



December 26, 2023

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

Re: Notice of Exempt Modification – Antenna and RRU Swap/Add
Property Address: 57 Cook Drive Montville, CT 06382
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 twelve (12) wireless telecommunication antennas at an antenna center line height of 180-foot level on an existing 193-foot Guy Tower owned by Wireless Solutions LLC a Connecticut limited liability company and Robert W. Kingsborough, 11 Dell Drive Uncasville CT 06382.

AT&T desires to modify its existing telecommunications facility by swapping twelve (12) antennas and twelve (12) radios and associated lines. The centerline height of said antennas and remote radio units is and will remain at 180' 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. § 16-510j-72(b) (2). In accordance with R.C.S.A., a copy of this letter is being sent to Leonard Bunnell Sr., City Mayor Montville Town Hall 2nd Fl 310 Norwich-New London Tpke Uncasville, CT 06382, Lucy Beit, City Assessor, ground floor room 4, 310 Norwich-New London Tpke Uncasville, CT 06382, a copy to Wireless Solutions LLC a Connecticut limited liability company and Robert W. Kingsborough, 11 Dell Drive Uncasville CT, 06382.

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

- **EM-ATT-086-190117** – AT&T Mobility, LLC notice of intent to modify an existing telecommunications facility located at 57 Cook Drive Montville, 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 190-foot level of the 193-foot Guyed 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,

Carolyn Seeley
Real Estate Specialist
Smartlink on behalf of AT&T
(978) 760-5577
Carolyn.seeley@smartlinkgroup.com

CC w/enclosures:

Mayor Ronald McDaniel
Town of Montville
310 Norwich-New London Turnpike
Uncasville, CT 06382

Liz Burdick - Town Planner
Town of Montville
310 Norwich-New London Turnpike
Uncasville, CT 06382

KT Enterprises LLC – Property Owner
PO Box 374
Uncasville, CT 06382

Wireless Solutions – Tower Owner

Good Morning,

It was a pleasure speaking with you this morning regarding the tower at 49 Cook Drive. Unfortunately, we do not have a copy of the original permit in our files. The only permits we have copies of are from 1980 for an addition and 2011 for a replacement.

Should you have any further questions, please feel free to contact me.

Respectfully,

Meredith Badalucca

Zoning & Wetlands Officer

Town of Montville

310 Norwich New London Tpke

Uncasville, CT 06382

860-848-6779



Property Card: 49 COOK DR
Town of Montville, CT

Parcel Information

Location:	49 COOK DR	Property Use:	Public Utility	Primary Use:	Utility Building
Unique ID:	S0556700	Map Block Lot:	099-010-000	Acres:	2.04
		Zone:	R20	Volume / Page:	0558/0320
		Sale Date:	02/11/2011	Sale Price:	\$250,000

Value Information

	Appraised Value	Assessed Value
Land	89700	62790
Buildings	53900	37730
Detached Outbuildings	271700	190190
Total	415300	290710

Owner's Information

Owner's Data
KT TOWER ENTERPRISES LLC PO BOX 374 UNCASVILLE, CT 063820374

Building 1

Category:	Commercial	Siding:	Pre-Cast Concrete	Total Rooms:	0
Stories:	1.00	Fuel:	Oil	Beds/Units:	0
GLA:	784	Heating:	Hot Air No Duct	Baths:	0
Year Built:	1970	Fireplace:	0		
Class:	Masonry	Cooling Percent:	None	Half Baths:	0
Use:	Utility Building	Floors:	Concrete	Basement Garage:	0
Construction Style:	Utility Building	Roof Material:	Asphalt	Finished Basement:	0



Data shown on this report is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this report.



49 COOK DRIVE

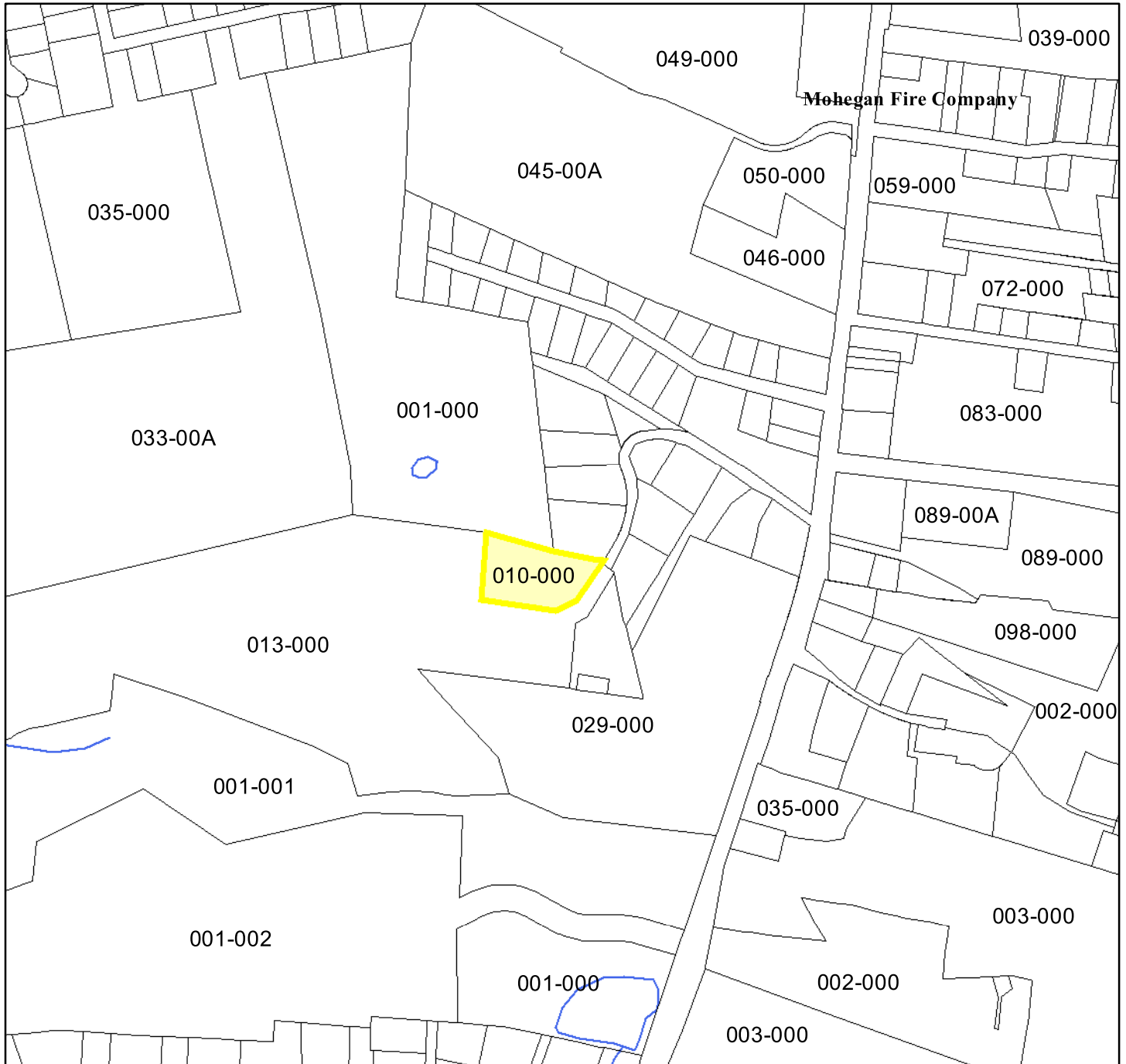
Montville, CT



July 29, 2022

1 inch = 564 Feet

www.cai-tech.com



	Community Facilities
	Parcel Lines - No Ortho
	Streams

Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

(Revised)
STRUCTURAL ANALYSIS REPORT

For

SITE NUMBER: CTL02171
SITE NAME: MONTVILLE EAST
FA CODE: 10035116

57 COOK DRIVE
UNCASVILLE, CT 06382

Antennas Mounted to the Tower



Prepared for:



Dated: May 6, 2022 (Rev 1)

Dated: May 2, 2022

Prepared by:



HUDSON
Design Group LLC

45 Beechwood Drive
North Andover, MA 01845
(P) 978.557.5553 (F) 978.336.5586
www.hudsondesigngroupllc.com





HUDSON
Design Group LLC

SCOPE OF WORK:

Hudson Design Group LLC (HDG) has been authorized by AT&T to conduct a structural evaluation of the 193' guyed tower supporting the proposed AT&T antennas located at elevation 180' above the ground level.

This report represents this office's findings, conclusions and recommendations pertaining to the support of AT&T's existing and proposed antennas listed below.

Record drawings of the existing tower were not available for our use. The previous structural analysis report and modification drawings prepared by this office, dated March 14, 2013, were used for analysis.

Tower mapping report prepared by ProVertic LLC, dated April 28, 2022, was provided to this office.

CONCLUSION SUMMARY:

HDG performed structural analysis of the existing tower with the following proposed modifications:

- 1. Strengthen tower legs from El.120' to El.180'.**
- 2. Add horizontals from El.120' to El.140'.**
- 3. Replace diagonals and girts from El.120' to El.140'.**

Based on our evaluation, we have determined that the existing tower and foundation with the proposed modifications **are in conformance** with the ANSI/TIA-222-H Standard for the loading considered under the criteria listed in this report. The tower structure is rated at **89.5%** - (Leg at Tower Section T2 from EL.160' to EL.180' Controlling).



APPURTENANCES CONFIGURATION:

Tenant	Appurtenances	Elev.	Mount
	(3) AIR 32 Antennas	191'	Boom Gate
	(3) AIR6449 B41 Antennas	191'	Boom Gate
	(3) APXVAARR24_43-U-NA20 Antennas	191'	Boom Gate
	(6) Radios	191'	Boom Gate
	(1) 20' Omni	190'	Boom Gate
	(2) 6' Omni	182'	Boom Gate
AT&T	(2) B14 4478	180'	Boom Gate
AT&T	(3) 4426 B66	180'	Boom Gate
AT&T	(3) RRUS-32 B30	180'	Boom Gate
AT&T	(2) DC6-48-60-18-8F	180'	Boom Gate
AT&T	(2) TPA65R-BU8DA-K Antennas	180'	Boom Gate
AT&T	(1) TPA65R-BU6DA-K Antenna	180'	Boom Gate
AT&T	(3) AIR6419 B77G Antennas	180'	Boom Gate
AT&T	(3) AIR6449 B77D Antennas	180'	Boom Gate
AT&T	(2) DMP65R-BU8DA Antennas	180'	Boom Gate
AT&T	(1) DMP65R-BU6DA Antenna	180'	Boom Gate
AT&T	(3) 4415 B25	180'	Boom Gate
AT&T	(3) 4449 B5/B12	180'	Boom Gate
AT&T	(1) B14 4478	180'	Boom Gate
AT&T	(1) DC9-48-60-24-8C-EV	180'	Boom Gate
	(6) LPA-80080-4CF Antennas	169'	VFA12 - HD
	(6) SBNHH-1D65B Antennas	169'	VFA12 - HD
	(3) RRH2X60 700	169'	VFA12 - HD
	(3) RRH2X60 PCS	169'	VFA12 - HD
	(3) RRH4X45	169'	VFA12 - HD
	(3) UBFIX	169'	VFA12 - HD
	(2) OVP	169'	VFA12 - HD
	(6) APXVTM14 Antennas	150'	Boom Gate
	(3) FD-RRH-4X40 1900	150'	Boom Gate
	(3) FD-RRH-2X50 800	150'	Boom Gate
	(3) FZHN	150'	Boom Gate
	(1) 10' Dipole	123'	Side Mount Standoff
	(1) Dipole	113'	Side Mount Standoff
	(1) 20' Omni	118'	Side Mount Standoff
	(1) 20' Omni	117'	Side Mount Standoff
	(1) 20' Omni	98'	Side Mount Standoff

