	-0.12	0.031
88.75	-23.10	-1.50	0.00	-91.20	0.00	91.20	3,855.46	1,927.73	7,344.03	3,677.47	1.11	-0.13	0.031
90.00	-21.43	-1.46	0.00	-89.32	0.00	89.32	3,837.86	1,918.93	7,260.44	3,635.61	1.14	-0.13	0.030
94.75	-21.38	-1.46	0.00	-82.41	0.00	82.41	3,812.68	1,906.34	7,142.21	3,576.41	1.28	-0.14	0.029
95.00	-20.44	-1.43	0.00	-82.04	0.00	82.04	3,809.11	1,904.56	7,125.59	3,568.09	1.28	-0.14	0.028
100.00	-19.53	-1.40	0.00	-74.91	0.00	74.91	3,736.78	1,868.39	6,795.28	3,402.69	1.43	-0.15	0.027
105.00	-18.63	-1.36	0.00	-67.92	0.00	67.92	3,662.56	1,831.28	6,469.20	3,239.41	1.59	-0.15	0.026
110.00	-17.81	-1.33	0.00	-61.10	0.00	61.10	3,586.46	1,793.23	6,147.63	3,078.39	1.75	-0.16	0.025
111.00	-17.37	-1.31	0.00	-59.77	0.00	59.77	3,571.01	1,785.51	6,083.89	3,046.47	1.79	-0.16	0.024
113.00	-16.98	-1.30	0.00	-57.14	0.00	57.14	3,539.90	1,769.95	5,956.99	2,982.92	1.86	-0.17	0.024
115.00	-16.81	-1.29	0.00	-54.55	0.00	54.55	3,508.48	1,754.24	5,830.89	2,919.78	1.93	-0.17	0.023
116.00	-16.11	-1.26	0.00	-53.26	0.00	53.26	3,492.66	1,746.33	5,768.14	2,888.36	1.96	-0.17	0.023
120.00	-15.19	-1.22	0.00	-48.22	0.00	48.22	3,428.62	1,714.31	5,519.25	2,763.73	2.11	-0.18	0.022
125.00	-14.55	-1.18	0.00	-42.15	0.00	42.15	3,346.87	1,673.44	5,213.02	2,610.39	2.30	-0.18	0.020
129.00	-14.31	-1.17	0.00	-37.41	0.00	37.41	3,269.48	1,634.74	4,956.00	2,481.68	2.45	-0.19	0.019
130.00	-13.40	-1.12	0.00	-36.24	0.00	36.24	3,247.19	1,623.60	4,888.33	2,447.80	2.49	-0.19	0.019
133.75	-13.26	-1.11	0.00	-32.05	0.00	32.05	1,899.47	949.74	2,843.96	1,424.09	2.65	-0.20	0.029
135.00	-12.70	-1.08	0.00	-30.66	0.00	30.66	1,889.77	944.89	2,804.78	1,404.47	2.70	-0.20	0.029
140.00	-12.16	-1.04	0.00	-25.27	0.00	25.27	1,849.78	924.89	2,648.90	1,326.42	2.91	-0.21	0.026
145.00	-12.06	-1.04	0.00	-20.06	0.00	20.06	1,807.91	903.95	2,494.59	1,249.15	3.13	-0.21	0.023
146.00	-10.55	-0.93	0.00	-19.02	0.00	19.02	1,799.31	899.65	2,463.95	1,233.81	3.17	-0.21	0.021
148.00	-9.74	-0.87	0.00	-17.16	0.00	17.16	1,781.88	890.94	2,402.89	1,203.23	3.26	-0.22	0.020
150.00	-9.26	-0.84	0.00	-15.41	0.00	15.41	1,764.15	882.08	2,342.16	1,172.82	3.35	-0.22	0.018
155.00	-8.97	-0.82	0.00	-11.21	0.00	11.21	1,718.52	859.26	2,191.90	1,097.58	3.59	-0.23	0.015
158.00	-6.57	-0.62	0.00	-8.76	0.00	8.76	1,690.24	845.12	2,102.91	1,053.02	3.73	-0.23	0.012
160.00	-6.13	-0.59	0.00	-7.52	0.00	7.52	1,671.00	835.50	2,044.10	1,023.57	3.83	-0.23	0.011
165.00	-5.87	-0.56	0.00	-4.59	0.00	4.59	1,621.61	810.80	1,899.05	950.94	4.07	-0.23	0.008

Site Number: 376046

Code: ANSI/TIA-222-G

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168.00	-3.24	-0.32	0.00	-2.90	0.00	2.90	1,591.06	795.53	1,813.47	908.08	4.22	-0.23	0.005
170.00	-2.87	-0.29	0.00	-2.25	0.00	2.25	1,570.33	785.16	1,757.06	879.84	4.32	-0.24	0.004
175.00	-2.66	-0.27	0.00	-0.80	0.00	0.80	1,517.17	758.58	1,618.41	810.41	4.56	-0.24	0.003
178.00	0.00	-0.26	0.00	0.00	0.00	0.00	1,484.37	742.18	1,536.95	769.62	4.71	-0.24	0.000

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Site Name: MANSFIELD CENTER 1 CT, CT

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Equivalent Modal Analysis Method

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	0.17
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.18
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	2.36
Redundancy Factor (p):	1.00

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
50	176.50	250	1.858	1.817	1.081	0.326	54	309
49	172.50	430	1.775	1.427	0.935	0.277	79	532
48	169.00	177	1.704	1.136	0.820	0.237	28	219
47	166.50	296	1.654	0.954	0.745	0.211	42	366
46	162.50	507	1.575	0.704	0.637	0.171	58	627
45	159.00	208	1.508	0.521	0.552	0.139	19	257
44	156.50	328	1.461	0.410	0.498	0.118	26	406
43	152.50	561	1.387	0.260	0.419	0.087	33	694
42	149.00	229	1.324	0.156	0.358	0.063	10	283
41	147.00	245	1.289	0.106	0.326	0.050	8	303
40	145.50	123	1.263	0.072	0.304	0.041	3	153
39	142.50	628	1.211	0.016	0.263	0.025	10	776
38	137.50	645	1.128	-0.053	0.204	0.001	1	797
37	134.38	164	1.077	-0.082	0.173	-0.011	-1	203
36	131.88	1,048	1.037	-0.099	0.151	-0.019	-13	1,296
35	129.50	284	1.000	-0.110	0.132	-0.025	-5	351
34	127.00	740	0.962	-0.117	0.113	-0.031	-15	915
33	122.50	948	0.895	-0.122	0.085	-0.038	-24	1,172
32	118.00	779	0.831	-0.117	0.063	-0.040	-21	963
31	115.50	198	0.796	-0.111	0.053	-0.040	-5	244
30	114.00	398	0.775	-0.107	0.047	-0.040	-10	493
29	112.00	404	0.748	-0.100	0.040	-0.038	-10	499
28	110.50	204	0.728	-0.095	0.036	-0.036	-5	252
27	107.50	1,036	0.689	-0.084	0.028	-0.032	-22	1,281
26	102.50	1,062	0.627	-0.063	0.018	-0.022	-15	1,312
25	97.50	1,087	0.567	-0.041	0.011	-0.009	-7	1,344
24	94.88	55	0.537	-0.030	0.009	-0.002	0	68
23	92.38	1,932	0.509	-0.019	0.007	0.005	6	2,388
22	89.38	516	0.476	-0.008	0.006	0.012	4	638
21	86.88	845	0.450	0.002	0.006	0.018	10	1,044
20	82.50	1,148	0.406	0.016	0.006	0.028	21	1,420
19	78.00	937	0.363	0.029	0.008	0.036	22	1,158
18	75.50	237	0.340	0.035	0.009	0.039	6	293
17	72.50	1,200	0.314	0.042	0.011	0.042	34	1,484

Site Number: 376046

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

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Customer: AT&T MOBILITY

16	67.50	1,226	0.272	0.051	0.015	0.046	38	1,515
15	62.50	1,251	0.233	0.058	0.019	0.048	40	1,547
14	57.50	1,277	0.197	0.063	0.024	0.049	41	1,578
13	53.00	1,040	0.168	0.066	0.028	0.049	34	1,285
12	50.50	523	0.152	0.068	0.030	0.048	17	647
11	47.50	2,650	0.135	0.069	0.032	0.048	85	3,276
10	44.38	671	0.117	0.070	0.035	0.047	21	830
9	41.88	1,150	0.105	0.071	0.037	0.047	36	1,422
8	37.50	1,560	0.084	0.071	0.039	0.046	48	1,928
7	32.50	1,589	0.063	0.072	0.041	0.045	48	1,965
6	27.50	1,619	0.045	0.071	0.042	0.044	47	2,002
5	22.50	1,649	0.030	0.068	0.041	0.042	46	2,039
4	17.50	1,679	0.018	0.063	0.037	0.039	44	2,075
3	12.50	1,709	0.009	0.054	0.031	0.035	39	2,112
2	7.50	1,738	0.003	0.039	0.022	0.026	31	2,149
1	2.50	1,768	0.000	0.016	0.008	0.012	14	2,186
RFS FD9R6004/2C-3L	178.00	16	1.890	1.980	1.140	0.345	4	19
Alcatel-Lucent RRH2X	178.00	129	1.890	1.980	1.140	0.345	30	159
Alcatel-Lucent RRH2X	178.00	132	1.890	1.980	1.140	0.345	30	163
RFS DB-T1-6Z-8AB-0Z	178.00	88	1.890	1.980	1.140	0.345	20	109
Generic 20' Omni	178.00	55	1.890	1.980	1.140	0.345	13	68
Generic 18' Dipole	178.00	110	1.890	1.980	1.140	0.345	25	136
Generic 2' x 4' Rect	178.00	40	1.890	1.980	1.140	0.345	9	49
Commscope LNX-	178.00	116	1.890	1.980	1.140	0.345	27	144
Commscope LNX-	178.00	118	1.890	1.980	1.140	0.345	27	145
Commscope HBXX-	178.00	245	1.890	1.980	1.140	0.345	56	303
Generic 8' Yagi	178.00	30	1.890	1.980	1.140	0.345	7	37
Flat Platform w/ Han	178.00	2,000	1.890	1.980	1.140	0.345	460	2,473
Powerwave Allgon LGP	168.00	85	1.684	1.061	0.790	0.227	13	105
Raycap DC6-48-60-18-	168.00	20	1.684	1.061	0.790	0.227	3	25
Raycap DC6-48-60-18-	168.00	40	1.684	1.061	0.790	0.227	6	49
Ericsson RRUS 8843 B	168.00	216	1.684	1.061	0.790	0.227	33	267
Ericsson RRUS 4478 B	168.00	180	1.684	1.061	0.790	0.227	27	222
Ericsson RRUS 4449 B	168.00	213	1.684	1.061	0.790	0.227	32	263
Powerwave Allgon 777	168.00	105	1.684	1.061	0.790	0.227	16	130
Commscope NNH4-65B-	168.00	269	1.684	1.061	0.790	0.227	41	333
CCI DMP65R-BU6DA	168.00	238	1.684	1.061	0.790	0.227	36	294
Site Pro 1 P/N RMQP-	168.00	1,500	1.684	1.061	0.790	0.227	227	1,854
Alcatel-Lucent 2X50W	158.00	159	1.489	0.475	0.530	0.131	14	197
Alcatel-Lucent 1900M	158.00	180	1.489	0.475	0.530	0.131	16	223
Alcatel-Lucent 800 M	158.00	185	1.489	0.475	0.530	0.131	16	229
Alcatel-Lucent TD-RR	158.00	210	1.489	0.475	0.530	0.131	18	260
RFS APXVSPP18-C-A20	158.00	171	1.489	0.475	0.530	0.131	15	211
Commscope DT465B-	158.00	174	1.489	0.475	0.530	0.131	15	215
Round Low Profile PI	158.00	1,500	1.489	0.475	0.530	0.131	131	1,854
Ericsson KRY 112 489	148.00	46	1.307	0.130	0.342	0.057	2	57
Ericsson Radio 4449	148.00	222	1.307	0.130	0.342	0.057	8	274
RFS APXV18-209014-C-	148.00	56	1.307	0.130	0.342	0.057	2	69
RFS APXVAARR24_43-U-	148.00	384	1.307	0.130	0.342	0.057	14	474
Round Low Profile PI	146.00	1,500	1.272	0.083	0.312	0.044	44	1,854
Generic 18' Dipole	120.00	110	0.859	-0.120	0.072	-0.040	-3	136
Generic 8' Yagi	116.00	30	0.803	-0.112	0.055	-0.040	-1	37
Generic 9' Omni	113.00	25	0.762	-0.104	0.044	-0.039	-1	31
Generic 8' Yagi	113.00	30	0.762	-0.104	0.044	-0.039	-1	37
Generic 2' x 4' Rect	111.00	40	0.735	-0.097	0.037	-0.037	-1	49
Generic 22' Dipole	111.00	66	0.735	-0.097	0.037	-0.037	-2	82
Flat T-Arm	110.00	750	0.722	-0.093	0.034	-0.036	-18	927
Generic GPS	76.00	10	0.345	0.034	0.009	0.038	0	12
		54,740	97.057	44.919	35.933	9.580	2,361	67,673