***Proposed AT&T Appurtenances shown in Bold.**



AT&T EXISTING/PROPOSED COAX CABLES:

Tenant	Coax Cables	Elev.	Mount
AT&T	(6) 1 1/4" Cables	180'	Tower Face
AT&T	(4) DC Power Cables	180'	Tower Face
AT&T	(2) Fiber Cables	180'	Tower Face
AT&T	(2) DC Power Cables	180'	Tower Face
AT&T	(1) Fiber Cable	180'	Tower Face

**Proposed AT&T Coax Cables shown in Bold.*

ANALYSIS RESULTS SUMMARY:

Component	Max. Stress Ratio	Elev. of Component (ft)	Pass/Fail	Comments
Legs	89.5 %	160 – 180	PASS	Controlling
Diagonals	47.4 %	160 – 180	PASS	
Horizontals	2.1 %	0 – 5	PASS	
Sec. Horizontals	35.1 %	160 – 180	PASS	
Top Girt	12.7 %	0 – 5	PASS	
Bottom Girt	30.7 %	5 – 20	PASS	
Guy	80.4 %	162.6	PASS	
Torque Arm	60.2 %	162.6	PASS	



HUDSON
Design Group LLC

DESIGN CRITERIA:

1. EIA/TIA-222-H Structural Standard for Antenna Supporting Structures, Antennas and Small Wind Turbine Support Structures
2. Connecticut State Building Code

City/Town: Montville
County: New London
Basic Wind Speed: 135 mph
Risk Category: II
Exposure Category: B
Topographic Category: 1
Ice Thickness: 1.0 inch

ASSUMPTIONS:

1. The appurtenances configuration is as stated in this report. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer requirements.
2. The tower and foundation are properly constructed and maintained. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
3. The support mounts and platforms are not analyzed and are considered adequate to support the loading. The analysis is limited to the primary support structure itself.
4. All prior structural modification, if any, are assumed to be as per the data supplied (if available), and installed properly.

SUPPORT RECOMMENDATIONS:

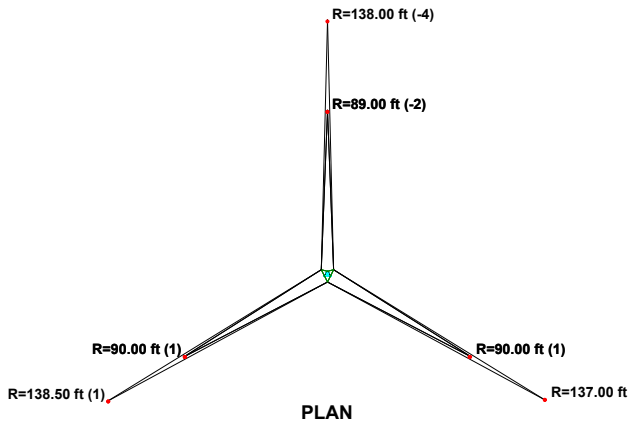
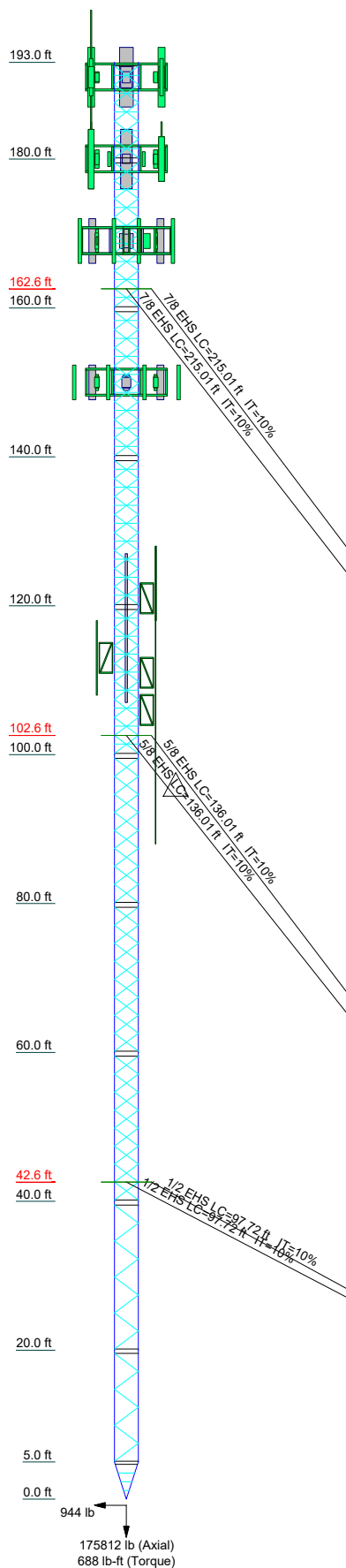
HDG recommends that the proposed antennas, RRUs and surge arrestor be mounted on the existing sector frames supported by the tower.



HUDSON
Design Group LLC

TNX INPUT/OUTPUT

Section	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs				ROHN 3 EH				ROHN 2.5 EH (CT2171)	ROHN 2.5 EH mod (CT2171)		A
Leg Grade						A572-50					
Diagonals	N.A.			ROHN TS1.5x11 ga	L1 3/4x1 3/4x3/16	ROHN TS1.5x16 ga			L2x2x1/4		
Diagonal Grade	N.A.			A53-B-42	A36	A53-B-42			A36		
Top Girts	N.A.			ROHN TS1.5x11 ga		ROHN TS1.5x16 ga			ROHN TS1.5x11 ga	L2x2x1/4	
Bottom Girts	N.A.			ROHN TS1.5x16 ga		ROHN TS1.5x11 ga			ROHN TS1.5x11 ga	L2x2x1/4	
Horizontals	C										
Sec. Horizontals				N.A.							
Face Width (ft)	D	631.6	724.0	1568.3	1076.9	813.8	2468.4	1657.3	1672.1	2802.0	3,420
# Panels @ (ft)							70 @ 2.41667				5 @ 2.46667
Weight (lb)	14692.8	323.5									1034.9



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Rohn 6'x12' Boom Gate (3) (T-Mobile)	191	4449 B5/B12	180
AIR 32 B66AA/B2P w/mount pipe	191	4449 B5/B12	180
AIR 32 B66AA/B2P w/mount pipe	191	4449 B5/B12	180
AIR 32 B66AA/B2P w/mount pipe	191	DC9-48-60-24-PC16-EV	180
AIR6449 B41 w/mount pipe	191	SM 503-1 (VERIZON)	169
AIR6449 B41 w/mount pipe	191	SM 503-1	169
AIR6449 B41 w/mount pipe	191	SM 503-1	169
APXVAARR24_43-U-NA20 w/mount pipe	191	(2) LPA-80080-4CF w/mount pipe	169
APXVAARR24_43-U-NA20 w/mount pipe	191	(2) SBNHH-1D65B w/ Mount Pipe	169
APXVAARR24_43-U-NA20 w/mount pipe	191	(2) LPA-80080-4CF w/mount pipe	169
APXVAARR24_43-U-NA20 w/mount pipe	191	(2) SBNHH-1D65B w/ Mount Pipe	169
APXVAARR24_43-U-NA20 w/mount pipe	191	(2) LPA-80080-4CF w/mount pipe	169
APXVAARR24_43-U-NA20 w/mount pipe	191	(2) SBNHH-1D65B w/ Mount Pipe	169
4449 B5/B12	191	RRH2x60-700	169
4449 B5/B12	191	RRH2x60-700	169
4449 B5/B12	191	RRH2x60-700	169
4426 B66	191	RRH2x60 PCS	169
4426 B66	191	RRH2x60 PCS	169
4426 B66	191	RRH2x60 PCS	169
Omni 3'x20'	190	RRH2x60 PCS	169
Omni 3'x6'	182	B66A RRH 4X45	169
Omni 3'x6'	182	B66A RRH 4X45	169
Rohn 6'x15' Boom Gate (3) (ATI - Existing)	180	B66A RRH 4X45	169
Ericsson RRUS-32	180	UBFIX	169
Ericsson RRUS-32	180	UBFIX	169
Ericsson RRUS-32	180	RFS DB-T1-6Z-8AB-0Z	169
4426 B66	180	RFS DB-T1-6Z-8AB-0Z	169
4426 B66	180	Rohn 6'x15' Boom Gate (3) (SPRINT)	150
4426 B66	180	(2) APXVTM14 w/mount pipe	150
B14 4478	180	(2) APXVTM14 w/mount pipe	150
B14 4478	180	(2) APXVTM14 w/mount pipe	150
B14 4478	180	FD-RRH4x40 1900	150
DC6-48-60-18-8F	180	FD-RRH4x40 1900	150
DC6-48-60-18-8F	180	FD-RRH4x40 1900	150
TPA65R-BU8DA-K w/mount pipe (ATTI - Proposed)	180	FD-RRH2x50 800	150
TPA-65R-BU8DA-K w/mount pipe	180	FD-RRH2x50 800	150
TPA65R-BU8DA-K w/mount pipe	180	FD-RRH2x50 800	150
AIR6449 B77D w/mount pipe	180	FZHN	150
AIR6449 B77D w/mount pipe	180	FZHN	150
AIR6449 B77D w/mount pipe	180	FZHN	150
AIR6419 B77G w/mount pipe	180	10' Dipole	123
AIR6419 B77G w/mount pipe	180	3' Side Mount Standoff	121
AIR6419 B77G w/mount pipe	180	Omni 3'x20'	118
AIR6419 B77G w/mount pipe	180	Omni 3'x20'	117
DMP65R-BU8DA w/mount pipe	180	3' Side Mount Standoff	113
DMP65R-BU8DA w/mount pipe	180	10' Dipole	113
DMP65R-BU8DA w/mount pipe	180	3' Side Mount Standoff	111
4415 B25	180	3' Side Mount Standoff	107
4415 B25	180	3' Side Mount Standoff	106
4415 B25	180	Omni 3'x20'	98

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	ROHN 2.5 EH (CT2171)	C	L4x4x1/4
B	ROHN TS1.5x11 ga	D	4 @ 1.16667

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A53-B-42	42 ksi	63 ksi
A36	36 ksi	58 ksi			

TOWER DESIGN NOTES

1. Tower is located in North Andover County, Connecticut.

Hudson Design Group LLC Job: **CT2171 Modifications**

45 Beechwood Drive
 North Andover, MA 01845
 Phone: (P) 978.557.5553
 FAX: (F) 978.336.5586

Project: **193 ft Guyed Tower**

Client: AT&T	Drawn by: kw	App'd:
Code: TIA-222-H	Date: 05/06/22	Scale: NTS
Path:		Dwg No. E-1

©/CT2171 Mod/CT2171 Mod.rvt

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586	Job	CT2171 Modifications	Page	1 of 15
	Project	193 ft Guyed Tower	Date	09:11:36 05/06/22
	Client	AT&T	Designed by	kw

Tower Input Data

The main tower is a 3x guyed tower with an overall height of 193.00 ft above the ground line.

The base of the tower is set at an elevation of 0.00 ft above the ground line.

The face width of the tower is 3.42 ft at the top and tapered at the base.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower is located in New London County, Connecticut.

Tower base elevation above sea level: 0.00 ft.

Basic wind speed of 135 mph.

Risk Category II.

Exposure Category B.

Simplified Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.0000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

Safety factor used in guy design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Tower Section Geometry

<i>Tower Section</i>	<i>Tower Elevation</i>	<i>Assembly Database</i>	<i>Description</i>	<i>Section Width</i>	<i>Number of Sections</i>	<i>Section Length</i>
	<i>ft</i>			<i>ft</i>		<i>ft</i>
T1	193.00-180.00			3.42	1	13.00
T2	180.00-160.00			3.42	1	20.00
T3	160.00-140.00			3.42	1	20.00
T4	140.00-120.00			3.42	1	20.00
T5	120.00-100.00			3.42	1	20.00
T6	100.00-80.00			3.42	1	20.00
T7	80.00-60.00			3.42	1	20.00
T8	60.00-40.00			3.42	1	20.00
T9	40.00-20.00			3.42	1	20.00
T10	20.00-5.00			3.42	1	15.00
T11	5.00-0.00			3.42	1	5.00

Tower Section Geometry (cont'd)

<p style="text-align: center;">tnxTower</p> <p style="text-align: center;">Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586</p>	Job	CT2171 Modifications	Page	2 of 15	
	Project	193 ft Guyed Tower		Date	09:11:36 05/06/22
	Client	AT&T		Designed by	kw

Tower Section	Tower Elevation <i>ft</i>	Diagonal Spacing <i>ft</i>	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset <i>in</i>	Bottom Girt Offset <i>in</i>
T1	193.00-180.00	2.47	X Brace	No	Yes	6.0000	2.0000
T2	180.00-160.00	2.42	X Brace	No	Yes	6.0000	2.0000
T3	160.00-140.00	2.42	X Brace	No	Yes	6.0000	2.0000
T4	140.00-120.00	2.42	X Brace	No	Yes	6.0000	2.0000
T5	120.00-100.00	2.42	X Brace	No	Yes	6.0000	2.0000
T6	100.00-80.00	2.42	CX Brace	No	No	6.0000	2.0000
T7	80.00-60.00	2.42	X Brace	No	No	6.0000	2.0000
T8	60.00-40.00	2.42	CX Brace	No	No	6.0000	2.0000
T9	40.00-20.00	2.42	K Brace Left	No	No	6.0000	2.0000
T10	20.00-5.00	2.42	K Brace Left	No	No	5.0000	1.0000
T11	5.00-0.00	1.17	X Brace	No	Yes	4.0000	0.0000

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 193.00-180.00	Pipe	ROHN 2.5 EH (CT2171)	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T2 180.00-160.00	Pipe	ROHN 2.5 EH mod (CT2171)	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T3 160.00-140.00	Pipe	ROHN 2.5 EH mod (CT2171)	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T4 140.00-120.00	Pipe	ROHN 2.5 EH (CT2171)	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T5 120.00-100.00	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T6 100.00-80.00	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Pipe	ROHN TS1.5x16 ga	A53-B-42 (42 ksi)
T7 80.00-60.00	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Equal Angle	L1 3/4x1 3/4x3/16	A36 (36 ksi)
T8 60.00-40.00	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Pipe	ROHN TS1.5x11 ga	A53-B-42 (42 ksi)
T9 40.00-20.00	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Pipe	ROHN TS1.5x16 ga	A53-B-42 (42 ksi)
T10 20.00-5.00	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Pipe	ROHN TS1.5x11 ga	A53-B-42 (42 ksi)
T11 5.00-0.00	Pipe	ROHN 3 EH	A572-50 (50 ksi)	Equal Angle		A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation <i>ft</i>	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 193.00-180.00	Equal Angle	L2x2x1/4	A36 (36 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T2 180.00-160.00	Equal Angle	L2x2x1/4	A36 (36 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T3 160.00-140.00	Pipe	ROHN TS1.5x11 ga	A53-B-42 (42 ksi)	Pipe	ROHN TS1.5x11 ga	A53-B-42 (42 ksi)
T4 140.00-120.00	Equal Angle	L2x2x1/4	A36 (36 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)

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Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T5 120.00-100.00	Equal Angle	L2x2x1/4	A36 (36 ksi)	Equal Angle	L2x2x1/4	A36 (36 ksi)
T6 100.00-80.00	Pipe	ROHN TS1.5x16 ga	A53-B-42 (42 ksi)	Pipe	ROHN TS1.5x16 ga	A53-B-42 (42 ksi)
T7 80.00-60.00	Pipe	ROHN TS1.5x11 ga	A53-B-42 (42 ksi)	Pipe	ROHN TS1.5x11 ga	A53-B-42 (42 ksi)
T8 60.00-40.00	Pipe	ROHN TS1.5x11 ga	A53-B-42 (42 ksi)	Pipe	ROHN TS1.5x11 ga	A53-B-42 (42 ksi)
T9 40.00-20.00	Pipe	ROHN TS1.5x16 ga	A53-B-42 (42 ksi)	Pipe	ROHN TS1.5x16 ga	A53-B-42 (42 ksi)
T10 20.00-5.00	Pipe	ROHN TS1.5x11 ga	A53-B-42 (42 ksi)	Pipe	ROHN TS1.5x11 ga	A53-B-42 (42 ksi)
T11 5.00-0.00	Equal Angle	L4x4x1/4	A36 (36 ksi)	Equal Angle	L4x4x1/4	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T11 5.00-0.00	None	Solid Round		A572-50 (50 ksi)	Equal Angle	L4x4x1/4	A36 (36 ksi)

Tower Section Geometry (cont'd)

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T1 193.00-180.00	Equal Angle	L2x2x1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T2 180.00-160.00	Equal Angle	L2x2x1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T3 160.00-140.00	Equal Angle	L2x2x1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T4 140.00-120.00	Equal Angle	L2x2x1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T5 120.00-100.00	Equal Angle	L2x2x1/4	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)

Guy Data

Guy Elevation ft	Guy Grade	Guy Size	Initial Tension lb	%	Guy Modulus ksi	Guy Weight plf	L _u ft	Anchor Radius ft	Anchor Azimuth Adj. °	Anchor Elevation ft	End Fitting Efficiency %	
162.583	EHS	A	7/8	7970.00	10%	19000	1.581	214.81	138.00	0.0000	-4.00	100%
		B	7/8	7970.00	10%	19000	1.581	211.09	137.00	0.0000	0.00	100%
		C	7/8	7970.00	10%	19000	1.581	211.29	138.50	0.0000	1.00	100%

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102.583	EHS	A	5/8	4240.00	10%	21000	0.813	135.90	89.00	0.0000	-2.00	100%
		B	5/8	4240.00	10%	21000	0.813	134.26	90.00	0.0000	1.00	100%
		C	5/8	4240.00	10%	21000	0.813	134.26	90.00	0.0000	1.00	100%
42.5833	EHS	A	1/2	2690.00	10%	21000	0.517	97.64	89.00	0.0000	-2.00	100%
		B	1/2	2690.00	10%	21000	0.517	97.21	90.00	0.0000	1.00	100%
		C	1/2	2690.00	10%	21000	0.517	97.21	90.00	0.0000	1.00	100%

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
1 1/4 Fiber Cable	A	No	No	Ar (CaAa)	191.00 - 8.00	0.0000	0.23	4	4	1.5500	1.5500		0.66
7/8	C	No	No	Ar (CaAa)	180.00 - 8.00	4.0000	-0.1	3	3	1.1100	1.1100		0.54

1 1/4 (AT&T - existing)	C	No	No	Ar (CaAa)	180.00 - 8.00	0.0000	0.3	6	6	0.0000	1.5500		0.66
WR-VG122S T-BRDA	C	No	No	Ar (CaAa)	180.00 - 8.00	2.0000	0.2	4	4	0.0000	0.4000		0.25
FB-L98B-002	C	No	No	Ar (CaAa)	180.00 - 8.00	2.0000	0.3	2	2	0.0000	0.4000		0.25

WR-VG122S T-BRDA	C	No	No	Ar (CaAa)	180.00 - 8.00	2.0000	0.4	2	2	0.0000	0.4000		0.25
FB-L98B-002	C	No	No	Ar (CaAa)	180.00 - 8.00	2.0000	0.45	1	1	0.0000	0.4000		0.25

1 5/8 (VERIZON)	B	No	No	Ar (CaAa)	169.00 - 8.00	-3.0000	0	12	12	0.0000	1.9800		1.04
1 5/8 Fiber Cable	B	No	No	Ar (CaAa)	169.00 - 8.00	-5.0000	0	2	2	0.0000	1.9800		1.04

1 1/4 Fiber Cable	C	No	No	Ar (CaAa)	152.00 - 8.00	4.0000	0	4	4	1.5500	1.5500		0.66
1 1/4	C	No	No	Ar (CaAa)	121.00 - 8.00	4.0000	-0.2	1	1	1.5500	1.5500		0.66
1 1/4	C	No	No	Ar (CaAa)	113.00 - 8.00	4.0000	-0.25	1	1	1.5500	1.5500		0.66
1/2	C	No	No	Ar (CaAa)	111.00 - 8.00	4.0000	-0.3	1	1	0.5800	0.5800		0.25
1 1/4	C	No	No	Ar (CaAa)	107.00 - 8.00	2.5000	-0.35	1	1	1.5500	1.5500		0.66

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight lb	
Rohn 6'x12' Boom Gate (3)	A	None		0.0000	191.00	No Ice	49.80	49.80	1680.00

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<i>Description</i>	<i>Face or Leg</i>	<i>Offset Type</i>	<i>Offsets: Horz Lateral Vert</i> <i>ft ft ft</i>	<i>Azimuth Adjustment</i> <i>°</i>	<i>Placement</i> <i>ft</i>	<i>C_{AA} Front</i> <i>ft²</i>	<i>C_{AA} Side</i> <i>ft²</i>	<i>Weight</i> <i>lb</i>	
(T-Mobile)						1/2" Ice	59.30	59.30	2100.00
AIR 32 B66AA/B2P w/mount pipe	A	From Leg	4.00 0.00 0.00	0.0000	191.00	1" Ice No Ice 1/2" Ice 1" Ice	68.80 7.12 7.60 8.07	68.80 6.41 7.28 8.03	2520.00 153.90 217.59 288.39
AIR 32 B66AA/B2P w/mount pipe	B	From Leg	4.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	7.12 7.60 8.07	6.41 7.28 8.03	153.90 217.59 288.39
AIR 32 B66AA/B2P w/mount pipe	C	From Leg	4.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	7.12 7.60 8.07	6.41 7.28 8.03	153.90 217.59 288.39
AIR6449 B41 w/mount pipe	A	From Leg	4.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	5.92 6.30 6.69	3.33 3.80 4.29	117.60 167.08 222.04
AIR6449 B41 w/mount pipe	B	From Leg	4.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	5.92 6.30 6.69	3.33 3.80 4.29	117.60 167.08 222.04
AIR6449 B41 w/mount pipe	C	From Leg	4.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	5.92 6.30 6.69	3.33 3.80 4.29	117.60 167.08 222.04
APXVAARR24_43-U-NA20 w/mount pipe	A	From Leg	4.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	20.24 20.89 21.55	11.19 12.62 13.71	174.32 311.78 460.89
APXVAARR24_43-U-NA20 w/mount pipe	B	From Leg	4.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	20.24 20.89 21.55	11.19 12.62 13.71	174.32 311.78 460.89
APXVAARR24_43-U-NA20 w/mount pipe	C	From Leg	4.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	20.24 20.89 21.55	11.19 12.62 13.71	174.32 311.78 460.89
4449 B5/B12	A	From Leg	3.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	1.97 2.15 2.33	1.55 1.71 1.88	73.00 92.52 114.92
4449 B5/B12	B	From Leg	3.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	1.97 2.15 2.33	1.55 1.71 1.88	73.00 92.52 114.92
4449 B5/B12	C	From Leg	3.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	1.97 2.15 2.33	1.55 1.71 1.88	73.00 92.52 114.92
4426 B66	A	From Leg	3.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	1.64 1.80 1.97	0.73 0.85 0.98	49.00 61.88 77.16
4426 B66	B	From Leg	3.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	1.64 1.80 1.97	0.73 0.85 0.98	49.00 61.88 77.16
4426 B66	C	From Leg	3.00 0.00 0.00	0.0000	191.00	No Ice 1/2" Ice 1" Ice	1.64 1.80 1.97	0.73 0.85 0.98	49.00 61.88 77.16