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:55:18 AM

Customer: AT&T MOBILITY

Load Case (0.9 - 0.2Sds) * DL + E EMAMSeismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
50	176.50	250	1.858	1.817	1.081	0.326	54	216
49	172.50	430	1.775	1.427	0.935	0.277	79	371
48	169.00	177	1.704	1.136	0.820	0.237	28	153
47	166.50	296	1.654	0.954	0.745	0.211	42	256
46	162.50	507	1.575	0.704	0.637	0.171	58	438
45	159.00	208	1.508	0.521	0.552	0.139	19	179
44	156.50	328	1.461	0.410	0.498	0.118	26	284
43	152.50	561	1.387	0.260	0.419	0.087	33	485
42	149.00	229	1.324	0.156	0.358	0.063	10	198
41	147.00	245	1.289	0.106	0.326	0.050	8	212
40	145.50	123	1.263	0.072	0.304	0.041	3	107
39	142.50	628	1.211	0.016	0.263	0.025	10	542
38	137.50	645	1.128	-0.053	0.204	0.001	1	557
37	134.38	164	1.077	-0.082	0.173	-0.011	-1	142
36	131.88	1,048	1.037	-0.099	0.151	-0.019	-13	906
35	129.50	284	1.000	-0.110	0.132	-0.025	-5	245
34	127.00	740	0.962	-0.117	0.113	-0.031	-15	639
33	122.50	948	0.895	-0.122	0.085	-0.038	-24	819
32	118.00	779	0.831	-0.117	0.063	-0.040	-21	673
31	115.50	198	0.796	-0.111	0.053	-0.040	-5	171
30	114.00	398	0.775	-0.107	0.047	-0.040	-10	344
29	112.00	404	0.748	-0.100	0.040	-0.038	-10	349
28	110.50	204	0.728	-0.095	0.036	-0.036	-5	176
27	107.50	1,036	0.689	-0.084	0.028	-0.032	-22	895
26	102.50	1,062	0.627	-0.063	0.018	-0.022	-15	917
25	97.50	1,087	0.567	-0.041	0.011	-0.009	-7	939
24	94.88	55	0.537	-0.030	0.009	-0.002	0	48
23	92.38	1,932	0.509	-0.019	0.007	0.005	6	1,669
22	89.38	516	0.476	-0.008	0.006	0.012	4	446
21	86.88	845	0.450	0.002	0.006	0.018	10	729
20	82.50	1,148	0.406	0.016	0.006	0.028	21	992
19	78.00	937	0.363	0.029	0.008	0.036	22	809
18	75.50	237	0.340	0.035	0.009	0.039	6	205
17	72.50	1,200	0.314	0.042	0.011	0.042	34	1,037
16	67.50	1,226	0.272	0.051	0.015	0.046	38	1,059
15	62.50	1,251	0.233	0.058	0.019	0.048	40	1,081
14	57.50	1,277	0.197	0.063	0.024	0.049	41	1,103
13	53.00	1,040	0.168	0.066	0.028	0.049	34	898
12	50.50	523	0.152	0.068	0.030	0.048	17	452
11	47.50	2,650	0.135	0.069	0.032	0.048	85	2,289
10	44.38	671	0.117	0.070	0.035	0.047	21	580
9	41.88	1,150	0.105	0.071	0.037	0.047	36	993
8	37.50	1,560	0.084	0.071	0.039	0.046	48	1,347
7	32.50	1,589	0.063	0.072	0.041	0.045	48	1,373
6	27.50	1,619	0.045	0.071	0.042	0.044	47	1,399
5	22.50	1,649	0.030	0.068	0.041	0.042	46	1,424
4	17.50	1,679	0.018	0.063	0.037	0.039	44	1,450
3	12.50	1,709	0.009	0.054	0.031	0.035	39	1,476
2	7.50	1,738	0.003	0.039	0.022	0.026	31	1,501
1	2.50	1,768	0.000	0.016	0.008	0.012	14	1,527
RFS FD9R6004/2C-3L	178.00	16	1.890	1.980	1.140	0.345	4	13
Alcatel-Lucent RRH2X	178.00	129	1.890	1.980	1.140	0.345	30	111
Alcatel-Lucent RRH2X	178.00	132	1.890	1.980	1.140	0.345	30	114
RFS DB-T1-6Z-8AB-0Z	178.00	88	1.890	1.980	1.140	0.345	20	76
Generic 20' Omni	178.00	55	1.890	1.980	1.140	0.345	13	48
Generic 18' Dipole	178.00	110	1.890	1.980	1.140	0.345	25	95

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

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Customer: AT&T MOBILITY

Generic 2' x 4' Rect	178.00	40	1.890	1.980	1.140	0.345	9	35
Commscope LNX-	178.00	116	1.890	1.980	1.140	0.345	27	101
Commscope LNX-	178.00	118	1.890	1.980	1.140	0.345	27	102
Commscope HBXX-	178.00	245	1.890	1.980	1.140	0.345	56	211
Generic 8' Yagi	178.00	30	1.890	1.980	1.140	0.345	7	26
Flat Platform w/ Han	178.00	2,000	1.890	1.980	1.140	0.345	460	1,727
Powerwave Allgon LGP	168.00	85	1.684	1.061	0.790	0.227	13	73
Raycap DC6-48-60-18-	168.00	20	1.684	1.061	0.790	0.227	3	17
Raycap DC6-48-60-18-	168.00	40	1.684	1.061	0.790	0.227	6	35
Ericsson RRUS 8843 B	168.00	216	1.684	1.061	0.790	0.227	33	187
Ericsson RRUS 4478 B	168.00	180	1.684	1.061	0.790	0.227	27	155
Ericsson RRUS 4449 B	168.00	213	1.684	1.061	0.790	0.227	32	184
Powerwave Allgon 777	168.00	105	1.684	1.061	0.790	0.227	16	91
Commscope NNH4-65B-	168.00	269	1.684	1.061	0.790	0.227	41	232
CCI DMP65R-BU6DA	168.00	238	1.684	1.061	0.790	0.227	36	206
Site Pro 1 P/N RMQP-	168.00	1,500	1.684	1.061	0.790	0.227	227	1,296
Alcatel-Lucent 2X50W	158.00	159	1.489	0.475	0.530	0.131	14	137
Alcatel-Lucent 1900M	158.00	180	1.489	0.475	0.530	0.131	16	155
Alcatel-Lucent 800 M	158.00	185	1.489	0.475	0.530	0.131	16	160
Alcatel-Lucent TD-RR	158.00	210	1.489	0.475	0.530	0.131	18	181
RFS APXVSP18-C-A20	158.00	171	1.489	0.475	0.530	0.131	15	148
Commscope DT465B-	158.00	174	1.489	0.475	0.530	0.131	15	150
Round Low Profile PI	158.00	1,500	1.489	0.475	0.530	0.131	131	1,296
Ericsson KRY 112 489	148.00	46	1.307	0.130	0.342	0.057	2	40
Ericsson Radio 4449	148.00	222	1.307	0.130	0.342	0.057	8	192
RFS APXV18-209014-C-	148.00	56	1.307	0.130	0.342	0.057	2	48
RFS APXVAARR24_43-U-	148.00	384	1.307	0.130	0.342	0.057	14	331
Round Low Profile PI	146.00	1,500	1.272	0.083	0.312	0.044	44	1,296
Generic 18' Dipole	120.00	110	0.859	-0.120	0.072	-0.040	-3	95
Generic 8' Yagi	116.00	30	0.803	-0.112	0.055	-0.040	-1	26
Generic 9' Omni	113.00	25	0.762	-0.104	0.044	-0.039	-1	22
Generic 8' Yagi	113.00	30	0.762	-0.104	0.044	-0.039	-1	26
Generic 2' x 4' Rect	111.00	40	0.735	-0.097	0.037	-0.037	-1	35
Generic 22' Dipole	111.00	66	0.735	-0.097	0.037	-0.037	-2	57
Flat T-Arm	110.00	750	0.722	-0.093	0.034	-0.036	-18	648
Generic GPS	76.00	10	0.345	0.034	0.009	0.038	0	9
		54,740	97.057	44.919	35.933	9.580	2,361	47,281

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

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Customer: AT&T MOBILITY

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis MethodCalculated Forces

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 (deg)	Ratio
0.00	-65.49	-2.35	0.00	-328.48	0.00	328.48	6,032.65	3,016.33	16,860.55	8,442.81	0.00	0.00	0.050
5.00	-63.34	-2.33	0.00	-316.72	0.00	316.72	5,970.50	2,985.25	16,375.27	8,199.81	0.00	-0.01	0.049
10.00	-61.22	-2.30	0.00	-305.08	0.00	305.08	5,906.46	2,953.23	15,891.42	7,957.52	0.02	-0.02	0.049
15.00	-59.15	-2.26	0.00	-293.58	0.00	293.58	5,840.54	2,920.27	15,409.29	7,716.10	0.04	-0.03	0.048
20.00	-57.11	-2.22	0.00	-282.27	0.00	282.27	5,772.74	2,886.37	14,929.17	7,475.68	0.07	-0.03	0.048
25.00	-55.11	-2.19	0.00	-271.14	0.00	271.14	5,703.06	2,851.53	14,451.36	7,236.42	0.11	-0.04	0.047
30.00	-53.14	-2.14	0.00	-260.22	0.00	260.22	5,631.49	2,815.75	13,976.15	6,998.46	0.16	-0.05	0.047
35.00	-51.21	-2.10	0.00	-249.49	0.00	249.49	5,558.05	2,779.02	13,503.85	6,761.96	0.22	-0.06	0.046
40.00	-49.79	-2.07	0.00	-238.98	0.00	238.98	5,482.72	2,741.36	13,034.73	6,527.05	0.29	-0.07	0.046
43.75	-48.96	-2.06	0.00	-231.20	0.00	231.20	5,424.99	2,712.50	12,685.17	6,352.01	0.35	-0.08	0.045
45.00	-45.69	-1.97	0.00	-228.63	0.00	228.63	5,405.52	2,702.76	12,569.11	6,293.89	0.37	-0.08	0.045
50.00	-45.04	-1.96	0.00	-218.78	0.00	218.78	5,326.43	2,663.21	12,107.26	6,062.63	0.46	-0.09	0.045
51.00	-43.75	-1.93	0.00	-216.82	0.00	216.82	4,331.58	2,165.79	9,957.52	4,986.16	0.48	-0.09	0.054
55.00	-42.18	-1.89	0.00	-209.11	0.00	209.11	4,286.21	2,143.11	9,674.28	4,844.33	0.57	-0.10	0.053
60.00	-40.63	-1.85	0.00	-199.67	0.00	199.67	4,227.81	2,113.90	9,321.84	4,667.85	0.68	-0.11	0.052
65.00	-39.11	-1.82	0.00	-190.39	0.00	190.39	4,167.52	2,083.76	8,971.44	4,492.39	0.80	-0.13	0.052
70.00	-37.63	-1.79	0.00	-181.28	0.00	181.28	4,105.35	2,052.68	8,623.38	4,318.10	0.94	-0.14	0.051
75.00	-37.34	-1.79	0.00	-172.31	0.00	172.31	4,041.30	2,020.65	8,277.95	4,145.13	1.09	-0.15	0.051
76.00	-36.16	-1.77	0.00	-170.52	0.00	170.52	4,028.27	2,014.13	8,209.21	4,110.71	1.12	-0.15	0.050
80.00	-34.74	-1.75	0.00	-163.45	0.00	163.45	3,975.37	1,987.69	7,935.46	3,973.63	1.26	-0.16	0.050
85.00	-33.70	-1.74	0.00	-154.69	0.00	154.69	3,907.56	1,953.78	7,596.19	3,803.74	1.44	-0.18	0.049
88.75	-33.06	-1.74	0.00	-148.14	0.00	148.14	3,855.46	1,927.73	7,344.03	3,677.47	1.58	-0.19	0.049
90.00	-30.67	-1.73	0.00	-145.97	0.00	145.97	3,837.86	1,918.93	7,260.44	3,635.61	1.63	-0.19	0.048
94.75	-30.60	-1.74	0.00	-137.73	0.00	137.73	3,812.68	1,906.34	7,142.21	3,576.41	1.82	-0.20	0.047
95.00	-29.26	-1.74	0.00	-137.30	0.00	137.30	3,809.11	1,904.56	7,125.59	3,568.09	1.83	-0.20	0.046
100.00	-27.95	-1.76	0.00	-128.59	0.00	128.59	3,736.78	1,868.39	6,795.28	3,402.69	2.05	-0.22	0.045
105.00	-26.67	-1.78	0.00	-119.79	0.00	119.79	3,662.56	1,831.28	6,469.20	3,239.41	2.29	-0.23	0.044
110.00	-25.49	-1.80	0.00	-110.88	0.00	110.88	3,586.46	1,793.23	6,147.63	3,078.39	2.54	-0.24	0.043
111.00	-24.86	-1.82	0.00	-109.08	0.00	109.08	3,571.01	1,785.51	6,083.89	3,046.47	2.59	-0.25	0.043
113.00	-24.30	-1.83	0.00	-105.45	0.00	105.45	3,539.90	1,769.95	5,956.99	2,982.92	2.69	-0.25	0.042
115.00	-24.05	-1.83	0.00	-101.79	0.00	101.79	3,508.48	1,754.24	5,830.89	2,919.78	2.80	-0.26	0.042
116.00	-23.05	-1.85	0.00	-99.96	0.00	99.96	3,492.66	1,746.33	5,768.14	2,888.36	2.86	-0.26	0.041
120.00	-21.74	-1.88	0.00	-92.54	0.00	92.54	3,428.62	1,714.31	5,519.25	2,763.73	3.08	-0.27	0.040
125.00	-20.83	-1.89	0.00	-83.15	0.00	83.15	3,346.87	1,673.44	5,213.02	2,610.39	3.37	-0.29	0.038
129.00	-20.48	-1.90	0.00	-75.57	0.00	75.57	3,269.48	1,634.74	4,956.00	2,481.68	3.62	-0.30	0.037
130.00	-19.18	-1.91	0.00	-73.67	0.00	73.67	3,247.19	1,623.60	4,888.33	2,447.80	3.68	-0.30	0.036
133.75	-18.98	-1.91	0.00	-66.51	0.00	66.51	1,899.47	949.74	2,843.96	1,424.09	3.92	-0.31	0.057
135.00	-18.18	-1.91	0.00	-64.12	0.00	64.12	1,889.77	944.89	2,804.78	1,404.47	4.00	-0.31	0.055
140.00	-17.40	-1.90	0.00	-54.58	0.00	54.58	1,849.78	924.89	2,648.90	1,326.42	4.34	-0.33	0.051
145.00	-17.25	-1.90	0.00	-45.07	0.00	45.07	1,807.91	903.95	2,494.59	1,249.15	4.70	-0.35	0.046
146.00	-15.09	-1.83	0.00	-43.18	0.00	43.18	1,799.31	899.65	2,463.95	1,233.81	4.77	-0.35	0.043
148.00	-13.93	-1.79	0.00	-39.51	0.00	39.51	1,781.88	890.94	2,402.89	1,203.23	4.92	-0.36	0.041
150.00	-13.24	-1.76	0.00	-35.92	0.00	35.92	1,764.15	882.08	2,342.16	1,172.82	5.07	-0.36	0.038
155.00	-12.83	-1.73	0.00	-27.13	0.00	27.13	1,718.52	859.26	2,191.90	1,097.58	5.46	-0.38	0.032
158.00	-9.39	-1.47	0.00	-21.94	0.00	21.94	1,690.24	845.12	2,102.91	1,053.02	5.70	-0.38	0.026
160.00	-8.76	-1.40	0.00	-19.01	0.00	19.01	1,671.00	835.50	2,044.10	1,023.57	5.86	-0.39	0.024
165.00	-8.40	-1.36	0.00	-11.99	0.00	11.99	1,621.61	810.80	1,899.05	950.94	6.27	-0.40	0.018

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

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Customer: AT&T MOBILITY

168.00	-4.64	-0.87	0.00	-7.91	0.00	7.91	1,591.06	795.53	1,813.47	908.08	6.52	-0.40	0.012
170.00	-4.11	-0.79	0.00	-6.16	0.00	6.16	1,570.33	785.16	1,757.06	879.84	6.69	-0.40	0.010
175.00	-3.80	-0.73	0.00	-2.20	0.00	2.20	1,517.17	758.58	1,618.41	810.41	7.11	-0.41	0.005
178.00	0.00	-0.71	0.00	0.00	0.00	0.00	1,484.37	742.18	1,536.95	769.62	7.37	-0.41	0.000