Omni 3"x6'	B	From Leg	4.00 0.00 0.00	0.0000	182.00	No Ice 1/2" Ice 1" Ice	1.77 2.13 2.50	1.77 2.13 2.50	20.00 33.24 50.59
Omni 3"x6'	C	From Leg	4.00 0.00 0.00	0.0000	182.00	No Ice 1/2" Ice 1" Ice	1.77 2.13 2.50	1.77 2.13 2.50	20.00 33.24 50.59
Omni 3"x20'	C	From Leg	4.00 0.00 0.00	0.0000	190.00	No Ice 1/2" Ice 1" Ice	6.00 8.03 10.08	6.00 8.03 10.08	50.00 93.17 149.01

<p style="text-align: center;">tnxTower</p> <p style="text-align: center;">Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586</p>	Job	CT2171 Modifications	Page	6 of 15	
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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz Lateral	Vert					

Rohn 6'x15' Boom Gate (3) (AT&T - Existing)	A	None			0.0000	180.00	No Ice 53.20 1/2" Ice 63.30 1" Ice 73.40	53.20 63.30 73.40	1790.00 2230.00 2670.00
Ericsson RRUS-32	A	From Leg	3.00 0.00 0.00		0.0000	180.00	No Ice 3.31 1/2" Ice 3.56 1" Ice 3.81	2.42 2.64 2.86	77.00 104.93 136.47
Ericsson RRUS-32	B	From Leg	3.00 0.00 0.00		0.0000	180.00	No Ice 3.31 1/2" Ice 3.56 1" Ice 3.81	2.42 2.64 2.86	77.00 104.93 136.47
Ericsson RRUS-32	C	From Leg	3.00 0.00 0.00		0.0000	180.00	No Ice 3.31 1/2" Ice 3.56 1" Ice 3.81	2.42 2.64 2.86	77.00 104.93 136.47
4426 B66	A	From Leg	3.00 0.00 0.00		0.0000	180.00	No Ice 1.64 1/2" Ice 1.80 1" Ice 1.97	0.73 0.85 0.98	49.00 61.88 77.16
4426 B66	B	From Leg	3.00 0.00 0.00		0.0000	180.00	No Ice 1.64 1/2" Ice 1.80 1" Ice 1.97	0.73 0.85 0.98	49.00 61.88 77.16
4426 B66	C	From Leg	3.00 0.00 0.00		0.0000	180.00	No Ice 1.64 1/2" Ice 1.80 1" Ice 1.97	0.73 0.85 0.98	49.00 61.88 77.16
B14 4478	A	From Leg	3.00 0.00 0.00		0.0000	180.00	No Ice 1.65 1/2" Ice 1.81 1" Ice 1.98	0.93 1.05 1.19	60.00 74.37 91.23
B14 4478	B	From Leg	3.00 0.00 0.00		0.0000	180.00	No Ice 1.65 1/2" Ice 1.81 1" Ice 1.98	0.93 1.05 1.19	60.00 74.37 91.23
B14 4478	C	From Leg	3.00 0.00 0.00		0.0000	180.00	No Ice 1.65 1/2" Ice 1.81 1" Ice 1.98	0.93 1.05 1.19	60.00 74.37 91.23
DC6-48-60-18-8F	A	From Leg	1.00 0.00 0.00		0.0000	180.00	No Ice 0.79 1/2" Ice 1.27 1" Ice 1.45	0.79 1.27 1.45	20.00 35.12 52.57
DC6-48-60-18-8F	B	From Leg	1.00 0.00 0.00		0.0000	180.00	No Ice 0.79 1/2" Ice 1.27 1" Ice 1.45	0.79 1.27 1.45	20.00 35.12 52.57

TPA65R-BU8DA-K w/mount pipe (AT&T - Proposed)	A	From Leg	4.00 0.00 0.00		0.0000	180.00	No Ice 18.16 1/2" Ice 18.89 1" Ice 19.61	10.71 12.24 13.58	139.21 264.73 401.95
TPA-65R-BU6DA-K w/mount pipe	B	From Leg	4.00 0.00 0.00		0.0000	180.00	No Ice 12.96 1/2" Ice 13.57 1" Ice 14.14	7.28 8.46 9.35	94.55 187.00 287.98
TPA65R-BU8DA-K w/mount pipe	C	From Leg	4.00 0.00 0.00		0.0000	180.00	No Ice 18.16 1/2" Ice 18.89 1" Ice 19.61	10.71 12.24 13.58	139.21 264.73 401.95
AIR6449 B77D w/mount pipe	A	From Leg	4.00 0.00 0.00		0.0000	180.00	No Ice 4.35 1/2" Ice 4.70 1" Ice 5.06	3.01 3.47 3.94	117.60 157.89 203.17
AIR6449 B77D w/mount pipe	B	From Leg	4.00 0.00 0.00		0.0000	180.00	No Ice 4.35 1/2" Ice 4.70 1" Ice 5.06	3.01 3.47 3.94	117.60 157.89 203.17
AIR6449 B77D w/mount pipe	C	From Leg	4.00 0.00 0.00		0.0000	180.00	No Ice 4.35 1/2" Ice 4.70 1" Ice 5.06	3.01 3.47 3.94	117.60 157.89 203.17
AIR6419 B77G w/mount pipe	A	From Leg	4.00		0.0000	180.00	No Ice 4.48	2.88	109.60

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Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			Horz	Lateral						
			Vert		°	ft	ft ²	ft ²	lb	
			ft	ft						
			0.00				1/2" Ice	4.83	3.34	149.47
			0.00				1" Ice	5.19	3.81	194.34
AIR6419 B77G w/mount pipe	B	From Leg	4.00	0.0000	180.00		No Ice	4.48	2.88	109.60
			0.00				1/2" Ice	4.83	3.34	149.47
			0.00				1" Ice	5.19	3.81	194.34
AIR6419 B77G w/mount pipe	C	From Leg	4.00	0.0000	180.00		No Ice	4.48	2.88	109.60
			0.00				1/2" Ice	4.83	3.34	149.47
			0.00				1" Ice	5.19	3.81	194.34
DMP65R-BU8DA w/mount pipe	A	From Leg	4.00	0.0000	180.00		No Ice	18.16	10.71	148.11
			0.00				1/2" Ice	18.89	12.24	273.63
			0.00				1" Ice	19.61	13.58	410.85
DMP65R-BU6DA w/mount pipe	B	From Leg	4.00	0.0000	180.00		No Ice	12.96	7.28	104.95
			0.00				1/2" Ice	13.57	8.46	197.40
			0.00				1" Ice	14.14	9.35	298.38
DMP65R-BU8DA w/mount pipe	C	From Leg	4.00	0.0000	180.00		No Ice	18.16	10.71	148.11
			0.00				1/2" Ice	18.89	12.24	273.63
			0.00				1" Ice	19.61	13.58	410.85
4415 B25	A	From Leg	3.00	0.0000	180.00		No Ice	1.84	0.82	46.00
			0.00				1/2" Ice	2.01	0.94	60.07
			0.00				1" Ice	2.19	1.07	76.66
4415 B25	B	From Leg	3.00	0.0000	180.00		No Ice	1.84	0.82	46.00
			0.00				1/2" Ice	2.01	0.94	60.07
			0.00				1" Ice	2.19	1.07	76.66
4415 B25	C	From Leg	3.00	0.0000	180.00		No Ice	1.84	0.82	46.00
			0.00				1/2" Ice	2.01	0.94	60.07
			0.00				1" Ice	2.19	1.07	76.66
4449 B5/B12	A	From Leg	3.00	0.0000	180.00		No Ice	1.97	1.55	73.00
			0.00				1/2" Ice	2.15	1.71	92.52
			0.00				1" Ice	2.33	1.88	114.92
4449 B5/B12	B	From Leg	3.00	0.0000	180.00		No Ice	1.97	1.55	73.00
			0.00				1/2" Ice	2.15	1.71	92.52
			0.00				1" Ice	2.33	1.88	114.92
4449 B5/B12	C	From Leg	3.00	0.0000	180.00		No Ice	1.97	1.55	73.00
			0.00				1/2" Ice	2.15	1.71	92.52
			0.00				1" Ice	2.33	1.88	114.92
DC9-48-60-24-PC16-EV	C	From Leg	1.00	0.0000	180.00		No Ice	0.81	0.81	33.00
			0.00				1/2" Ice	1.30	1.30	48.38
			0.00				1" Ice	1.48	1.48	66.11

SM 503-1 (VERIZON)	A	From Leg	1.50	0.0000	169.00		No Ice	15.90	14.00	564.00
			0.00				1/2" Ice	22.01	20.81	752.00
			0.00				1" Ice	28.12	27.62	940.00
SM 503-1	B	From Leg	1.50	0.0000	169.00		No Ice	15.90	14.00	564.00
			0.00				1/2" Ice	22.01	20.81	752.00
			0.00				1" Ice	28.12	27.62	940.00
SM 503-1	C	From Leg	1.50	0.0000	169.00		No Ice	15.90	14.00	564.00
			0.00				1/2" Ice	22.01	20.81	752.00
			0.00				1" Ice	28.12	27.62	940.00
(2) LPA-80080-4CF w/mount pipe	A	From Leg	3.00	0.0000	169.00		No Ice	2.87	6.59	30.25
			0.00				1/2" Ice	3.24	7.22	76.66
			0.00				1" Ice	3.62	7.87	129.00
(2) SBNHH-1D65B w/ Mount Pipe	A	From Leg	3.00	0.0000	169.00		No Ice	8.42	7.09	66.55
			0.00				1/2" Ice	8.98	8.27	135.68
			0.00				1" Ice	9.50	9.17	212.84
(2) LPA-80080-4CF w/mount pipe	B	From Leg	3.00	0.0000	169.00		No Ice	2.87	6.59	30.25
			0.00				1/2" Ice	3.24	7.22	76.66
			0.00				1" Ice	3.62	7.87	129.00

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	Client	AT&T	Designed by	kw

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft ²	ft ²	lb
(2) SBNHH-1D65B w/ Mount Pipe	B	From Leg	3.00	0.0000	169.00	No Ice	8.42	7.09	66.55
			0.00			1/2" Ice	8.98	8.27	135.68
			0.00			1" Ice	9.50	9.17	212.84
(2) LPA-80080-4CF w/mount pipe	C	From Leg	3.00	0.0000	169.00	No Ice	2.87	6.59	30.25
			0.00			1/2" Ice	3.24	7.22	76.66
			0.00			1" Ice	3.62	7.87	129.00
(2) SBNHH-1D65B w/ Mount Pipe	C	From Leg	3.00	0.0000	169.00	No Ice	8.42	7.09	66.55
			0.00			1/2" Ice	8.98	8.27	135.68
			0.00			1" Ice	9.50	9.17	212.84
RRH2x60-700	A	From Leg	3.00	0.0000	169.00	No Ice	3.50	1.82	60.00
			0.00			1/2" Ice	3.76	2.05	82.72
			0.00			1" Ice	4.03	2.29	109.06
RRH2x60-700	B	From Leg	3.00	0.0000	169.00	No Ice	3.50	1.82	60.00
			0.00			1/2" Ice	3.76	2.05	82.72
			0.00			1" Ice	4.03	2.29	109.06
RRH2x60-700	C	From Leg	3.00	0.0000	169.00	No Ice	3.50	1.82	60.00
			0.00			1/2" Ice	3.76	2.05	82.72
			0.00			1" Ice	4.03	2.29	109.06
RRH2x60 PCS	A	From Leg	3.00	0.0000	169.00	No Ice	2.15	1.35	55.00
			0.00			1/2" Ice	2.34	1.50	72.75
			0.00			1" Ice	2.54	1.67	93.35
RRH2x60 PCS	B	From Leg	3.00	0.0000	169.00	No Ice	2.15	1.35	55.00
			0.00			1/2" Ice	2.34	1.50	72.75
			0.00			1" Ice	2.54	1.67	93.35
RRH2x60 PCS	C	From Leg	3.00	0.0000	169.00	No Ice	2.15	1.35	55.00
			0.00			1/2" Ice	2.34	1.50	72.75
			0.00			1" Ice	2.54	1.67	93.35
B66A RRH 4X45	A	From Leg	3.00	0.0000	169.00	No Ice	2.66	1.59	64.00
			0.00			1/2" Ice	2.88	1.77	84.35
			0.00			1" Ice	3.10	1.96	107.85
B66A RRH 4X45	B	From Leg	3.00	0.0000	169.00	No Ice	2.66	1.59	64.00
			0.00			1/2" Ice	2.88	1.77	84.35
			0.00			1" Ice	3.10	1.96	107.85
B66A RRH 4X45	C	From Leg	3.00	0.0000	169.00	No Ice	2.66	1.59	64.00
			0.00			1/2" Ice	2.88	1.77	84.35
			0.00			1" Ice	3.10	1.96	107.85
UBFIX	A	From Leg	3.00	0.0000	169.00	No Ice	0.65	0.54	20.00
			0.00			1/2" Ice	0.76	0.65	26.42
			0.00			1" Ice	0.88	0.76	34.58
UBFIX	B	From Leg	3.00	0.0000	169.00	No Ice	0.65	0.54	20.00
			0.00			1/2" Ice	0.76	0.65	26.42
			0.00			1" Ice	0.88	0.76	34.58
UBFIX	C	From Leg	3.00	0.0000	169.00	No Ice	0.65	0.54	20.00
			0.00			1/2" Ice	0.76	0.65	26.42
			0.00			1" Ice	0.88	0.76	34.58
RFS DB-T1-6Z-8AB-0Z	A	From Leg	1.50	0.0000	169.00	No Ice	4.80	2.00	44.00
			0.00			1/2" Ice	5.07	2.19	80.13
			0.00			1" Ice	5.35	2.39	120.22
RFS DB-T1-6Z-8AB-0Z	B	From Leg	1.50	0.0000	169.00	No Ice	4.80	2.00	44.00
			0.00			1/2" Ice	5.07	2.19	80.13
			0.00			1" Ice	5.35	2.39	120.22

Rohn 6'x15' Boom Gate (3) (SPRINT)	A	None		0.0000	150.00	No Ice	53.20	53.20	1790.00
						1/2" Ice	63.30	63.30	2230.00
						1" Ice	73.40	73.40	2670.00
(2) APXVTM14 w/mount pipe	A	From Leg	4.00	0.0000	150.00	No Ice	6.65	5.03	91.90
			0.00			1/2" Ice	7.14	5.89	147.31

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586	Job	CT2171 Modifications	Page	9 of 15
	Project	193 ft Guyed Tower	Date	09:11:36 05/06/22
	Client	AT&T	Designed by	kw

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			Horz	Vert						
			ft	ft	°	ft	ft ²	ft ²	lb	
(2) APXVTM14 w/mount pipe	B	From Leg	0.00	4.00	0.0000	150.00	1" Ice	7.60	6.63	209.47
			4.00	0.00			No Ice	6.65	5.03	91.90
			0.00	0.00			1/2" Ice	7.14	5.89	147.31
			0.00	0.00			1" Ice	7.60	6.63	209.47
(2) APXVTM14 w/mount pipe	C	From Leg	4.00	0.00	0.0000	150.00	No Ice	6.65	5.03	91.90
			0.00	0.00			1/2" Ice	7.14	5.89	147.31
			0.00	0.00			1" Ice	7.60	6.63	209.47
			0.00	0.00			1" Ice	7.60	6.63	209.47
FD-RRH4x40 1900	A	From Leg	3.00	0.00	0.0000	150.00	No Ice	2.24	2.32	60.00
			0.00	0.00			1/2" Ice	2.44	2.53	83.13
			0.00	0.00			1" Ice	2.65	2.74	109.50
			0.00	0.00			1" Ice	2.65	2.74	109.50
FD-RRH4x40 1900	B	From Leg	3.00	0.00	0.0000	150.00	No Ice	2.24	2.32	60.00
			0.00	0.00			1/2" Ice	2.44	2.53	83.13
			0.00	0.00			1" Ice	2.65	2.74	109.50
			0.00	0.00			1" Ice	2.65	2.74	109.50
FD-RRH4x40 1900	C	From Leg	3.00	0.00	0.0000	150.00	No Ice	2.24	2.32	60.00
			0.00	0.00			1/2" Ice	2.44	2.53	83.13
			0.00	0.00			1" Ice	2.65	2.74	109.50
			0.00	0.00			1" Ice	2.65	2.74	109.50
FD-RRH2x50 800	A	From Leg	3.00	0.00	0.0000	150.00	No Ice	2.06	1.93	64.00
			0.00	0.00			1/2" Ice	2.24	2.11	86.12
			0.00	0.00			1" Ice	2.43	2.29	111.30
			0.00	0.00			1" Ice	2.43	2.29	111.30
FD-RRH2x50 800	B	From Leg	3.00	0.00	0.0000	150.00	No Ice	2.06	1.93	64.00
			0.00	0.00			1/2" Ice	2.24	2.11	86.12
			0.00	0.00			1" Ice	2.43	2.29	111.30
			0.00	0.00			1" Ice	2.43	2.29	111.30
FD-RRH2x50 800	C	From Leg	3.00	0.00	0.0000	150.00	No Ice	2.06	1.93	64.00
			0.00	0.00			1/2" Ice	2.24	2.11	86.12
			0.00	0.00			1" Ice	2.43	2.29	111.30
			0.00	0.00			1" Ice	2.43	2.29	111.30
FZHN	A	From Leg	3.00	0.00	0.0000	150.00	No Ice	2.07	0.78	59.52
			0.00	0.00			1/2" Ice	2.25	0.90	74.83
			0.00	0.00			1" Ice	2.43	1.03	92.75
			0.00	0.00			1" Ice	2.43	1.03	92.75
FZHN	B	From Leg	3.00	0.00	0.0000	150.00	No Ice	2.07	0.78	59.52
			0.00	0.00			1/2" Ice	2.25	0.90	74.83
			0.00	0.00			1" Ice	2.43	1.03	92.75
			0.00	0.00			1" Ice	2.43	1.03	92.75
FZHN	C	From Leg	3.00	0.00	0.0000	150.00	No Ice	2.07	0.78	59.52
			0.00	0.00			1/2" Ice	2.25	0.90	74.83
			0.00	0.00			1" Ice	2.43	1.03	92.75
			0.00	0.00			1" Ice	2.43	1.03	92.75

3' Side Mount Standoff	B	From Leg	1.50	0.00	0.0000	121.00	No Ice	1.50	1.50	45.00
			0.00	0.00			1/2" Ice	2.20	2.20	70.00
			0.00	0.00			1" Ice	2.90	2.90	95.00
			0.00	0.00			1" Ice	2.90	2.90	95.00
10' Dipole	B	From Leg	3.00	0.00	0.0000	123.00	No Ice	3.39	3.39	25.00
			0.00	0.00			1/2" Ice	4.97	4.97	53.13
			0.00	0.00			1" Ice	5.57	5.57	87.92
			0.00	0.00			1" Ice	5.57	5.57	87.92
3' Side Mount Standoff	C	From Leg	1.50	0.00	0.0000	113.00	No Ice	1.50	1.50	45.00
			0.00	0.00			1/2" Ice	2.20	2.20	70.00
			0.00	0.00			1" Ice	2.90	2.90	95.00
			0.00	0.00			1" Ice	2.90	2.90	95.00
10' Dipole	C	From Leg	3.00	0.00	0.0000	113.00	No Ice	3.43	3.43	25.00
			0.00	0.00			1/2" Ice	4.97	4.97	53.13
			0.00	0.00			1" Ice	5.57	5.57	87.92
			0.00	0.00			1" Ice	5.57	5.57	87.92
3' Side Mount Standoff	B	From Leg	1.50	0.00	0.0000	111.00	No Ice	1.50	1.50	45.00
			0.00	0.00			1/2" Ice	2.20	2.20	70.00
			0.00	0.00			1" Ice	2.90	2.90	95.00
			0.00	0.00			1" Ice	2.90	2.90	95.00
Omni 3"x20'	B	From Leg	3.00	0.00	0.0000	118.00	No Ice	6.00	6.00	50.00
			0.00	0.00			1/2" Ice	8.03	8.03	93.17
			0.00	0.00			1" Ice	10.08	10.08	149.01
			0.00	0.00			1" Ice	10.08	10.08	149.01
3' Side Mount Standoff	B	From Leg	1.50	0.00	0.0000	106.00	No Ice	1.50	1.50	45.00
			0.00	0.00			1/2" Ice	2.20	2.20	70.00
			0.00	0.00			1" Ice	2.90	2.90	95.00
			0.00	0.00			1" Ice	2.90	2.90	95.00
Omni 3"x20'	B	From Leg	3.00	0.00	0.0000	98.00	No Ice	6.00	6.00	50.00

<p style="text-align: center;">tnxTower</p> <p style="text-align: center;">Hudson Design Group LLC</p> <p style="text-align: center;">45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586</p>	Job	CT2171 Modifications	Page	10 of 15
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	Client	AT&T	Designed by	kw

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight
			Horz Lateral	Vert					
			ft	ft	°	ft	ft ²	ft ²	lb
			0.00			1/2" Ice	8.03	8.03	93.17
			0.00			1" Ice	10.08	10.08	149.01
3' Side Mount Standoff	A	From Leg	1.50		0.0000	No Ice	1.50	1.50	45.00
			0.00			1/2" Ice	2.20	2.20	70.00
			0.00			1" Ice	2.90	2.90	95.00
Omni 3"x20'	A	From Leg	3.00		0.0000	No Ice	6.00	6.00	50.00
			0.00			1/2" Ice	8.03	8.03	93.17
			0.00			1" Ice	10.08	10.08	149.01