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

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Customer: AT&T MOBILITY

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis MethodCalculated Forces

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 (deg)	Ratio
0.00	-45.75	-2.35	0.00	-324.24	0.00	324.24	6,032.65	3,016.33	16,860.55	8,442.81	0.00	0.00	0.046
5.00	-44.25	-2.33	0.00	-312.49	0.00	312.49	5,970.50	2,985.25	16,375.27	8,199.81	0.00	-0.01	0.046
10.00	-42.78	-2.29	0.00	-300.87	0.00	300.87	5,906.46	2,953.23	15,891.42	7,957.52	0.02	-0.02	0.045
15.00	-41.32	-2.25	0.00	-289.41	0.00	289.41	5,840.54	2,920.27	15,409.29	7,716.10	0.04	-0.03	0.045
20.00	-39.90	-2.21	0.00	-278.14	0.00	278.14	5,772.74	2,886.37	14,929.17	7,475.68	0.07	-0.03	0.044
25.00	-38.50	-2.17	0.00	-267.08	0.00	267.08	5,703.06	2,851.53	14,451.36	7,236.42	0.11	-0.04	0.044
30.00	-37.13	-2.13	0.00	-256.22	0.00	256.22	5,631.49	2,815.75	13,976.15	6,998.46	0.16	-0.05	0.043
35.00	-35.78	-2.08	0.00	-245.58	0.00	245.58	5,558.05	2,779.02	13,503.85	6,761.96	0.22	-0.06	0.043
40.00	-34.79	-2.05	0.00	-235.16	0.00	235.16	5,482.72	2,741.36	13,034.73	6,527.05	0.29	-0.07	0.042
43.75	-34.21	-2.03	0.00	-227.46	0.00	227.46	5,424.99	2,712.50	12,685.17	6,352.01	0.35	-0.08	0.042
45.00	-31.92	-1.95	0.00	-224.92	0.00	224.92	5,405.52	2,702.76	12,569.11	6,293.89	0.37	-0.08	0.042
50.00	-31.47	-1.94	0.00	-215.17	0.00	215.17	5,326.43	2,663.21	12,107.26	6,062.63	0.46	-0.09	0.041
51.00	-30.57	-1.90	0.00	-213.23	0.00	213.23	4,331.58	2,165.79	9,957.52	4,986.16	0.48	-0.09	0.050
55.00	-29.47	-1.86	0.00	-205.62	0.00	205.62	4,286.21	2,143.11	9,674.28	4,844.33	0.56	-0.10	0.049
60.00	-28.38	-1.83	0.00	-196.30	0.00	196.30	4,227.81	2,113.90	9,321.84	4,667.85	0.67	-0.11	0.049
65.00	-27.33	-1.79	0.00	-187.15	0.00	187.15	4,167.52	2,083.76	8,971.44	4,492.39	0.79	-0.12	0.048
70.00	-26.29	-1.76	0.00	-178.18	0.00	178.18	4,105.35	2,052.68	8,623.38	4,318.10	0.93	-0.14	0.048
75.00	-26.08	-1.76	0.00	-169.37	0.00	169.37	4,041.30	2,020.65	8,277.95	4,145.13	1.08	-0.15	0.047
76.00	-25.27	-1.74	0.00	-167.61	0.00	167.61	4,028.27	2,014.13	8,209.21	4,110.71	1.11	-0.15	0.047
80.00	-24.27	-1.72	0.00	-160.65	0.00	160.65	3,975.37	1,987.69	7,935.46	3,973.63	1.24	-0.16	0.047
85.00	-23.54	-1.71	0.00	-152.05	0.00	152.05	3,907.56	1,953.78	7,596.19	3,803.74	1.41	-0.17	0.046
88.75	-23.10	-1.71	0.00	-145.64	0.00	145.64	3,855.46	1,927.73	7,344.03	3,677.47	1.55	-0.18	0.046
90.00	-21.43	-1.70	0.00	-143.50	0.00	143.50	3,837.86	1,918.93	7,260.44	3,635.61	1.60	-0.19	0.045
94.75	-21.38	-1.70	0.00	-135.42	0.00	135.42	3,812.68	1,906.34	7,142.21	3,576.41	1.80	-0.20	0.043
95.00	-20.44	-1.71	0.00	-135.00	0.00	135.00	3,809.11	1,904.56	7,125.59	3,568.09	1.81	-0.20	0.043
100.00	-19.52	-1.72	0.00	-126.46	0.00	126.46	3,736.78	1,868.39	6,795.28	3,402.69	2.02	-0.21	0.042
105.00	-18.63	-1.75	0.00	-117.83	0.00	117.83	3,662.56	1,831.28	6,469.20	3,239.41	2.25	-0.23	0.041
110.00	-17.80	-1.77	0.00	-109.09	0.00	109.09	3,586.46	1,793.23	6,147.63	3,078.39	2.50	-0.24	0.040
111.00	-17.36	-1.78	0.00	-107.32	0.00	107.32	3,571.01	1,785.51	6,083.89	3,046.47	2.55	-0.24	0.040
113.00	-16.97	-1.79	0.00	-103.76	0.00	103.76	3,539.90	1,769.95	5,956.99	2,982.92	2.65	-0.25	0.040
115.00	-16.80	-1.80	0.00	-100.17	0.00	100.17	3,508.48	1,754.24	5,830.89	2,919.78	2.76	-0.25	0.039
116.00	-16.10	-1.82	0.00	-98.37	0.00	98.37	3,492.66	1,746.33	5,768.14	2,888.36	2.81	-0.26	0.039
120.00	-15.19	-1.85	0.00	-91.09	0.00	91.09	3,428.62	1,714.31	5,519.25	2,763.73	3.03	-0.27	0.037
125.00	-14.55	-1.86	0.00	-81.86	0.00	81.86	3,346.87	1,673.44	5,213.02	2,610.39	3.32	-0.28	0.036
129.00	-14.30	-1.87	0.00	-74.41	0.00	74.41	3,269.48	1,634.74	4,956.00	2,481.68	3.56	-0.29	0.034
130.00	-13.40	-1.88	0.00	-72.55	0.00	72.55	3,247.19	1,623.60	4,888.33	2,447.80	3.62	-0.30	0.034
133.75	-13.26	-1.88	0.00	-65.51	0.00	65.51	1,899.47	949.74	2,843.96	1,424.09	3.86	-0.31	0.053
135.00	-12.70	-1.88	0.00	-63.16	0.00	63.16	1,889.77	944.89	2,804.78	1,404.47	3.94	-0.31	0.052
140.00	-12.16	-1.87	0.00	-53.77	0.00	53.77	1,849.78	924.89	2,648.90	1,326.42	4.27	-0.33	0.047
145.00	-12.05	-1.87	0.00	-44.44	0.00	44.44	1,807.91	903.95	2,494.59	1,249.15	4.62	-0.34	0.042
146.00	-10.54	-1.81	0.00	-42.57	0.00	42.57	1,799.31	899.65	2,463.95	1,233.81	4.70	-0.35	0.040
148.00	-9.73	-1.76	0.00	-38.96	0.00	38.96	1,781.88	890.94	2,402.89	1,203.23	4.84	-0.35	0.038
150.00	-9.25	-1.73	0.00	-35.43	0.00	35.43	1,764.15	882.08	2,342.16	1,172.82	4.99	-0.36	0.035
155.00	-8.96	-1.70	0.00	-26.78	0.00	26.78	1,718.52	859.26	2,191.90	1,097.58	5.37	-0.37	0.030
158.00	-6.56	-1.45	0.00	-21.66	0.00	21.66	1,690.24	845.12	2,102.91	1,053.02	5.61	-0.38	0.024
160.00	-6.12	-1.39	0.00	-18.77	0.00	18.77	1,671.00	835.50	2,044.10	1,023.57	5.77	-0.38	0.022
165.00	-5.86	-1.34	0.00	-11.84	0.00	11.84	1,621.61	810.80	1,899.05	950.94	6.17	-0.39	0.016

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number:OAA751997_C3_03

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Customer: AT&T MOBILITY

168.00	-3.24	-0.86	0.00	-7.82	0.00	7.82	1,591.06	795.53	1,813.47	908.08	6.42	-0.39	0.011
170.00	-2.87	-0.78	0.00	-6.09	0.00	6.09	1,570.33	785.16	1,757.06	879.84	6.59	-0.40	0.009
175.00	-2.65	-0.73	0.00	-2.18	0.00	2.18	1,517.17	758.58	1,618.41	810.41	7.00	-0.40	0.004
178.00	0.00	-0.71	0.00	0.00	0.00	0.00	1,484.37	742.18	1,536.95	769.62	7.25	-0.40	0.000

Site Number: 376046

Code: ANSI/TIA-222-G

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Site Name: MANSFIELD CENTER 1 CT, CT

Engineering Number: OAA751997_C3_03

10/18/2019 9:55:18 AM

Customer: AT&T MOBILITY

Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	38.50	0.00	65.64	0.00	0.00	5006.86	51.00	0.64
0.9D + 1.6W	38.48	0.00	49.22	0.00	0.00	4956.94	51.00	0.63
1.2D + 1.0Di + 1.0Wi	12.84	0.00	105.23	0.00	0.00	1738.78	51.00	0.24
(1.2 + 0.2Sds) * DL + E ELFM	1.64	0.00	65.49	0.00	0.00	237.43	51.00	0.04
(1.2 + 0.2Sds) * DL + E EMAM	2.35	0.00	65.49	0.00	0.00	328.48	133.75	0.06
(0.9 - 0.2Sds) * DL + E ELFM	1.64	0.00	45.75	0.00	0.00	234.58	51.00	0.04
(0.9 - 0.2Sds) * DL + E EMAM	2.35	0.00	45.75	0.00	0.00	324.24	133.75	0.05
1.0D + 1.0W	7.60	0.00	54.74	0.00	0.00	982.47	51.00	0.13



Base Plate & Anchor Rod Analysis

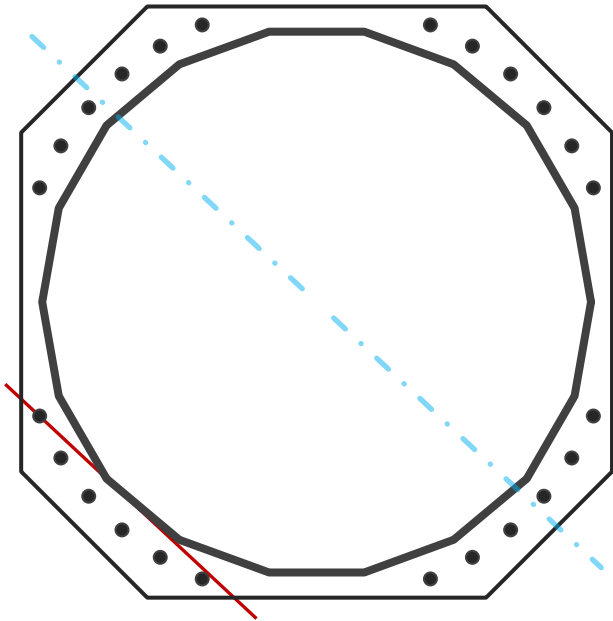
Pole Dimensions		
Number of Sides	18	-
Diameter	68.36	in
Thickness	0.4375	in
Orientation Offset	0	°

Base Reactions		
Moment, Mu	5006.9	k-ft
Axial, Pu	65.6	k
Shear, Vu	38.5	k
Neutral Axis	137	°

Report Capacities		
Component	Capacity	Result
Base Plate	44%	Pass
Anchor Rods	52%	Pass
Dwyidag	-	-

Base Plate		
Shape	Square	-
Width	75	in
Thickness	3	in
Grade	Other	
Yield Strength, Fy	55	ksi
Tensile Strength, Fu	70	ksi
Clip	16	in
Orientation Offset	0	°
Anchor Rod Detail	d	η=0.5
Clear Distance	3	in
Applied Moment, Mu	1824.0	k
Bending Stress, φMn	4171.7	k

Original Anchor Rods		
Arrangement	Cluster	-
Quantity	24	-
Diameter, ø	2 1/4	in
Bolt Circle	76	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	6.0	in
Orientation Offset	0	°
Applied Force, Pu	134.3	k
Anchor Rods, φPn	259.8	k



Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	38.5	5006.9	1.00
Anchor Rod Forces	38.5	5006.9	1.00
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
Stiffener Forces	0.0	0.0	0.00

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in ²	in ²	in ⁴	#	in ⁴
Pole	92.8826	5.1601	0.3303		53569.80
Bolt	3.9761	3.2477	0.8393	4.5	56296.11
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Square	-
Width, W	75	in
Thickness, t	3	in
Yield Strength, Fy	55	ksi
Tensile Strength, Fu	70	ksi
Base Plate Chord	30.853	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

Anchor Rods		
Anchor Rod Quantity, N	24	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	76	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	134.3	k
Applied Shear, Vu	0.1	k
Compressive Capacity, ϕP_n	259.8	k
Tensile Capacity, ϕR_{nt}	0.517	OK
Interaction Capacity	0.518	OK

External Base Plate		
Chord Length AA	37.456	in
Additional AA	0.000	in
Section Modulus, Z	84.276	in ³
Applied Moment, Mu	1824.0	k-ft
Bending Capacity, ϕM_n	4171.7	k-ft
Capacity, $M_u/\phi M_n$	0.437	OK

Chord Length AB	36.398	in
Additional AB	0.000	in
Section Modulus, Z	81.895	in ³
Applied Moment, Mu	1447.6	k-ft
Bending Capacity, ϕM_n	4053.8	k-ft
Capacity, $M_u/\phi M_n$	0.357	OK

Bend Line Length	0.000	in
Additional Bend Line	0.000	in
Section Modulus, Z	0.000	in ³
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕM_n	0.0	k-ft
Capacity, $M_u/\phi M_n$		

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in ³
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, ϕM_n	0.0	k-ft
Capacity, $M_u/\phi M_n$		



Non-Ionizing Radiation Report

Compiled For: Smartlink on behalf of AT&T

Site Name: Mansfield

Site FA: 10071107

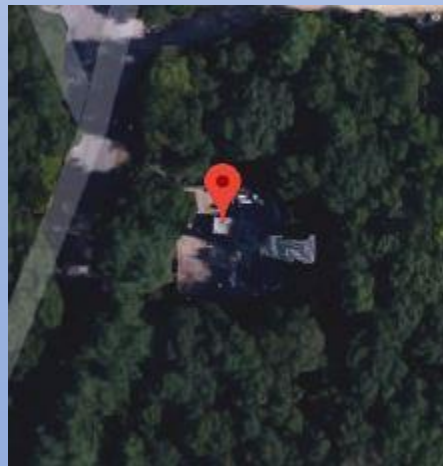
Site ID: CTL05858

230 Clover Mill Road, Mansfield, CT 06268

Latitude: 41.77583 Longitude: -72.22255

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 Mansfield located at 230 Clover Mill Road in Mansfield, 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.**

All Carriers, All Bands Cumulative Exposure %		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0198
	% Exposure	2.63%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0198
	% Exposure	0.53%

2. Site Summary:

Site Information	
Site Name: Mansfield	
Site Address: 230 Clover Mill Road, Mansfield, CT 06268	
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)
1	Alpha	AT&T	Powerwave	7770	850	168	1242
2a	Alpha	AT&T	CCI	DMP65R-BU6DA	700	168	2951
2b	Alpha	AT&T	CCI	DMP65R-BU6DA	1900	168	3664
3a	Alpha	AT&T	Commscope	NNH-65C-R2B	700	168	1476
3b	Alpha	AT&T	Commscope	NNH-65C-R2B	2100	168	3837
3c	Alpha	AT&T	Commscope	NNH-65C-R2B	850	168	1000
3d	Alpha	AT&T	Commscope	NNH-65C-R2B	850	168	1000
4	Beta	AT&T	Powerwave	7770	850	168	1242
5a	Beta	AT&T	CCI	DMP65R-BU6DA	700	168	2951
5b	Beta	AT&T	CCI	DMP65R-BU6DA	1900	168	3664
6a	Beta	AT&T	Commscope	NNH-65C-R2B	700	168	1476
6b	Beta	AT&T	Commscope	NNH-65C-R2B	2100	168	3837
6c	Beta	AT&T	Commscope	NNH-65C-R2B	850	168	1000
6d	Beta	AT&T	Commscope	NNH-65C-R2B	850	168	1000
7	Gamma	AT&T	Powerwave	7770	850	168	1242
8a	Gamma	AT&T	CCI	DMP65R-BU6DA	700	168	2951
8b	Gamma	AT&T	CCI	DMP65R-BU6DA	1900	168	3664
9a	Gamma	AT&T	Commscope	NNH-65C-R2B	700	168	1476
9b	Gamma	AT&T	Commscope	NNH-65C-R2B	2100	168	3837
9c	Gamma	AT&T	Commscope	NNH-65C-R2B	850	168	1000
9d	Gamma	AT&T	Commscope	NNH-65C-R2B	850	168	1000
10	Omni	City of Mansfield	Generic	Dipole	450	178	100
11	Omni	City of Mansfield	Generic	Dipole	450	178	100
12	Omni	City of Mansfield	Generic	Dipole	450	178	100
13	Omni	City of Mansfield	Generic	Dipole	450	178	100

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
14	Alpha	Verizon Wireless	Commscope	NNH-65C-R2B	700	178	1516
15	Alpha	Verizon Wireless	Commscope	NNH-65C-R2B	2100	178	2039
16	Alpha	Verizon Wireless	Commscope	NNH-65C-R2B	1900	178	1839
17	Alpha	Verizon Wireless	Commscope	NNH-65C-R2B	850	178	1513
18	Beta	Verizon Wireless	Commscope	NNH-65C-R2B	700	178	1516
19	Beta	Verizon Wireless	Commscope	NNH-65C-R2B	2100	178	2039
20	Beta	Verizon Wireless	Commscope	NNH-65C-R2B	1900	178	1839
21	Beta	Verizon Wireless	Commscope	NNH-65C-R2B	850	178	1513
22	Gamma	Verizon Wireless	Commscope	NNH-65C-R2B	700	178	1516
23	Gamma	Verizon Wireless	Commscope	NNH-65C-R2B	2100	178	2039
24	Gamma	Verizon Wireless	Commscope	NNH-65C-R2B	1900	178	1839
25	Gamma	Verizon Wireless	Commscope	NNH-65C-R2B	850	178	1513
26	Alpha	Sprint	RFS	APXVAARR18_N43-U-NA20	1900	158	1683
27a	Alpha	Sprint	Commscope	DT465B-2XR-V2	850	158	1826
27b	Alpha	Sprint	Commscope	DT465B-2XR-V2	2500	158	1937
28	Beta	Sprint	RFS	APXVAARR18_N43-U-NA20	1900	158	1683
29a	Beta	Sprint	Commscope	DT465B-2XR-V2	850	158	1826
29b	Beta	Sprint	Commscope	DT465B-2XR-V2	2500	158	1937
30	Gamma	Sprint	RFS	APXVAARR18_N43-U-NA20	1900	158	1683
31a	Gamma	Sprint	Commscope	DT465B-2XR-V2	850	158	1826
31b	Gamma	Sprint	Commscope	DT465B-2XR-V2	2500	158	1937
32	Alpha	T-Mobile	RFS	APX16PV-16PVL-E	1900	148	2340
33	Alpha	T-Mobile	RFS	APX16PV-16PVL-E	2100	148	2273
34	Beta	T-Mobile	RFS	APX16PV-16PVL-E	1900	148	2340
35	Beta	T-Mobile	RFS	APX16PV-16PVL-E	2100	148	2273
36	Gamma	T-Mobile	RFS	APX16PV-16PVL-E	1900	148	2340
37	Gamma	T-Mobile	RFS	APX16PV-16PVL-E	2100	148	2273

Ant ID	Sector	Operator	Antenna manufacturer	Antenna Model	Operating Frequency	Rad Ctr (Ft)	Total ERP Power (Watts)
38	Omni	City of Mansfield	Generic	Dipole	450	110	100
39	Omni	City of Mansfield	Generic	Dipole	450	110	100
40	Omni	City of Mansfield	Generic	Dipole	450	110	100
41	Omni	City of Mansfield	Generic	Dipole	450	110	100

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)	0.0026
	% Exposure	0.52%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.3
	Exposure values at the site (mW/cm ²)	0.0026
	% Exposure	0.11%

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)	0.0006
	% Exposure	0.10%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.8
	Exposure values at the site (mW/cm ²)	0.0006
	% Exposure	0.02%

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)	0.0007
	% Exposure	0.12%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.8
	Exposure values at the site (mW/cm ²)	0.0007
	% 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)	0.0006
	% Exposure	0.10%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	2.8
	Exposure values at the site (mW/cm ²)	0.0006
	% Exposure	0.02%

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)	0.0021
	% Exposure	0.21%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0021
	% Exposure	0.04%

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)	0.0023
	% Exposure	0.23%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0023
	% Exposure	0.05%

Attachment 2: T-Mobile Exposure Analysis

T-Mobile 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0017
	% Exposure	0.17%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0017
	% 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)	0.0017
	% Exposure	0.17%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0017
	% Exposure	0.03%

Attachment 3: 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)	0.0010
	% 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%

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)	0.0011
	% Exposure	0.11%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0011
	% Exposure	0.02%

Attachment 4: 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)	0.0012
	% Exposure	0.20%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0012
	% Exposure	0.0241%

Sprint 1900 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0011
	% Exposure	0.11%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	5.0
	Exposure values at the site (mW/cm ²)	0.0011
	% Exposure	0.0222%

Sprint 2500 MHz LTE		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	1.0
	Exposure values at the site (mW/cm ²)	0.0013
	% 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	0.0255%

Attachment 5: City of Mansfield Exposure Analysis

City of Mansfield 450 MHz UHF		
Uncontrolled / General Population	FCC's exposure limits (mW/cm ²)	0.3
	Exposure values at the site (mW/cm ²)	0.000239
	% Exposure	0.08%
Controlled / Occupational	FCC's Exposure limits(mW/cm ²)	1.5
	Exposure values at the site (mW/cm ²)	0.000239
	% Exposure	0.0159%

Attachment 6: Combined Exposure Analysis for each Carrier

AT&T All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0089
	% Exposure	1.28%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0089
	% Exposure	0.27%

T-Mobile All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0034
	% Exposure	0.34%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0034
	% Exposure	0.07%

Verizon Wireless All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0036
	% Exposure	0.50%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0036
	% Exposure	0.10%

Sprint All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.0036
	% Exposure	0.44%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.0036
	% Exposure	0.07%

City of Mansfield All Bands		
Uncontrolled / General Population	Exposure values at the site (mW/cm ²)	0.000239
	% Exposure	0.080%
Controlled / Occupational	Exposure values at the site (mW/cm ²)	0.000239
	% Exposure	0.0159%

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 ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

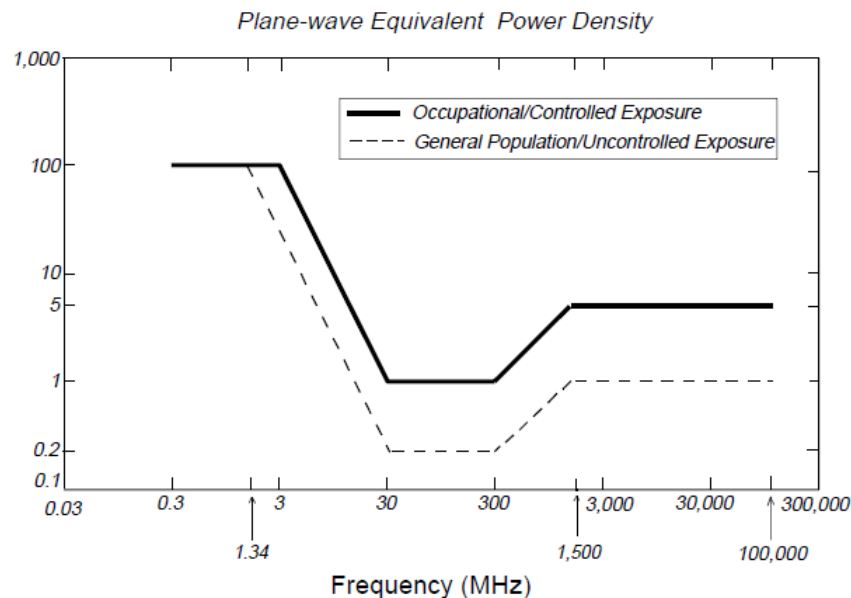
(B) Limits for General Population/Uncontrolled Exposure

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 ²)*	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)



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.

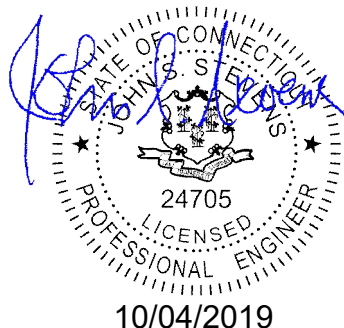
I certify that the information contained in this report is true and correct to the best of my knowledge.

Timothy A. Harris

10/4/2019

Signature

Date



Kristina Cottone

From: TrackingUpdates@fedex.com
Sent: Thursday, October 24, 2019 9:39 AM
To: Kristina Cottone
Subject: FedEx Shipment 776735409543 Delivered

Your package has been delivered

Tracking # 776735409543

Ship date:
Wed, 10/23/2019

Kristina Cottone
Smartlink LLC
NORTH BILLERICA, MA 01862
US



Delivered

Delivery date:
Thu, 10/24/2019 9:38 am

Paul Shapiro- Mayor
PAUL SHAPIRO- MAYOR
4 S EAGLEVILLE RD
STORRS MANSFIELD, CT
06268257404
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: [776735409543](#)

Status: Delivered: 10/24/2019 09:38 AM
Signed for By: Signature on File

Reference: CTL05858 Storrs Mansfield

Signed for by: Signature on File

Service type: FedEx Ground

Packaging type: Package

Number of pieces: 1

Weight: 1.00 lb.

Standard transit: 10/24/2019

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 8:39 AM CDT on 10/24/2019.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Kristina Cottone

From: TrackingUpdates@fedex.com
Sent: Thursday, October 24, 2019 9:36 AM
To: Kristina Cottone
Subject: FedEx Shipment 776735379124 Delivered

Your package has been delivered

Tracking # 776735379124

Ship date:

Wed, 10/23/2019

Kristina Cottone

Smartlink LLC

NORTH BILLERICA, MA 01862

US

Delivery date:

Thu, 10/24/2019 9:34 am

Michael Nintean- Building

Director

MICHAEL NINTEAU-

BUILDING DIRECTOR

4 S EAGLEVILLE RD

STORRS MANSFIELD, CT

06268257404

US

Delivered

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: [776735379124](#)

Status: Delivered: 10/24/2019 09:34 AM
Signed for By: Signature on File

Reference: CTL05858 Storrs Mansfield

Signed for by: Signature on File


Service type: FedEx Ground

Packaging type: Package

Number of pieces: 1

Weight: 1.00 lb.

Standard transit: 10/24/2019

 Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 8:35 AM CDT on 10/24/2019.

All weights are estimated.

Kristina Cottone

From: TrackingUpdates@fedex.com
Sent: Thursday, October 24, 2019 9:43 AM
To: Kristina Cottone
Subject: FedEx Shipment 776759248830 Delivered

Your package has been delivered

Tracking # 776759248830

Ship date:

Wed, 10/23/2019

Kristina Cottone

Smartlink LLC

NORTH BILLERICA, MA 01862

US

Delivery date:

Thu, 10/24/2019 9:38 am

**Town of Mansfield Board of
Educatio**

TOWN OF MANSFIELD
BOARD OF EDUCATIO
4 S EAGLEVILLE RD
STORRS MANSFIELD, CT
06268257404
US



Delivered

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: [776759248830](#)

Status: Delivered: 10/24/2019 09:38 AM
Signed for By: CQUINN

Reference: CTL05858 Storrs Mansfield

Signed for by: CQUINN


Service type: FedEx Ground

Packaging type: Package

Number of pieces: 1

Weight: 1.00 lb.

Standard transit: 10/24/2019

 Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 8:42 AM CDT on 10/24/2019.

All weights are estimated.

Kristina Cottone

From: TrackingUpdates@fedex.com
Sent: Thursday, October 24, 2019 11:12 AM
To: Kristina Cottone
Subject: FedEx Shipment 776735443891 Delivered

Your package has been delivered

Tracking # 776735443891

Ship date:
Wed, 10/23/2019

Kristina Cottone
Smartlink LLC
NORTH BILLERICA, MA 01862
US



Delivered

Delivery date:
Thu, 10/24/2019 11:09 am

ATTN: Ryan Tierney
AMERICAN TOWER
CORPORATION
10 PRESIDENTIAL WAY
WOBURN, MA 01801105399
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: [776735443891](#)

Status: Delivered: 10/24/2019 11:09 AM
Signed for By: IANCRI

Reference: CTL05858 Storrs Mansfield

Signed for by: IANCRI

Delivery location: Woburn, MA


Service type: FedEx Ground

Packaging type: Package

Number of pieces: 1

Weight: 1.00 lb.

Standard transit: 10/24/2019

 Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 10:11 AM CDT on 10/24/2019.

All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

SHEET INDEX

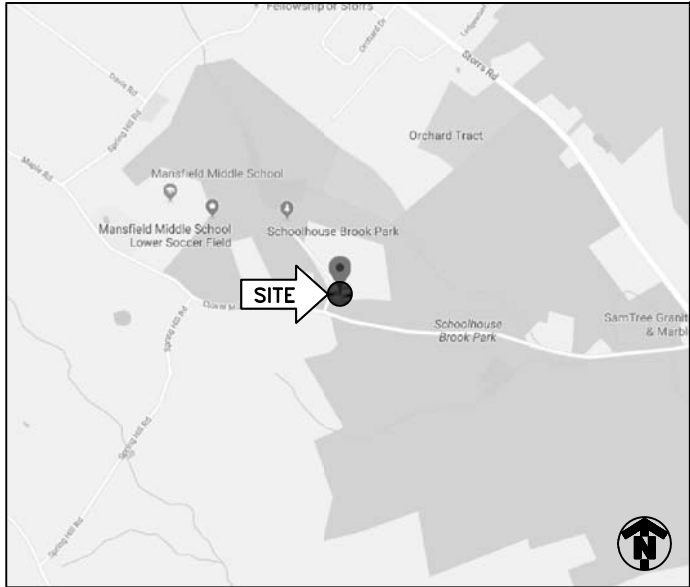
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T1	TITLE SHEET
C1	GENERAL NOTES
C2	OVERALL SITE PLAN
C2A	ENLARGED SITE PLAN
C3	ELEVATION VIEW
C4	ANTENNA ORIENTATION PLAN
C5	EQUIPMENT DETAILS
C5A	EQUIPMENT DETAILS
C6	PLUMBING DIAGRAM
C7	GROUNDING DETAILS

DRIVING DIRECTIONS

FROM 550 COCHITUATE RD.:

GET ON I-90 WEST/MASSACHUSETTS TURNPIKE. HEAD NORTHEAST TOWARD LEGGATT MCCALL COON. 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-84 TO CT-89 SOUTH IN UNION. TAKE EXIT 72 FROM I-84. MERGE ONTO I-90 WEST/MASSACHUSETTS TURNPIKE. USE THE RIGHT 2 LANES TO TAKE EXIT 9 FOR I-84 TOWARD US-20/HARTFORD/NEW YORK CITY. CONTINUE ONTO I-84. TAKE EXIT 72 FOR CT-89 TOWARD WESTFORD/ASHFORD. FOLLOW CT-89 SOUTH TO YOUR DESTINATION IN MANSFIELD. TURN LEFT ONTO CT-89 SOUTH. TURN LEFT TO STAY ON CT-89 SOUTH. TURN RIGHT TO STAY ON CT-89 SOUTH. TURN RIGHT ONTO CT-195 NORTH/STORRS ROAD. TURN LEFT ONTO CLOVER MILL ROAD. TURN LEFT TO STAY ON CLOVER MILL ROAD. TURN RIGHT.