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy
3	1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy
4	1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy
5	1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy
6	1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy
7	1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy
8	1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy
9	1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy
10	1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy
11	1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy
12	1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy
13	1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy
14	1.2 Dead+1.0 Ice+1.0 Temp+Guy
15	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy
16	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy
17	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy
18	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy
19	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy
20	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy
21	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy
22	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy
23	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy
24	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy
25	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy
26	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp+1.0 Guy
27	Dead+Wind 0 deg - Service+Guy
28	Dead+Wind 30 deg - Service+Guy
29	Dead+Wind 60 deg - Service+Guy
30	Dead+Wind 90 deg - Service+Guy
31	Dead+Wind 120 deg - Service+Guy
32	Dead+Wind 150 deg - Service+Guy
33	Dead+Wind 180 deg - Service+Guy
34	Dead+Wind 210 deg - Service+Guy
35	Dead+Wind 240 deg - Service+Guy
36	Dead+Wind 270 deg - Service+Guy
37	Dead+Wind 300 deg - Service+Guy
38	Dead+Wind 330 deg - Service+Guy

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Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb	
Mast	Max. Vert	10	175812.37	73.22	1.99	
	Max. H _x	12	130707.21	755.55	432.87	
	Max. H _z	4	131816.24	-816.53	473.20	
	Max. M _x	1	0.00	2.00	6.58	
	Max. M _z	1	0.00	2.00	6.58	
	Max. Torsion	13	409.95	465.77	363.55	
	Min. Vert	1	98936.84	2.00	6.58	
	Min. H _x	4	131816.24	-816.53	473.20	
	Min. H _z	8	132151.51	8.53	-863.51	
	Min. M _x	1	0.00	2.00	6.58	
	Min. M _z	1	0.00	2.00	6.58	
	Min. Torsion	7	-688.14	-44.15	-525.07	
	Guy C @ 138.5 ft Elev 1 ft Azimuth 240 deg	Max. Vert	10	-443.68	-195.15	112.58
		Max. H _x	10	-443.68	-195.15	112.58
Max. H _z		3	-54497.40	-40486.64	24023.16	
Min. Vert		3	-54497.40	-40486.64	24023.16	
Min. H _x		3	-54497.40	-40486.64	24023.16	
Min. H _z		10	-443.68	-195.15	112.58	
Guy B @ 137 ft Elev 0 ft Azimuth 120 deg	Max. Vert	6	-492.59	218.04	125.79	
	Max. H _x	11	-54320.73	40225.11	22589.17	
	Max. H _z	13	-53846.67	39341.97	23314.57	
	Min. Vert	11	-54320.73	40225.11	22589.17	
	Min. H _x	6	-492.59	218.04	125.79	
	Min. H _z	6	-492.59	218.04	125.79	
Guy A @ 138 ft Elev -4 ft Azimuth 0 deg	Max. Vert	2	-533.27	-0.01	-270.25	
	Max. H _x	10	-48440.41	880.59	-40363.52	
	Max. H _z	2	-533.27	-0.01	-270.25	
	Min. Vert	9	-56253.95	577.87	-46987.16	
	Min. H _x	6	-47150.10	-835.47	-39291.17	
	Min. H _z	9	-56253.95	577.87	-46987.16	
Guy C @ 90 ft Elev 1 ft Azimuth 240 deg	Max. Vert	10	-823.47	-1033.80	600.87	
	Max. H _x	10	-823.47	-1033.80	600.87	
	Max. H _z	3	-20317.55	-19976.85	11681.45	
	Min. Vert	3	-20317.55	-19976.85	11681.45	
	Min. H _x	3	-20317.55	-19976.85	11681.45	
	Min. H _z	10	-823.47	-1033.80	600.87	
Guy B @ 90 ft Elev 1 ft Azimuth 120 deg	Max. Vert	6	-1411.03	2036.59	1179.91	
	Max. H _x	11	-18541.49	18324.51	10427.42	
	Max. H _z	11	-18541.49	18324.51	10427.42	
	Min. Vert	11	-18541.49	18324.51	10427.42	
	Min. H _x	6	-1411.03	2036.59	1179.91	
	Min. H _z	6	-1411.03	2036.59	1179.91	
Guy A @ 89 ft Elev -2 ft Azimuth 0 deg	Max. Vert	2	-1275.39	-1.48	-1852.34	
	Max. H _x	11	-11728.47	356.47	-12518.49	
	Max. H _z	2	-1275.39	-1.48	-1852.34	
	Min. Vert	9	-21381.94	130.28	-23150.58	

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	Project	193 ft Guyed Tower	Date	09:11:36 05/06/22
	Client	AT&T	Designed by	kw

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
	Min. H _x	5	-11721.25	-357.82	-12510.64
	Min. H _z	9	-21381.94	130.28	-23150.58

Tower Mast Reaction Summary

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
Dead Only	98936.84	-2.00	-6.58	0.00	0.00	87.19
1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy	170951.42	-5.26	-208.47	0.00	0.00	66.41
1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy	160442.89	502.37	-237.03	0.00	0.00	650.98
1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy	131816.24	816.53	-473.20	0.00	0.00	522.56
1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy	157593.46	486.87	-290.14	0.00	0.00	109.47
1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy	169416.88	207.79	89.77	0.00	0.00	441.05
1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy	156815.94	44.15	525.07	0.00	0.00	688.14
1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy	132151.51	-8.53	863.51	0.00	0.00	213.04
1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy	162843.57	96.95	477.91	0.00	0.00	-371.06
1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy	175812.37	-73.22	-1.99	0.00	0.00	-256.54
1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy	158470.90	-485.13	-295.51	0.00	0.00	168.39
1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy	130707.21	-755.55	-432.87	0.00	0.00	-186.38
1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy	155570.75	-465.77	-363.55	0.00	0.00	-409.95
1.2 Dead+1.0 Ice+1.0 Temp+Guy	166771.05	-6.64	-37.77	0.00	0.00	146.04
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp+1.0 Guy	167892.49	-6.59	-281.12	0.00	0.00	117.07
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp+1.0 Guy	167688.25	107.11	-251.39	0.00	0.00	264.51
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp+1.0 Guy	167540.31	192.31	-150.59	0.00	0.00	271.15
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp+1.0 Guy	167681.80	220.43	-28.09	0.00	0.00	215.02
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp+1.0 Guy	167894.74	192.07	74.25	0.00	0.00	248.67
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp+1.0 Guy	167708.35	115.55	149.73	0.00	0.00	283.74
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp+1.0 Guy	167590.25	-7.12	187.13	0.00	0.00	174.18
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp+1.0 Guy	167773.56	-138.76	164.92	0.00	0.00	25.28
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp+1.0 Guy	167999.63	-221.59	83.18	0.00	0.00	18.39
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp+1.0 Guy	167771.51	-233.87	-28.07	0.00	0.00	75.17
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp+1.0 Guy	167594.56	-190.33	-141.66	0.00	0.00	41.96

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586	Job	CT2171 Modifications	Page	13 of 15
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	Client	AT&T	Designed by	kw

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
deg+1.0 Ice+1.0 Temp+1.0 Guy 1.2 Dead+1.0 Wind 330	167719.11	-111.38	-235.93	0.00	0.00	6.52
deg+1.0 Ice+1.0 Temp+1.0 Guy Dead+Wind 0 deg - Service+Guy	99371.34	-1.96	-199.84	0.00	0.00	72.22
Dead+Wind 30 deg - Service+Guy	99305.72	105.69	-192.03	0.00	0.00	178.01
Dead+Wind 60 deg - Service+Guy	99230.81	180.16	-110.38	0.00	0.00	162.22
Dead+Wind 90 deg - Service+Guy	99218.44	196.84	-6.13	0.00	0.00	84.14
Dead+Wind 120 deg - Service+Guy	99231.77	158.46	84.02	0.00	0.00	141.90
Dead+Wind 150 deg - Service+Guy	99141.59	92.72	152.93	0.00	0.00	186.54
Dead+Wind 180 deg - Service+Guy	99099.35	-2.25	188.07	0.00	0.00	101.95
Dead+Wind 210 deg - Service+Guy	99170.43	-111.66	177.19	0.00	0.00	-4.80
Dead+Wind 240 deg - Service+Guy	99278.07	-183.02	95.47	0.00	0.00	10.29
Dead+Wind 270 deg - Service+Guy	99239.75	-201.01	-6.11	0.00	0.00	89.14
Dead+Wind 300 deg - Service+Guy	99229.65	-164.24	-99.07	0.00	0.00	31.05
Dead+Wind 330 deg - Service+Guy	99295.25	-95.42	-167.62	0.00	0.00	-13.19

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	193 - 180	3.626	35	0.2994	0.0406
T2	180 - 160	2.831	35	0.2901	0.0376
T3	160 - 140	1.791	34	0.1995	0.0277
T4	140 - 120	1.186	34	0.1259	0.0258
T5	120 - 100	0.788	34	0.0776	0.0209
T6	100 - 80	0.547	34	0.0373	0.0173
T7	80 - 60	0.448	34	0.0247	0.0208
T8	60 - 40	0.337	34	0.0294	0.0180
T9	40 - 20	0.212	34	0.0254	0.0114
T10	20 - 5	0.124	34	0.0266	0.0233
T11	5 - 0	0.033	34	0.0303	0.0112

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
191.00	Rohn 6'x12' Boom Gate (3)	35	3.502	0.2996	0.0403	94817
190.00	Omni 3"x20'	35	3.440	0.2997	0.0402	94817
182.00	Omni 3"x6'	35	2.951	0.2942	0.0384	42252

<p style="text-align: center;">tnxTower</p> <p style="text-align: center;">Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586</p>	Job	CT2171 Modifications	Page	14 of 15
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Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
180.00	Rohn 6'x15' Boom Gate (3)	35	2.831	0.2901	0.0376	33814
169.00	SM 503-1	34	2.209	0.2459	0.0319	12653
162.58	Guy	34	1.901	0.2125	0.0287	9221
150.00	Rohn 6'x15' Boom Gate (3)	34	1.445	0.1577	0.0262	12786
123.00	10' Dipole	34	0.839	0.0842	0.0218	26839
121.00	3' Side Mount Standoff	34	0.805	0.0797	0.0212	26691
118.00	Omni 3"x20'	34	0.757	0.0733	0.0202	26527
117.00	Omni 3"x20'	34	0.741	0.0711	0.0199	26486
113.00	3' Side Mount Standoff	34	0.684	0.0623	0.0187	26344
111.00	3' Side Mount Standoff	34	0.658	0.0579	0.0182	26274
107.00	3' Side Mount Standoff	34	0.612	0.0497	0.0174	25881
106.00	3' Side Mount Standoff	34	0.601	0.0477	0.0173	25711
102.58	Guy	34	0.568	0.0415	0.0170	25304
98.00	Omni 3"x20'	34	0.532	0.0346	0.0175	28439
42.58	Guy	34	0.226	0.0259	0.0109	71846