LOCATION MAP





at&t

PROJECT

LTE 2C/3C/4C/5C/RETROFIT

SITE NAME

MANSFIELD CENTRAL-CLOVER MILL

CELL SITE ID

CTL05858

FA SITE NUMBER

10071107

PAGE ID



MRCTB042121/MRCTB025463/MRCTB025562
MRCTB042123/MRCTB042119

SITE ADDRESS

230 CLOVER MILL ROAD
STORRS MANSFIELD, CT 06268

STRUCTURE TYPE

MONOPOLE

PROJECT TEAM	
 <h2>smartlink</h2> <p>PROJECT MANAGER</p>	 <h2>INFINIGY</h2> <p>1033 Watervliet Shaker Rd Albany, NY 12205 Office # (518) 690-0790 Fax # (518) 690-0793</p> <p>ENGINEER</p>

SCOPE OF WORK (PER LTE RFDS, DATED 09/05/2019 V2.00):	
<ul style="list-style-type: none">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.	<p>TOWER</p> <ul style="list-style-type: none">REMOVE (3) PANEL ANTENNASINSTALL (6) PANEL ANTENNASREMOVE (3) RRUS-11 B12INSTALL (3) B14 4478INSTALL (3) 4449 B5/B12INSTALL (3) 8843 B2/B66AINSTALL (2) DC6 SQUID WITH (1) FIBER AND (4) DC CABLESINSTALL PLATFORM MOUNT <p>GROUND</p> <ul style="list-style-type: none">SWAP BB WITH 6630ADD XMUADD 2ND 6630ADD IDLe CABLE


PROJECT SUMMARY	
SITE NAME:	MANSFIELD CENTRAL-CLOVER MILL
CELL SITE ID:	CTL05858
FA SITE #:	10071107
SITE ADDRESS:	230 CLOVER MILL ROAD STORRS MANSFIELD, CT 06268
COUNTY:	TOLLAND
SITE COORDINATES:	
LATITUDE:	41.7756919° N (NAD 83)
LONGITUDE:	72.2225989° W (NAD 83)
RAD CENTER	±168' (AGL)
LANDLORD:	AMERICAN TOWER CORPORATION
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)




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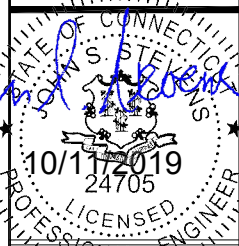
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0	ISSUED FOR REVIEW	BMM	10/02/19		
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GENERAL NOTES			
<p><u>PART 1 – GENERAL REQUIREMENTS</u></p> <p>1.1 THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:</p> <p>A. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION</p> <p>B. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.</p> <p>C. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE – "NEC").</p> <p>D. AND NFPA 101 (LIFE SAFETY CODE).</p> <p>E. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM).</p> <p>F. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE).</p>		<p>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.</p> <p>A. CONTRACTOR SHALL PROCURE ALL OTHER REQUIRED WORK RELATED MATERIALS NOT PROVIDED BY AT&T TO SUCCESSFULLY CONSTRUCT A WIRELESS FACILITY.</p> <p>2.5 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.</p> <p>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.</p>	
<p>1.2 DEFINITIONS:</p> <p>A: WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.</p> <p>B: COMPANY: AT&T CORPORATION</p> <p>C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.</p> <p>D: CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.</p> <p>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.</p>		<p><u>PART 3 – RECEIPT OF MATERIAL & EQUIPMENT</u></p> <p>3.1 RECEIPT OF MATERIAL AND EQUIPMENT: CONTRACTOR IS RESPONSIBLE FOR AT&T PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:</p> <p>A. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.</p> <p>B. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.</p> <p>C. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.</p> <p>D. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO AT&T OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.</p> <p>E. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.</p> <p>F. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.</p>	
<p>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.</p>		<p><u>PART 4 – GENERAL REQUIREMENTS FOR CONSTRUCTION</u></p> <p>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.</p>	
<p>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.</p>		<p>4.2 EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.</p>	
<p>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.</p> <p>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.</p>		<p>4.3 CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.</p> <p>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.</p> <p>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.</p>	
<p>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.</p>		<p>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.</p>	
<p>1.7 NOTICE TO PROCEED:</p> <p>A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED.</p> <p>B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE AT&T WITH AN OPERATIONAL WIRELESS FACILITY.</p>		<p>4.5 CONDUCT TESTING AS REQUIRED HEREIN.</p>	
<p><u>PART 2 – EXECUTION</u></p>			
<p>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.</p>		<p><u>PART 5 – TESTS AND INSPECTIONS</u></p> <p>5.1 TESTS AND INSPECTIONS:</p> <p>A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.</p> <p>B. CONTRACTOR SHALL COORDINATE TEST AND INSPECTION SCHEDULES WITH COMPANY'S REPRESENTATIVE WHO MUST BE ON SITE TO WITNESS SUCH TESTS AND INSPECTIONS.</p> <p>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.</p> <p>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.</p> <p>E. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.</p>	
<p>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.</p>		<p>F. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.</p> <p>G. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.</p>	
<p><u>PART 6 – TRENCHING AND BACKFILLING</u></p> <p>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.</p> <p>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.</p> <p>B. HAND DIGGING: UNLESS APPROVED IN WRITING OTHERWISE, ALL DIGGING WITHIN AN EXISTING CELL SITE COMPOUND IS TO BE DONE BY HAND.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>			
<p>SYMBOL DESCRIPTION</p> <p>⌋ CIRCUIT BREAKER</p> <p>⌋ NON-FUSIBLE DISCONNECT SWITCH</p> <p>⌋ FUSIBLE DISCONNECT SWITCH</p> <p>⌋ SURFACE MOUNTED PANEL BOARD</p> <p>⌋ TRANSFORMER</p> <p>⌋ KILOWATT HOUR METER</p> <p>⌋ JUNCTION BOX</p> <p>⌋ PULL BOX TO NEC/TELCO STANDARDS</p> <p>----- UNDERGROUND UTILITIES</p> <p>● EXOTHERMIC WELD CONNECTION</p> <p>■ MECHANICAL CONNECTION</p> <p>⌋ OR ⌋ GROUND ROD</p> <p>⌋ OR ⌋ GROUND ROD WITH INSPECTION SLEEVE</p> <p>⌋ GROUND BAR</p> <p>⌋ 120AC DUPLEX RECEPTACLE</p> <p>— G — GROUND CONDUCTOR</p> <p>— — — — — DC POWER AND FIBER OPTIC TRUNK CABLES</p> <p>— — — — — DC POWER CABLES</p> <p>⌋ REPRESENTS DETAIL NUMBER</p> <p>⌋ REF. DRAWING NUMBER</p>			
<p>ABBREVIATIONS</p>			
<p>CIGBE COAX ISOLATED GROUND BAR EXTERNAL</p> <p>MIGB MASTER ISOLATED GROUND BAR</p> <p>SST SELF SUPPORTING TOWER</p> <p>GPS GLOBAL POSITIONING SYSTEM</p> <p>TYP. TYPICAL</p> <p>DWG. DRAWING</p> <p>BCW BARE COPPER WIRE</p> <p>BFG BELOW FINISH GRADE</p> <p>PVC POLYVINYL CHLORIDE</p> <p>CAB CABINET</p> <p>C CONDUIT</p> <p>SS STAINLESS STEEL</p> <p>G GROUND</p> <p>AWG AMERICAN WIRE GAUGE</p> <p>RGS RIGID GALVANIZED STEEL</p> <p>AHJ AUTHORITY HAVING JURISDICTION</p> <p>TTLNA TOWER TOP LOW NOISE AMPLIFIER</p> <p>UNO UNLESS NOTED OTHERWISE</p> <p>EMT ELECTRICAL METALLIC TUBING</p> <p>AGL ABOVE GROUND LEVEL</p>			

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Prepared For: smartlink			


Drawing Scale: AS NOTED

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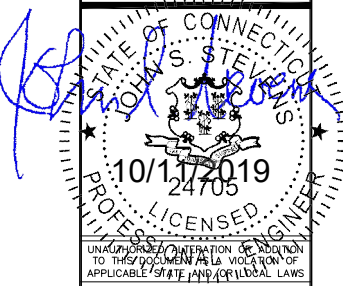
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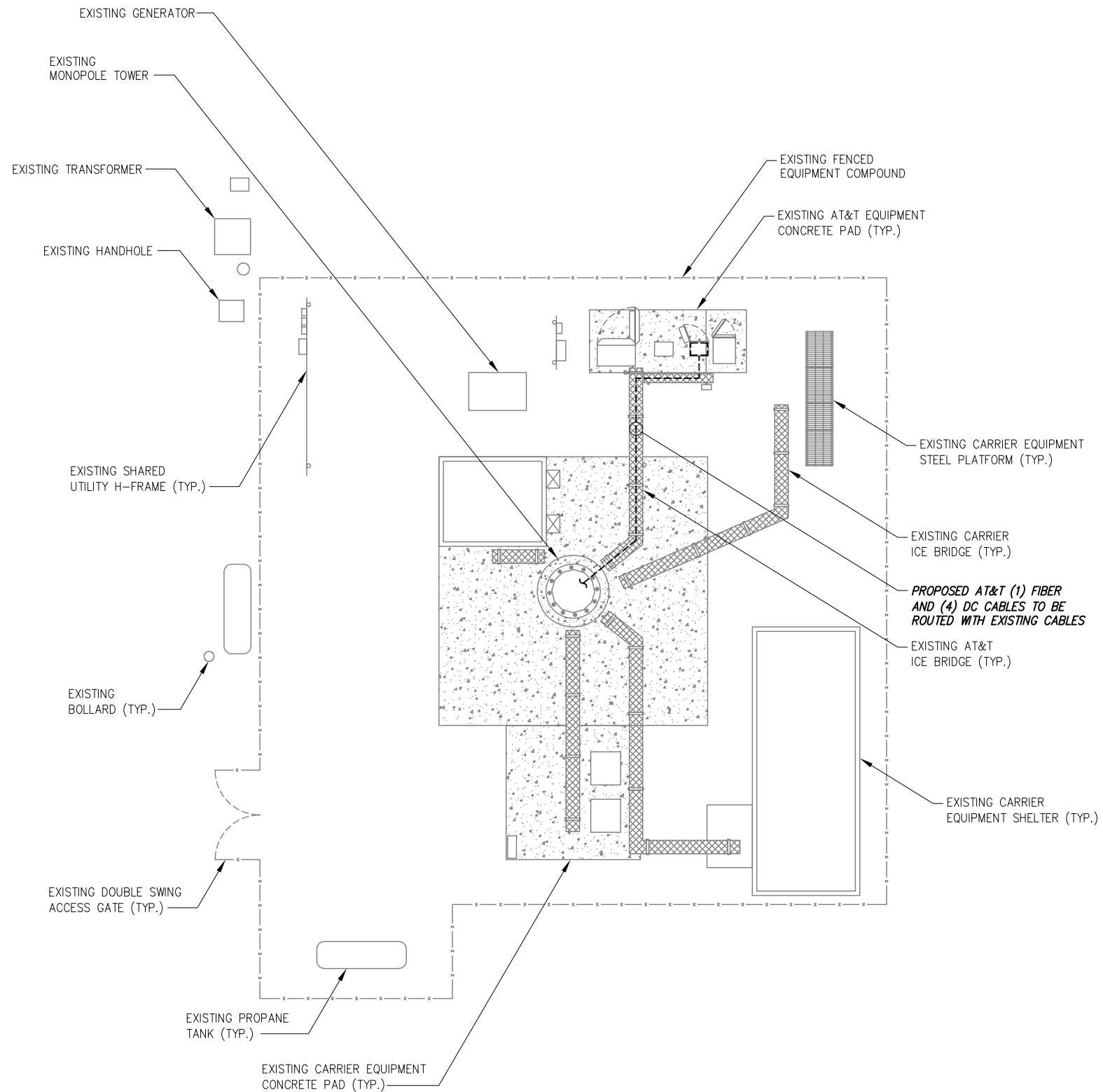


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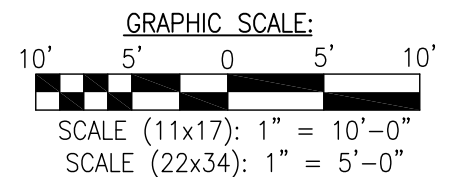


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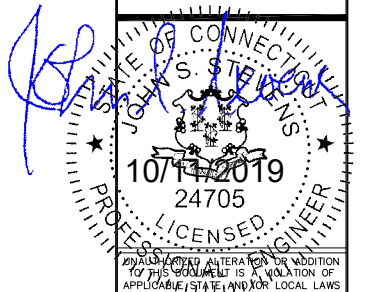
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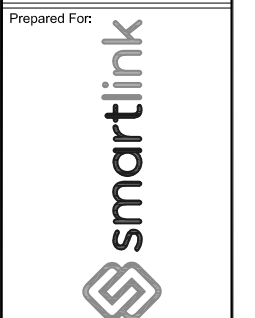


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-CLOVER MILL**

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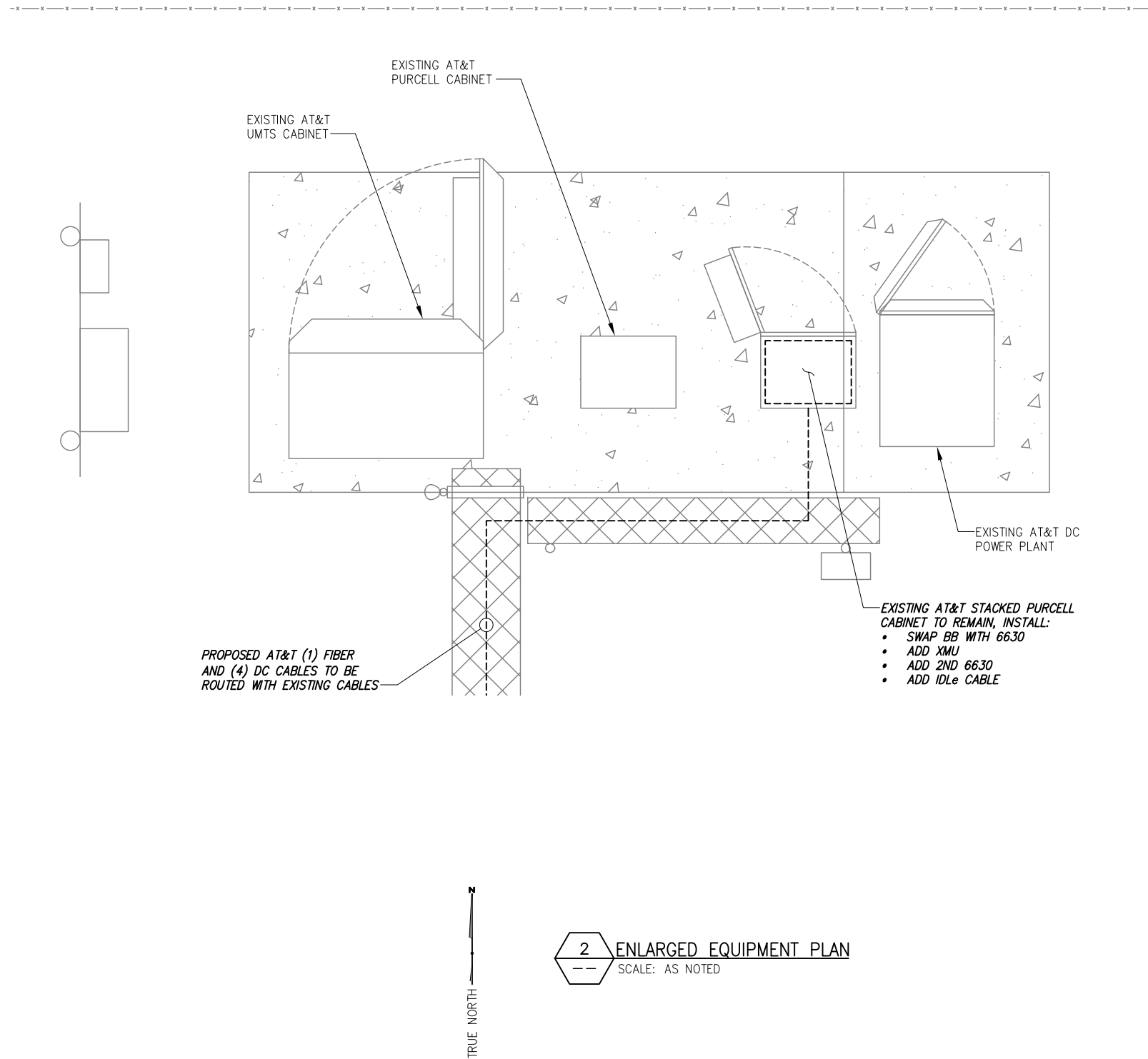
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Date:
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Drawing Title
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SITE PLAN**

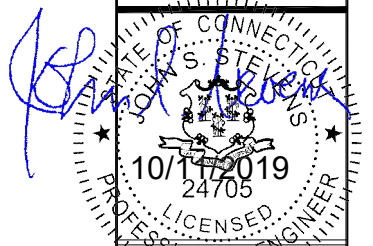
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Prepared For:
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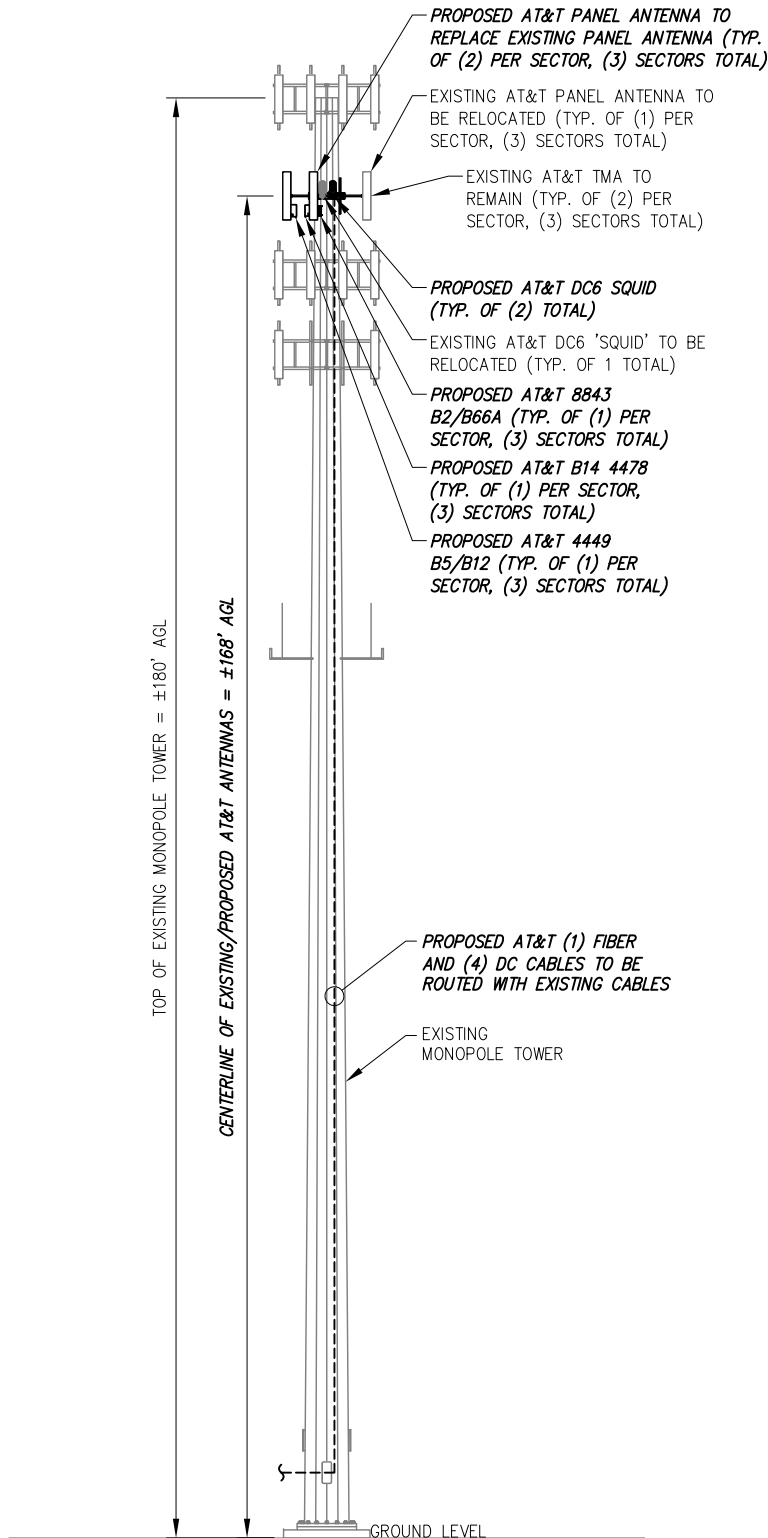
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Drawing Title
ENLARGED
SITE PLAN

Drawing Number
C2A

NOTE:
• INFINIGY ENGINEERING HAS NOT EVALUATED THE TOWER LOADING FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY REGARDING ITS EXISTING OR PROPOSED LOADING. FINAL INSTALLATION TO COMPLY STRUCTURAL ANALYSIS.
• FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNT, SEE "MOUNT ANALYSIS REPORT" COMPLETED BY INFINIGY, DATED 10/02/19.

NOTE:
• 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
• 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS



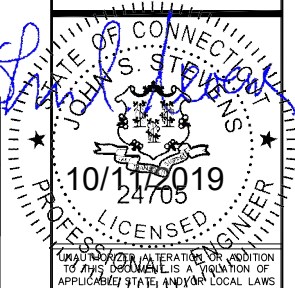
1 ELEVATION VIEW
-- NOT TO SCALE

FINAL ANTENNA CONFIGURATION & CABLE SCHEDULE BASED ON LTE RFDS DATED 09/05/19, V 2.00										
SECTOR	ANTENNA POSITION	ANTENNA STATUS & TECHNOLOGY	ANTENNA MANF/MODEL	TMA/DIPLEXER	RRUS	AZIMUTH	ANTENNA CL HEIGHT	CABLE FEEDER		RAYCAP UNIT
								TYPE	LENGTH	
ALPHA	A-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) LGP21401	--	90°	±168'	(2) (E) 1-5/8" COAX CABLES	±200'	(1) (E) DC6 'SQUID' (2) (P) DC6 'SQUID'
	A-2	--	--	--	--	--	--	(2) (E) 1-5/8" COAX CABLES	--	
	A-3	(P) LTE 700/1900	CCI DMP65R-BU6DA	--	(1) (P) B14 4478 (1) (P) 8843 B2/B66A	90°	±168'	(1) (E) FIBER CABLE (2) (E) DC CABLES	--	
	A-4	(P) LTE 700/850/AWS/5G 850	ANDREW NNH4-65B-R6	--	(1) (P) 4449 B5/B12	90°	±168'	SEE A-3 FOR CABLE INFORMATION	--	
BETA	B-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) LGP21401	--	210°	±168'	(2) (E) 1-5/8" COAX CABLES	±200'	
	B-2	--	--	--	--	--	--	(2) (E) 1-5/8" COAX CABLES	--	
	B-3	(P) LTE 700/1900	CCI DMP65R-BU6DA	--	(1) (P) B14 4478 (1) (P) 8843 B2/B66A	210°	±168'	(1) (P) FIBER CABLE (3) (P) DC CABLES	--	
	B-4	(P) LTE 700/850/AWS/5G 850	ANDREW NNH4-65B-R6	--	(1) (P) 4449 B5/B12	210°	±168'	SEE A-3 FOR CABLE INFORMATION	--	
GAMMA	G-1	(E) UMTS 850	POWERWAVE 7770	(2) (E) LGP21401	--	330°	±168'	(2) (E) 1-5/8" COAX CABLES	±200'	
	G-2	--	--	--	--	--	--	(2) (E) 1-5/8" COAX CABLES	--	
	G-3	(P) LTE 700/1900	CCI DMP65R-BU6DA	--	(1) (P) B14 4478 (1) (P) 8843 B2/B66A	330°	±168'	SEE A-3 FOR CABLE INFORMATION	--	
	G-4	(P) LTE 700/850/AWS/5G 850	ANDREW NNH4-65B-R6	--	(1) (P) 4449 B5/B12	330°	±168'	SEE A-3 FOR CABLE INFORMATION	--	

2 AT&T ANTENNA SCHEDULE
-- NOT TO SCALE

INFINIGY

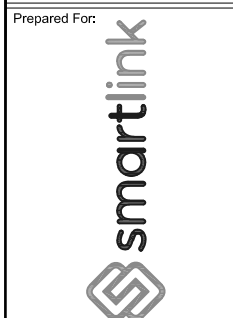
INFINIGY ENGINEERING, PLLC
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793



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Drawn:	BMM	Date:	10/02/19
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Checked:	AD	Date:	10/02/19
Project Number:			
499-006			

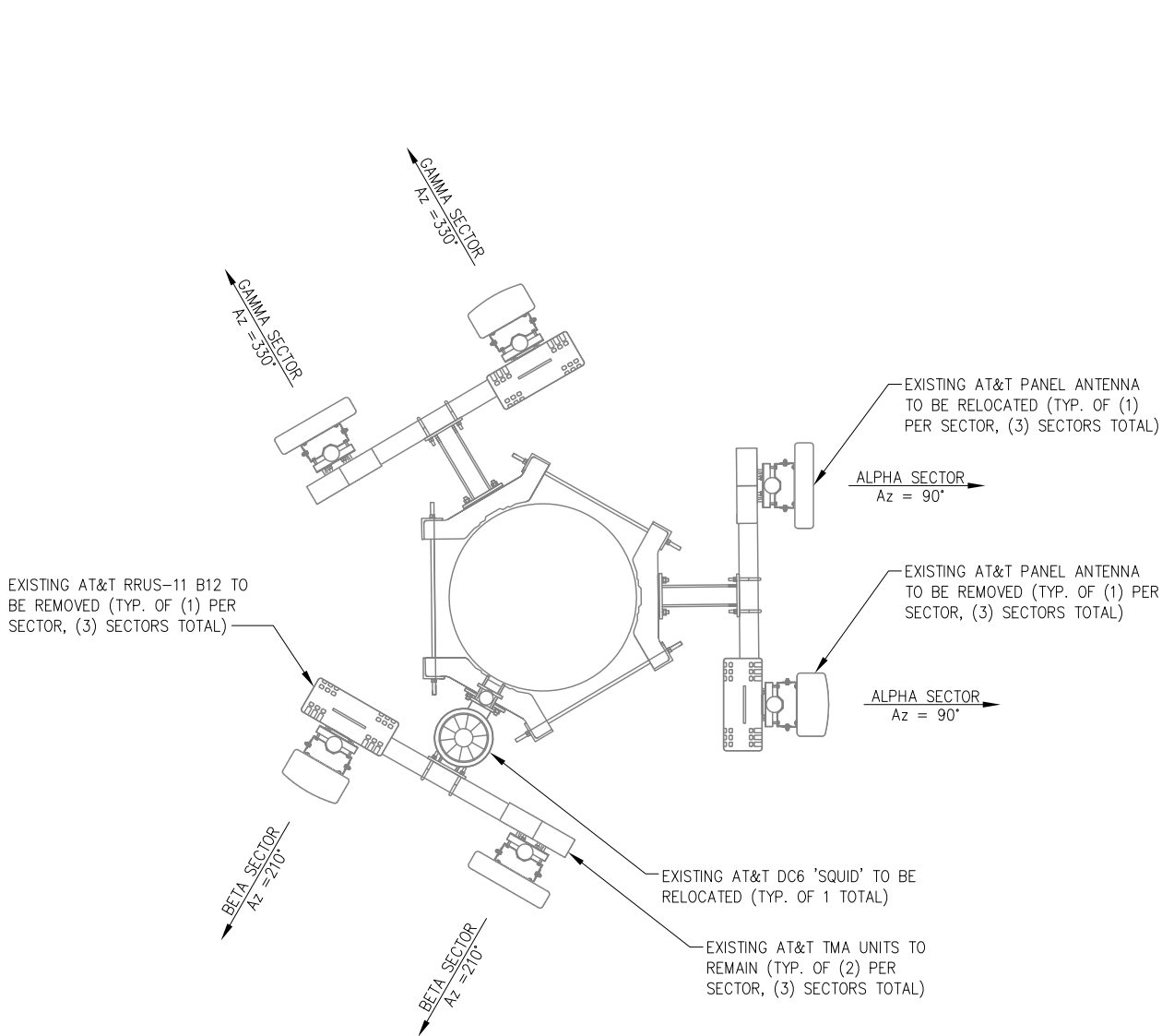
Project Title:
MANSFIELD CENTRAL
-CLOVER MILL
CTL05858
FA# 10071107
230 CLOVER MILL ROAD
STORRS MANSFIELD, CT 06268