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T1	193 - 180	Leg	ROHN 2.5 EH (CT2171)	1	-30595.40	136215.00	22.5	Pass
T2	180 - 160	Leg	ROHN 2.5 EH mod (CT2171)	55	-142450.00	159174.00	89.5	Pass
T3	160 - 140	Leg	ROHN 2.5 EH mod (CT2171)	138	-134379.00	157228.00	85.5	Pass
T4	140 - 120	Leg	ROHN 2.5 EH (CT2171)	218	-102940.00	131467.00	78.3	Pass
T5	120 - 100	Leg	ROHN 3 EH	299	-113542.00	130192.00	87.2	Pass
T6	100 - 80	Leg	ROHN 3 EH	380	-106142.00	125535.00	84.6	Pass
T7	80 - 60	Leg	ROHN 3 EH	437	-82717.20	127578.00	64.8	Pass
T8	60 - 40	Leg	ROHN 3 EH	493	-77087.10	123752.00	62.3	Pass
T9	40 - 20	Leg	ROHN 3 EH	550	-72460.50	112178.00	64.6	Pass
T10	20 - 5	Leg	ROHN 3 EH	583	-59480.10	112178.00	53.0	Pass
T11	5 - 0	Leg	ROHN 3 EH	611	-63785.10	128785.00	49.5	Pass
T1	193 - 180	Diagonal	L2x2x1/4	15	-5251.96	27793.30	18.9	Pass
T2	180 - 160	Diagonal	L2x2x1/4	86	-13227.50	27912.30	47.4	Pass
T3	160 - 140	Diagonal	L2x2x1/4	209	-7417.30	27912.30	26.6	Pass
T4	140 - 120	Diagonal	L2x2x1/4	290	-3343.81	27842.60	12.0	Pass
T5	120 - 100	Diagonal	L2x2x1/4	307	-5019.89	27940.00	18.0	Pass
T6	100 - 80	Diagonal	ROHN TS1.5x16 ga	431	-2824.72	6033.25	46.8	Pass
T7	80 - 60	Diagonal	L1 3/4x1 3/4x3/16	490	-2315.62	17838.30	13.0	Pass
T8	60 - 40	Diagonal	ROHN TS1.5x11 ga	502	-2726.84	11447.80	23.8	Pass
T9	40 - 20	Diagonal	ROHN TS1.5x16 ga	580	-2581.36	6033.25	42.8	Pass
T10	20 - 5	Diagonal	ROHN TS1.5x11 ga	607	-1078.83	11447.80	9.4	Pass
T11	5 - 0	Horizontal	L4x4x1/4	618	-443.15	59126.20	2.1	Pass
T1	193 - 180	Secondary Horizontal	L2x2x1/4	54	-1752.69	24926.30	7.0	Pass
T2	180 - 160	Secondary Horizontal	L2x2x1/4	79	10656.50	30391.20	35.1	Pass
T3	160 - 140	Secondary Horizontal	L2x2x1/4	214	3506.04	30391.20	11.5	Pass
T4	140 - 120	Secondary Horizontal	L2x2x1/4	286	2383.00	30391.20	7.8	Pass
T5	120 - 100	Secondary Horizontal	L2x2x1/4	322	4765.02	30391.20	15.7	Pass
T1	193 - 180	Top Girt	L2x2x1/4	4	-141.58	21227.30	0.7	Pass
T2	180 - 160	Top Girt	L2x2x1/4	59	-1204.16	21337.70	5.6	Pass
T3	160 - 140	Top Girt	ROHN TS1.5x11 ga	140	705.01	19665.40	3.6	Pass
T4	140 - 120	Top Girt	L2x2x1/4	222	1543.03	30391.20	5.1	Pass
T5	120 - 100	Top Girt	L2x2x1/4	301	1284.15	30391.20	4.2	Pass
T6	100 - 80	Top Girt	ROHN TS1.5x16 ga	384	760.34	9931.96	7.7	Pass
T7	80 - 60	Top Girt	ROHN TS1.5x11 ga	439	1062.82	19665.40	5.4	Pass
T8	60 - 40	Top Girt	ROHN TS1.5x11 ga	496	820.93	19665.40	4.2	Pass
T9	40 - 20	Top Girt	ROHN TS1.5x16 ga	555	860.64	9931.96	8.7	Pass
T10	20 - 5	Top Girt	ROHN TS1.5x11 ga	586	424.60	19665.40	2.2	Pass

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586	Job	CT2171 Modifications	Page	15 of 15
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Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail	
T11	5 - 0	Top Girt	L4x4x1/4	614	7953.91	62856.00	12.7	Pass	
T1	193 - 180	Bottom Girt	L2x2x1/4	8	-730.97	21227.30	3.4	Pass	
T2	180 - 160	Bottom Girt	L2x2x1/4	62	-4223.60	21337.70	19.8	Pass	
T3	160 - 140	Bottom Girt	ROHN TS1.5x11 ga	142	816.55	19665.40	4.2	Pass	
T4	140 - 120	Bottom Girt	L2x2x1/4	223	1188.79	30391.20	3.9	Pass	
T5	120 - 100	Bottom Girt	L2x2x1/4	305	2519.60	30391.20	8.3	Pass	
T6	100 - 80	Bottom Girt	ROHN TS1.5x16 ga	387	421.52	9931.96	4.2	Pass	
T7	80 - 60	Bottom Girt	ROHN TS1.5x11 ga	442	859.22	19665.40	4.4	Pass	
T8	60 - 40	Bottom Girt	ROHN TS1.5x11 ga	500	1323.82	19665.40	6.7	Pass	
T9	40 - 20	Bottom Girt	ROHN TS1.5x16 ga	558	297.56	9931.96	3.0	Pass	
T10	20 - 5	Bottom Girt	ROHN TS1.5x11 ga	590	6031.81	19665.40	30.7	Pass	
T2	180 - 160	Guy A@162.583	7/8	633	38448.60	47820.00	80.4	Pass	
T5	120 - 100	Guy A@102.583	5/8	645	11981.00	25440.00	47.1	Pass	
T8	60 - 40	Guy A@42.5833	1/2	657	5088.27	16140.00	31.5	Pass	
T2	180 - 160	Guy B@162.583	7/8	630	37575.90	47820.00	78.6	Pass	
T5	120 - 100	Guy B@102.583	5/8	642	10647.80	25440.00	41.9	Pass	
T8	60 - 40	Guy B@42.5833	1/2	653	4631.61	16140.00	28.7	Pass	
T2	180 - 160	Guy C@162.583	7/8	626	37750.40	47820.00	78.9	Pass	
T5	120 - 100	Guy C@102.583	5/8	638	11642.20	25440.00	45.8	Pass	
T8	60 - 40	Guy C@42.5833	1/2	650	5237.36	16140.00	32.4	Pass	
T2	180 - 160	Torque Arm Top@162.583	C15x50	636	10810.60	476280.00	60.2	Pass	
T5	120 - 100	Torque Arm Top@102.583	C15x40	648	3135.56	382320.00	21.2	Pass	
T8	60 - 40	Torque Arm Top@42.5833	C12x25	652	-1998.77	204038.00	10.5	Pass	
							Summary		
							Leg (T2)	89.5	Pass
							Diagonal (T2)	47.4	Pass
							Horizontal (T11)	2.1	Pass
							Secondary Horizontal (T2)	35.1	Pass
							Top Girt (T11)	12.7	Pass
							Bottom Girt (T10)	30.7	Pass
							Guy A (T2)	80.4	Pass
							Guy B (T2)	78.6	Pass
							Guy C (T2)	78.9	Pass
							Torque Arm Top (T2)	60.2	Pass
							RATING =	89.5	Pass



HUDSON
Design Group LLC

ADDITIONAL CALCULATIONS

SITE NUMBER: CT2171
FA CODE: 10035116
SITE NAME: MONTVILLE EAST

5/6/2022

Tower Mast Reactions

Axial Load $P := 175.8 \cdot \text{kip}$
Shear $H := 1.0 \cdot \text{kip}$
Moment $M := 0.0 \cdot \text{ft} \cdot \text{kip}$

Foundation Information

Depth of Pad $D := 5.0 \cdot \text{ft}$
Width of Pad $W := 7.0 \cdot \text{ft}$
Length of Pad $L := 7.0 \cdot \text{ft}$
Thickness of Pad $T := 1.75 \cdot \text{ft}$
Pier Diameter $P_{\text{dia}} := 2.5 \cdot \text{ft}$
Pier Extend above Grade $E := 0.5 \cdot \text{ft}$

Material Property

Rebar Tensile $F_y := 60 \cdot \text{ksi}$
Concrete Strength $f'_c := 3000 \cdot \text{psi}$
Unit Weight of Concrete $r_{\text{conc}} := 150 \cdot \text{pcf}$
Concrete Clear Cover $C_{\text{cov}} := 3 \cdot \text{in}$

Soil Property

Unit Weight of Soil $r_{\text{soil}} := 125 \cdot \text{pcf}$
 $r_{\text{submerged}} := 63 \cdot \text{pcf}$
Unit Weight of Water $r_{\text{water}} := 62.4 \cdot \text{pcf}$
Friction Angle $\phi := 35^\circ$
Ultimate Bearing $B_{\text{ult}} := 12.0 \cdot \text{ksf}$
Base Friction $\mu := 0.45$
Ground Water Below Grade $G_{\text{water}} := 5 \cdot \text{ft}$
Shear $\phi_s := 0.6$
Bearing $\phi_s := 0.6$

$$\text{FS}_{\text{Bearing}} := \frac{\text{Bearing}_{\phi_s} \cdot B_{\text{ult}}}{\text{Bearing}_{\text{Pressure}}} \quad \text{FS}_{\text{Bearing}} = 1.6$$

$$\text{Rating}_{\text{Bearing}} = 62.6\%$$

$$\text{FS}_{\text{Sliding}} := \frac{\text{Shear}_{\phi_s} \cdot \mu \cdot (P + 1.2 \cdot \text{Total}_{\text{Weight}})}{H} \quad \text{FS}_{\text{Sliding}} = 58.3$$

$$\text{Rating}_{\text{Sliding}} = 1.7\%$$

SITE NUMBER: CT2171
FA CODE: 10035116
SITE NAME: MONTVILLE EAST

5/6/2022

Inner Guy Anchor Reactions

Shear $F_{SHEAR} := 23.2 \cdot \text{kip}$
Uplift Load $F_{UPLIFT} := 21.3 \cdot \text{kip}$

Tower Height $T_{ht} := 193.0 \cdot \text{ft}$
Guy Anchor Radius $R := 89.0 \cdot \text{ft}$

Guy Anchor

Depth of Anchor Block $D_{AB} := 8.0 \cdot \text{ft}$
Width of Anchor Block $W_{AB} := 6.0 \cdot \text{ft}$
Length of Anchor Block $L_{AB} := 12.0 \cdot \text{ft}$
Thickness of Anchor Block $T_{AB} := 4.0 \cdot \text{ft}$

Material Property

Rebar Tensile $F_y := 60 \cdot \text{ksi}$
Concrete Strength $f'_c := 3000 \cdot \text{psi}$
Unit Weight of Concrete $r_{conc} := 150 \cdot \text{pcf}$
Concrete Clear Cover $C_{cov} := 3 \cdot \text{in}$

Soil Property

Unit Weight of Soil $r_{soil} := 125 \cdot \text{pcf}$
 $r_{submerged} := 63 \cdot \text{pcf}$
Internal Angle of Friction $\phi := 35^\circ$
Ultimate Bearing $B_{ult} := 12.0 \cdot \text{ksf}$
Base Friction $\mu := 0.45$
Shear_ $\phi_s := 0.75$
Uplift_ $\phi_s := 0.75$
Dead_Load_ $\phi_s := 0.9$

$$FS_Uplift := \frac{Uplift_ \phi_s \cdot Uplift_ Resistance}{F_{UPLIFT}} \quad FS_Uplift = 3.47$$

$$Rating_Uplift = 28.8\%$$

$$FS_Shear := \frac{Shear_ \phi_s \cdot F_{PASSIVE}}{F_{SHEAR}} \quad FS_Shear = 4.3$$

$$Rating_Shear = 23.3\%$$

SITE NUMBER: CT2171
 FA CODE: 10035116
 SITE NAME: MONTVILLE EAST

5/6/2022

Outer Guy Anchor Reactions

Shear $F_{SHEAR} := 47.0 \cdot kip$
 Uplift Load $F_{UPLIFT} := 56.3 \cdot kip$

Tower Height $T_{ht} := 193.0 \cdot ft$
 Guy Anchor Radius $R := 138.0 \cdot ft$

Guy Anchor

Depth of Anchor Block $D_{AB} := 10.0 \cdot ft$
 Width of Anchor Block $W_{AB} := 5.0 \cdot ft$
 Length of Anchor Block $L_{AB} := 9.0 \cdot ft$
 Thickness of Anchor Block $T_{AB} := 2.0 \cdot ft$