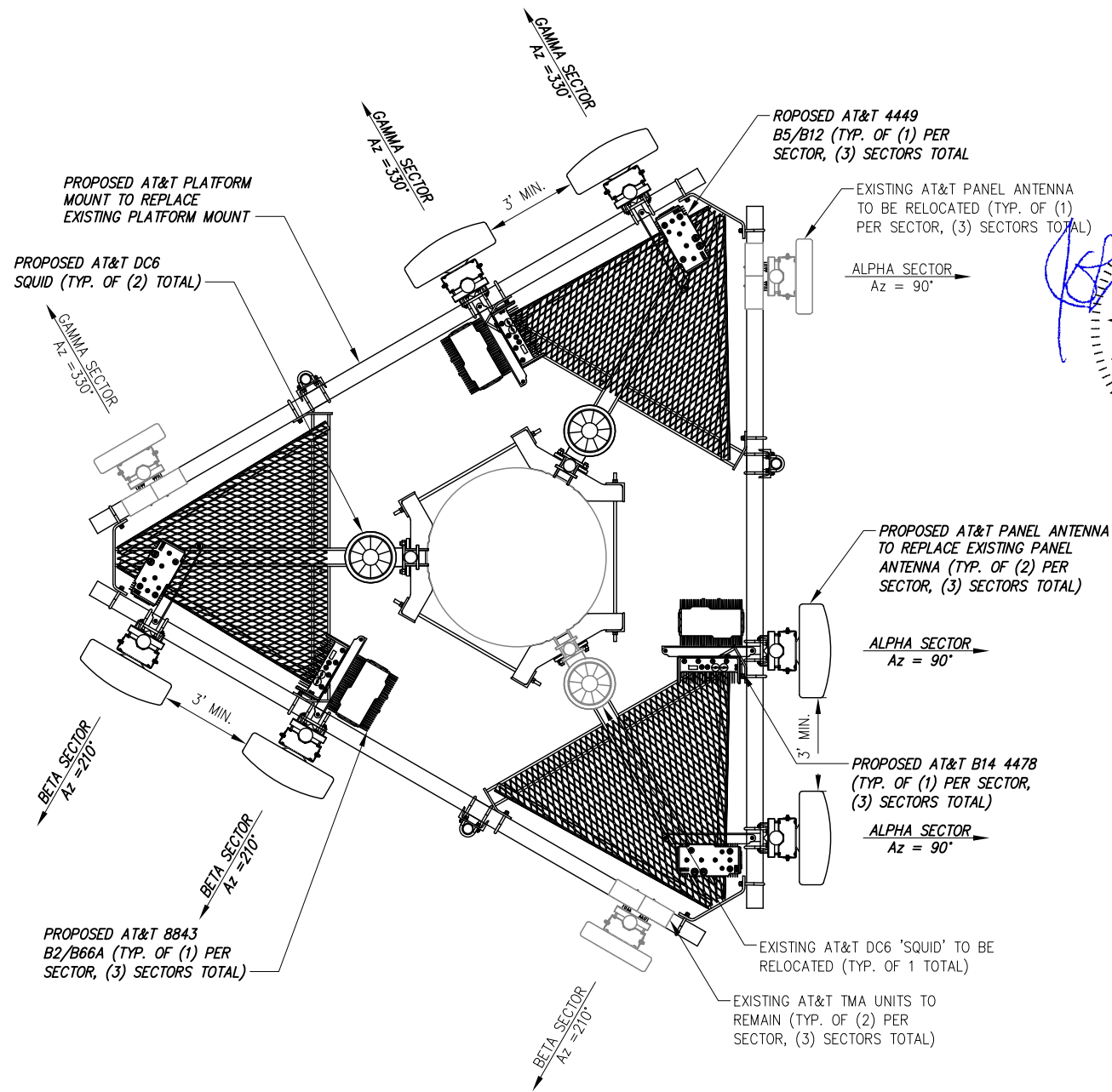
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Date:	10/11/19	

Drawing Title
**ELEVATION
VIEW**

Drawing Number
C3



1 EXISTING ANTENNA ORIENTATION PLAN
-- NOT TO SCALE



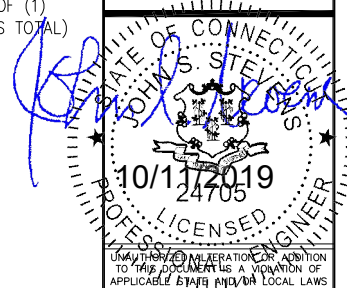
2 PROPOSED ANTENNA ORIENTATION PLAN
-- NOT TO SCALE

NOTE:
• 3' MINIMUM SEPARATION BETWEEN ALL LTE ANTENNAS
• 6' MINIMUM SEPARATION BETWEEN 700 BC/700 DE ANTENNAS

NOTE:
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• FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNT, SEE "MOUNT ANALYSIS REPORT" COMPLETED BY INFINIGY, DATED 10/02/19.

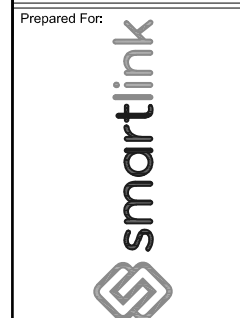
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499-006			

Project Title:
MANSFIELD CENTRAL
-CLOVER MILL
CTL05858
FA# 10071107
230 CLOVER MILL ROAD
STORRS MANSFIELD, CT 06268

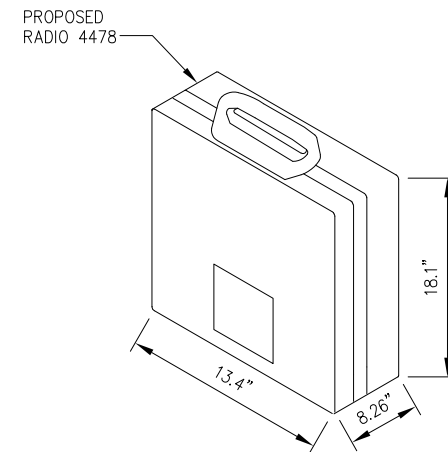
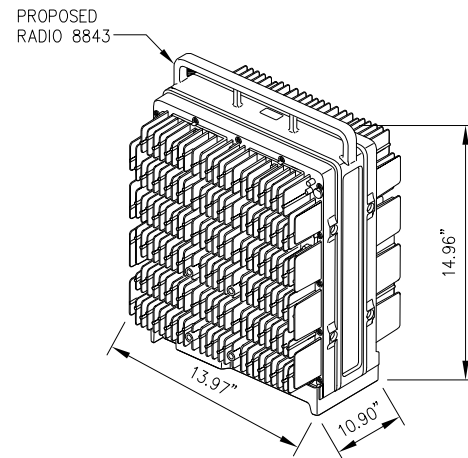
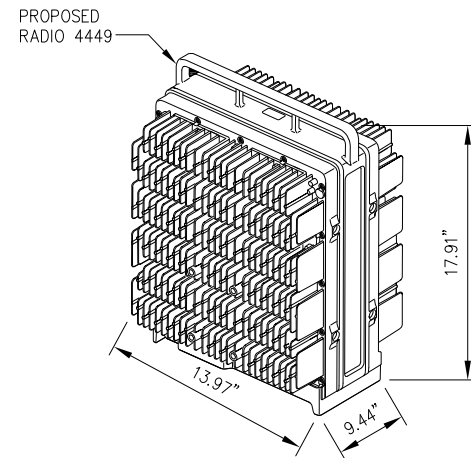
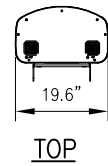
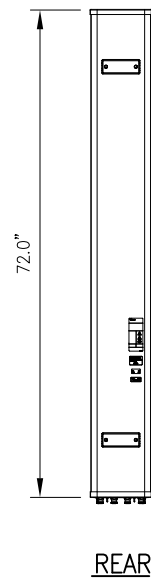
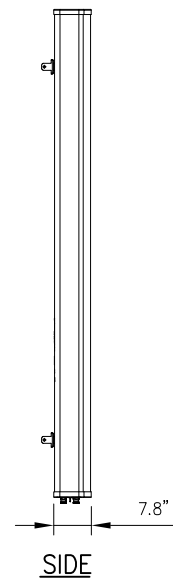
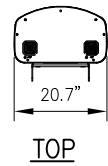
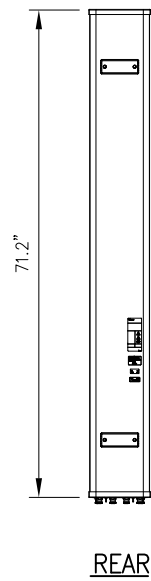
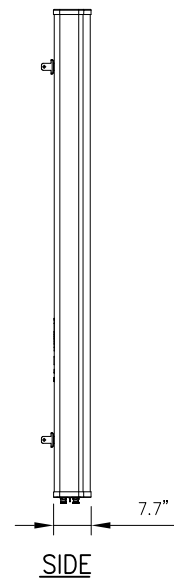


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AS NOTED
Date:
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Drawing Title
**ANTENNA
ORIENTATION
PLAN**

Drawing Number
C4



CCI MODEL NO.:	DMP65R-BU6A
RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	71.2"x20.7"x7.7"
WEIGHT, W/ PRE-MOUNTED BRACKETS:	79.4 LBS
CONNECTOR:	7-16 DIN FEMALE

ANDREW MODEL NO.:	NNH4-65B-R6
RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	72.0"x19.6"x7.8"
WEIGHT, W/ PRE-MOUNTED BRACKETS:	89.7 LBS
CONNECTOR:	7-16 DIN FEMALE

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

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

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

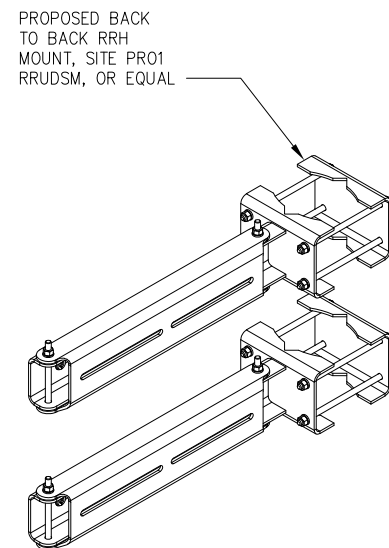
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NOT TO SCALE

2 ANTENNA DETAIL
NOT TO SCALE

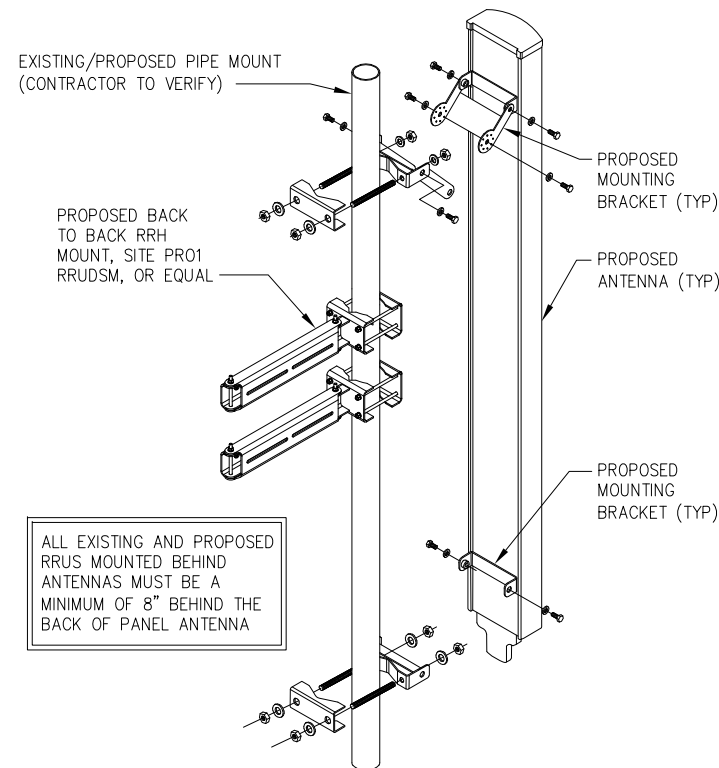
3 ERICSSON RADIO 4449 DETAIL
NOT TO SCALE

4 ERICSSON RADIO 8843 DETAIL
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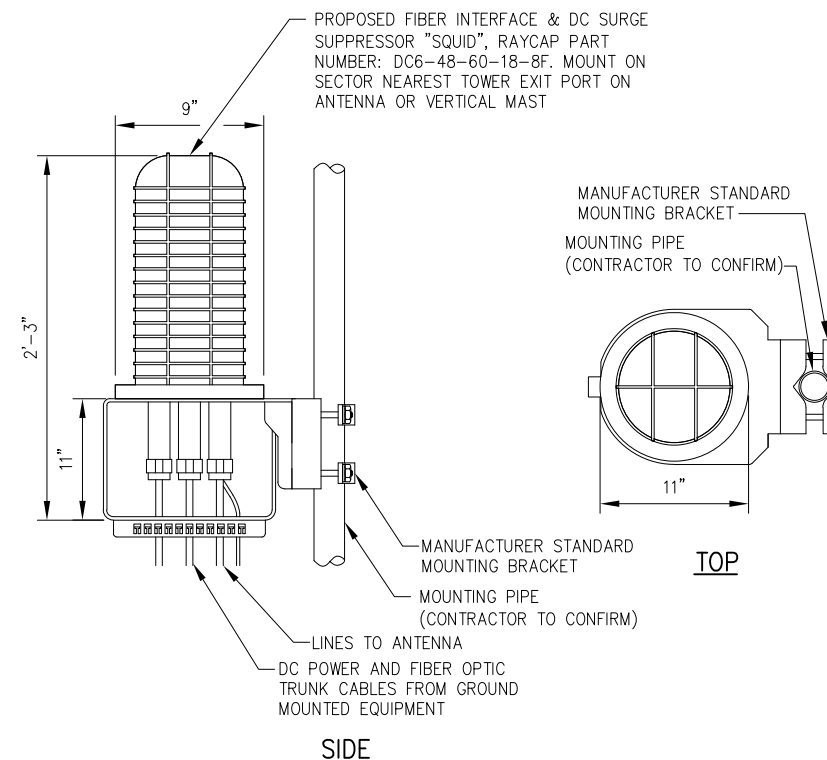
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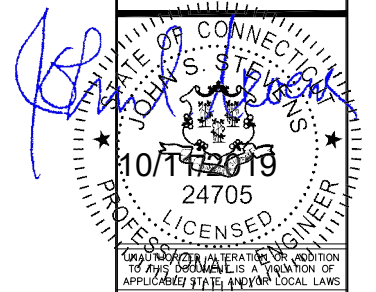
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NOT TO SCALE



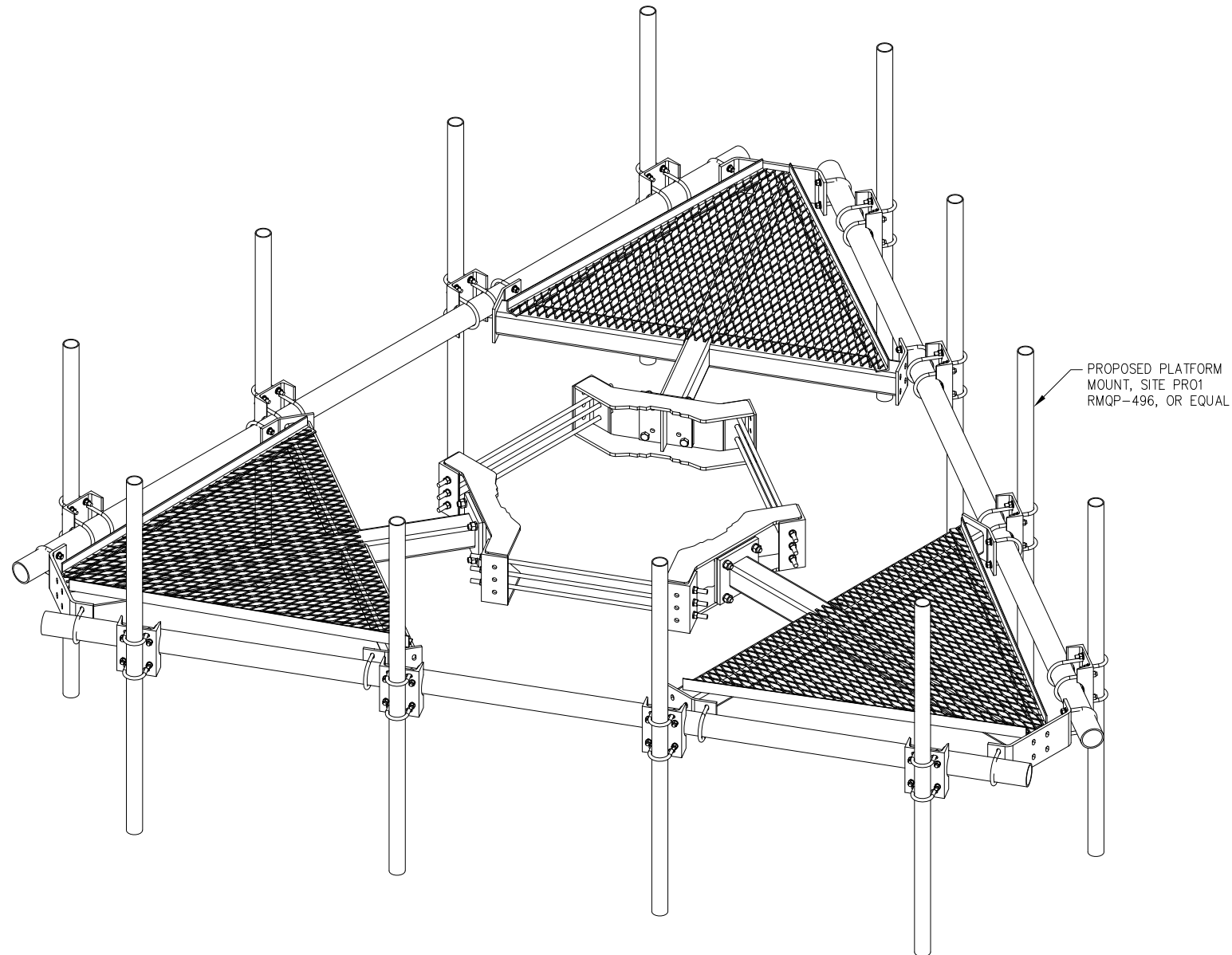
6 ANTENNA MOUNTING DETAIL
NOT TO SCALE



7 SQUID DETAIL
NOT TO SCALE

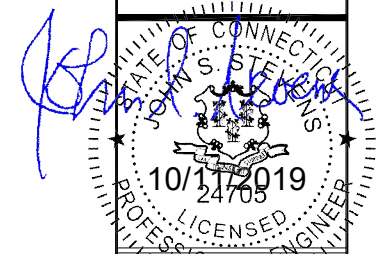


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Project Number:			
499-006			
Project Title:			
MANSFIELD CENTRAL -CLOVER MILL			
CTL05858			
FA# 10071107			
230 CLOVER MILL ROAD STORRS MANSFIELD, CT 06268			
Prepared For:			
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Drawing Title	EQUIPMENT DETAILS		
Drawing Number	C5		



1 PLATFORM MOUNT DETAIL
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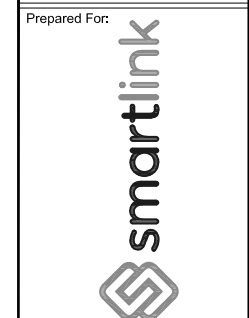


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Project Number:			
499-006			

Project Title:
**MANSFIELD CENTRAL
-CLOVER MILL**

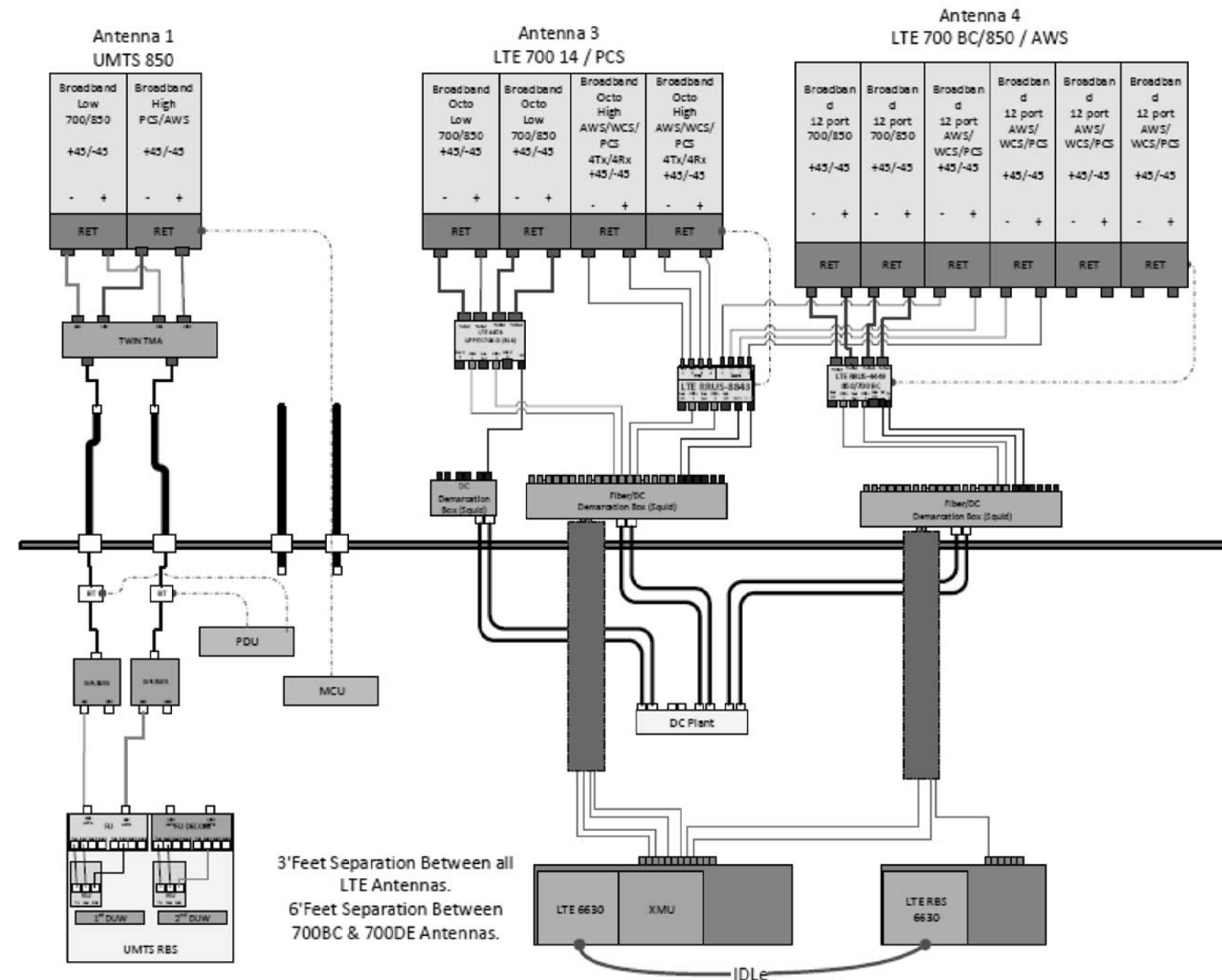
CTL05858
FA# 10071107
230 CLOVER MILL ROAD
STORRS MANSFIELD, CT 06268



Drawing Scale: AS NOTED	CD
Date: 10/11/19	

Drawing Title
**EQUIPMENT
DETAILS**

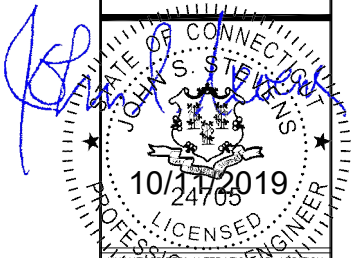
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*BASED ON LTE RFDS,
DATED 09/05/2019, V2.00

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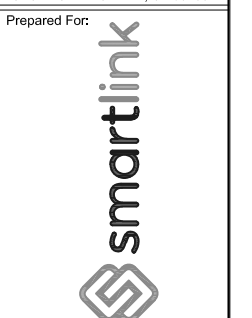
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499-006			

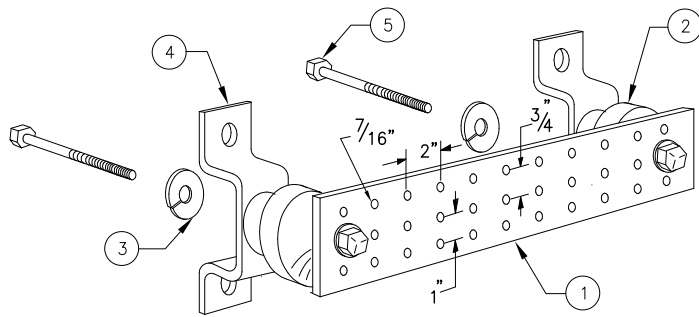
Project Title:
MANSFIELD CENTRAL
-CLOVER MILL
CTL05858
FA# 10071107
230 CLOVER MILL ROAD
STORRS MANSFIELD, CT 06268



Drawing Scale:	AS NOTED
Date:	10/11/19

Drawing Title
**PLUMBING
DIAGRAM**

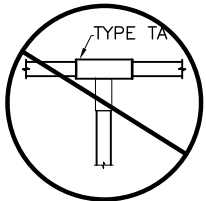
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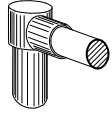
LEGEND

- 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 ACCOMODATE 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"

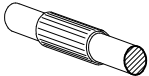
1 GROUND BAR
-- NOT TO SCALE



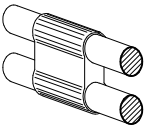
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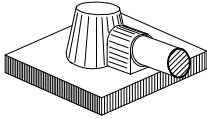
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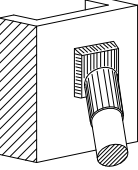
TYPE SV



TYPE PH

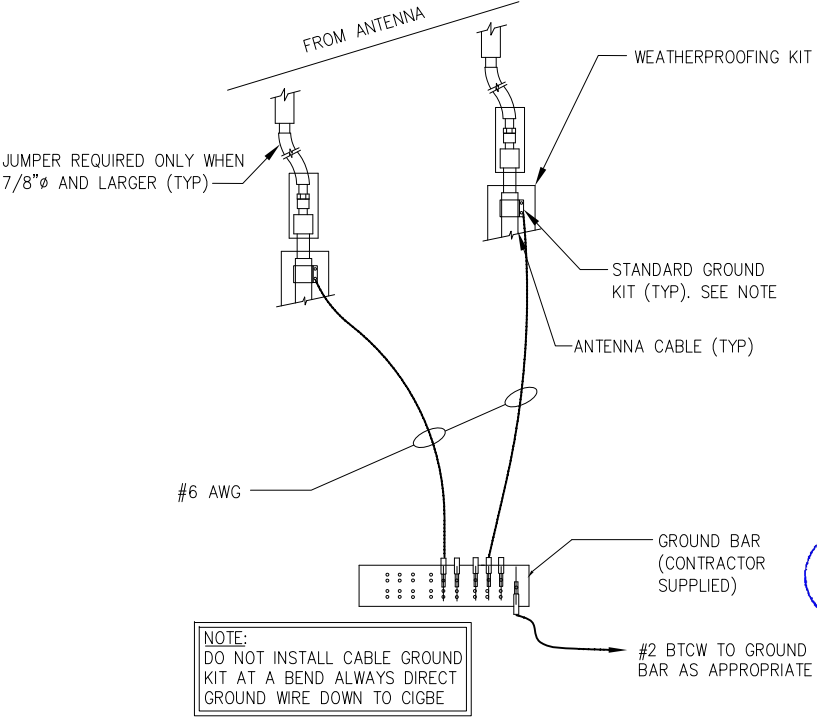


TYPE KA

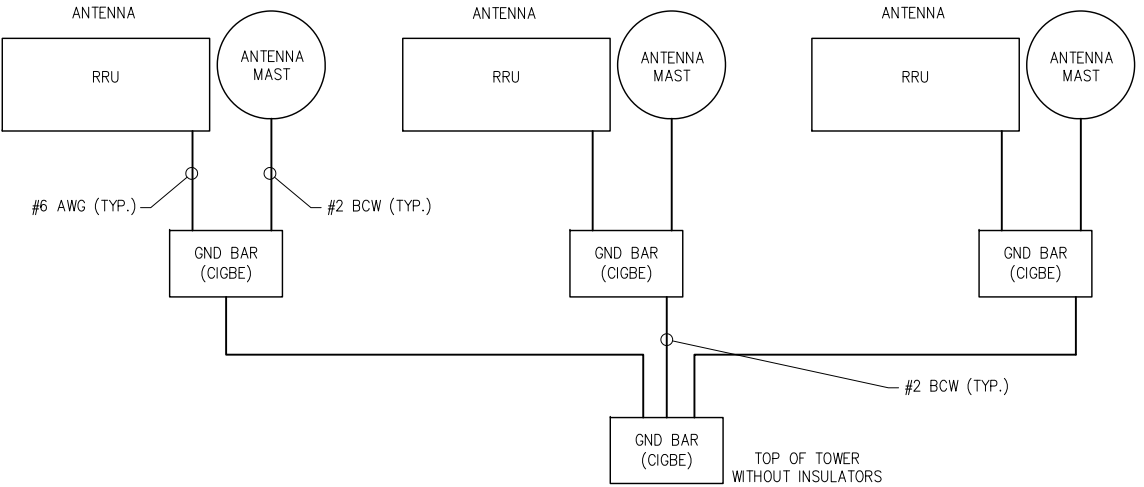


TYPE VS

2 CADWELDS (TYPICAL)
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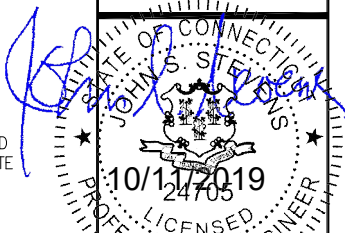


3 CONNECTION OF GROUND WIRES TO GROUNDING BARS @ ANTENNAS
-- NOT TO SCALE



4 SCHEMATIC DIAGRAM GROUNDING SYSTEM
-- NOT TO SCALE

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499-006			

Project Title:
**MANSFIELD CENTRAL
-CLOVER MILL**

CTL05858
FA# 10071107
230 CLOVER MILL ROAD
STORRS MANSFIELD, CT 06268



Drawing Scale:
AS NOTED
Date:
10/11/19

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Drawing Title
**GROUNDING
DETAILS**

Drawing Number
C7