Material Property

Rebar Tensile $F_y := 60 \cdot ksi$
 Concrete Strength $f'_c := 3000 \cdot psi$
 Unit Weight of Concrete $r_{conc} := 150 \cdot pcf$
 Concrete Clear Cover $C_{cov} := 3 \cdot in$

Soil Property

Unit Weight of Soil $r_{soil} := 125 \cdot pcf$
 $r_{submerged} := 63 \cdot pcf$
 Internal Angle of Friction $\phi := 35^\circ$
 Ultimate Bearing $B_{ult} := 12.0 \cdot ksf$
 Base Friction $\mu := 0.45$
 Shear $\phi_s := 0.75$
 Uplift $\phi_s := 0.75$
 Dead_Load $\phi_s := 0.9$

$$FS_Shear := \frac{Shear_phi_s \cdot F_{PASSIVE}}{F_{SHEAR}} \quad FS_Shear = 1.2$$

Rating_Shear = 83.9%

$$FS_Uplift := \frac{Uplift_phi_s \cdot Uplift_Resistance}{F_{UPLIFT}} \quad FS_Uplift = 2.14$$

Rating_Uplift = 46.8%

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



Site Name:	MONTVILLE EAST
AT&T Mobility FA#	10035116
Site ID:	CTL02171
Project Name:	5G NR 1SR CBAND
Address:	57 COOK DRIVE, UNCASVILLE, CT 06382
County:	NEW LONDON
Latitude:	41.4749919
Longitude:	-72.1050269
Structure Type:	GUYED TOWER
Property Owner:	NA
Property Contact:	NA

AT&T Existing Facility

Report Information

Report Writer:	Monti Kumar	Report Generated Date:	04-11-2023
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Site Compliance Statement

Compliance Status	Compliant
Cumulative General Population % MPE (Ground Level)	0.2184%

April 11, 2023

Emissions Analysis for Site: **CTL02171– MONTVILLE EAST**

MobileComm Professionals, Inc was directed to analyze the proposed AT&T facility located at **57 COOK DRIVE, UNCASVILLE, CT 06382**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

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

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

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

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the 700 and 850 MHz Bands are approximately $0.467 mW/cm^2$ and $0.567 mW/cm^2$ respectively or $466.667 \mu W/cm^2$ and $566.667 \mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS), 2300 MHz (WCS), 3540 MHz (DoD Band) and 3840 MHz (C-Band) bands is $1 mW/cm^2$ or $1000 \mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

1. Theoretical Calculations: Methods and Procedures

MobileComm Professionals, Inc has performed theoretical modeling of the site using a software tool, RoofMaster® Version 40.12.23.2022, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

In OET 65, a far field model is presented to calculate the spatial peak power density. The RoofMaster® implementation of this model incorporates antenna manufacturer's horizontal and vertical pattern data to determine the power density in all directions. This model yields the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0-6') must be conducted. RoofMaster® calculates seven power density values between 0-6' above the specified study plane and performs a linear spatial average.

The following table details the antennas and operating parameters for the AT&T antenna system as well as any other antenna systems at the site. This is based on antenna information provided by the client and data compiled from other sources where necessary. The data below was input into Roofmaster® to perform the theoretical exposure calculations at the ground.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at ground level (0-6' spatial average). The results from highest cumulative sample point at ground level surrounding the site are displayed in the table below. The contribution from directional antennas to the maximum cumulative totals varies greatly depending on location; therefore, the contribution from one antenna sector at the highest calculated exposure point may be greater or less than other sectors since sectorized directional antennas are pointed in different directions and there is not much overlapping exposure.

The contribution to the cumulative power density and % MPE for each antenna/frequency band is listed in the table. The cumulative power density and cumulative % MPE are displayed at the bottom of the table.

2. Antenna Inventory & Power Data

Sector	Ant ID	Operator	Antenna Mfg	Antenna Model	Antenna Type	FREQ. (MHz)	TECH.	AZ. (°)	H B W (°)	Antenna Gain (dBd)	Antenna Aperture (ft)	#of Channels	Transmitter Power Per Channel (Watts)	Total ERP (Watts)	Total EIRP (Watts)	Height (ft)	Calculated Power Density (μW/cm ²)	Allowable MPE (μW/cm ²)	Calculated MPE%
A	1	AT&T	CCI	TPA65R-BU8D	Panel	700	LTE(FN)	30	73	13.45	8	4	40.00	3155.88	5177.50	180.00	0.000036	466.67	0.000008
A	1	AT&T	CCI	TPA65R-BU8D	Panel	1900	LTE/5G	30	66	15.95	8	4	40.00	5612.03	9207.04	180.00	0.000014	1000.00	0.000001
A	1	AT&T	CCI	TPA65R-BU8D	Panel	2100	LTE/5G	30	66	16.15	8	4	60.00	8814.78	14461.43	180.00	0.000007	1000.00	0.000001
A	2-1	AT&T	Ericsson	AIR 6419 B77G	Panel	3450	5G	30	11	23.5	2.55	64	54.22	12138.53	19914.34	181.77	0.000149	1000.00	0.000015
A	2-2	AT&T	Ericsson	AIR 6449 B77D	Panel	3840	5G	30	11	23.5	2.55	64	86.75	19421.64	31862.94	178.23	0.000239	1000.00	0.000024
A	3	AT&T	CCI	DMP65R-BU8D	Panel	700	LTE(B12)	30	75	12.95	8	4	40.00	2812.68	4614.45	180.00	0.000024	466.67	0.000005
A	3	AT&T	CCI	DMP65R-BU8D	Panel	850	5G	30	64	13.85	8	4	40.00	3460.35	5677.01	180.00	0.000003	566.67	0.000000
A	3	AT&T	CCI	DMP65R-BU8D	Panel	2300	LTE	30	64	15.95	8	4	25.00	3507.52	5754.40	180.00	0.000007	1000.00	0.000001
B	4	AT&T	CCI	TPA65R-BU6D	Panel	700	LTE(FN)	150	73	12.35	6	4	40.00	2449.74	4019.02	180.00	0.000067	466.67	0.000014
B	4	AT&T	CCI	TPA65R-BU6D	Panel	1900	LTE/5G	150	66	15.95	6	4	40.00	5612.03	9207.04	180.00	0.000007	1000.00	0.000001
B	4	AT&T	CCI	TPA65R-BU6D	Panel	2100	LTE/5G	150	66	16.25	6	4	60.00	9020.10	14798.28	180.00	0.000026	1000.00	0.000003
B	5-1	AT&T	Ericsson	AIR 6419 B77G	Panel	3450	5G	150	11	23.5	2.55	64	54.22	12138.53	19914.34	181.77	0.151110	1000.00	0.015111
B	5-2	AT&T	Ericsson	AIR 6449 B77D	Panel	3840	5G	150	11	23.5	2.55	64	86.75	19421.64	31862.94	178.23	0.241775	1000.00	0.024178
B	6	AT&T	CCI	DMP65R-BU6D	Panel	700	LTE(B12)	150	74	11.85	6	4	40.00	2183.33	3581.95	180.00	0.032303	466.67	0.006922
B	6	AT&T	CCI	DMP65R-BU6D	Panel	850	5G	150	63	12.45	6	4	40.00	2506.80	4112.63	180.00	0.036078	566.67	0.006367
B	6	AT&T	CCI	DMP65R-BU6D	Panel	2300	LTE	150	54	16.25	6	4	25.00	3758.37	6165.95	180.00	0.038763	1000.00	0.003876
C	7	AT&T	CCI	TPA65R-BU8D	Panel	700	LTE(FN)	260	73	13.45	8	4	40.00	3155.88	5177.50	180.00	0.039824	466.67	0.008534
C	7	AT&T	CCI	TPA65R-BU8D	Panel	1900	LTE/5G	260	66	15.95	8	4	40.00	5612.03	9207.04	180.00	0.042863	1000.00	0.004286
C	7	AT&T	CCI	TPA65R-BU8D	Panel	2100	LTE/5G	260	66	16.15	8	4	60.00	8814.78	14461.43	180.00	0.058502	1000.00	0.005850
C	8-1	AT&T	Ericsson	AIR 6419 B77G	Panel	3450	5G	260	11	23.5	2.55	64	54.22	12138.53	19914.34	181.77	0.132411	1000.00	0.013241
C	8-2	AT&T	Ericsson	AIR 6449 B77D	Panel	3840	5G	260	11	23.5	2.55	64	86.75	19421.64	31862.94	178.23	0.211856	1000.00	0.021186
C	9	AT&T	CCI	DMP65R-BU8D	Panel	700	LTE(B12)	260	75	12.95	8	4	40.00	2812.68	4614.45	180.00	0.000028	466.67	0.000006
C	9	AT&T	CCI	DMP65R-BU8D	Panel	850	5G	260	64	13.85	8	4	40.00	3460.35	5677.01	180.00	0.000003	566.67	0.000001
C	9	AT&T	CCI	DMP65R-BU8D	Panel	2300	LTE	260	64	15.95	8	4	25.00	3507.52	5754.40	180.00	0.000009	1000.00	0.000001
A	10	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	600	LTE	60	69	13.25	8	2	30.00	1130.19	1854.18	188.00	0.000100	400.00	0.000025
A	10	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	700	LTE	60	64	13.65	8	2	30.00	1239.23	2033.06	188.00	0.000195	466.67	0.000042
A	10	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	1900	GSM	60	63	16.05	8	4	30.00	4307.06	7066.12	188.00	0.000368	1000.00	0.000037
A	10	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	1900	UMTS	60	63	16.05	8	2	30.00	2153.53	3533.06	188.00	0.000184	1000.00	0.000018
A	11	T-Mobile	RFS	APX16DWV-16DWV-S-E-A20	Panel	2100	LTE	60	65	15.85	4.66	2	60.00	4113.21	6748.10	190.00	0.014830	1000.00	0.001483
B	12	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	600	LTE	170	69	13.25	8	2	30.00	1130.19	1854.18	188.00	0.000000	400.00	0.000000
B	12	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	700	LTE	170	64	13.65	8	2	30.00	1239.23	2033.06	188.00	0.000007	466.67	0.000001
B	12	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	1900	GSM	170	63	16.05	8	4	30.00	4307.06	7066.12	188.00	0.000011	1000.00	0.000001
B	12	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	1900	UMTS	170	63	16.05	8	2	30.00	2153.53	3533.06	188.00	0.000006	1000.00	0.000001
B	13	T-Mobile	RFS	APX16DWV-16DWV-S-E-A20	Panel	2100	LTE	170	65	15.85	4.66	2	60.00	4113.21	6748.10	190.00	0.018711	1000.00	0.001871
C	14	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	600	LTE	330	69	13.25	8	2	30.00	1130.19	1854.18	188.00	0.010510	400.00	0.002628
C	14	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	700	LTE	330	64	13.65	8	2	30.00	1239.23	2033.06	188.00	0.012142	466.67	0.002602
C	14	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	1900	GSM	330	63	16.05	8	4	30.00	4307.06	7066.12	188.00	0.026821	1000.00	0.002682
C	14	T-Mobile	RFS	APXVAARR24_43-U-NA20	Panel	1900	UMTS	330	63	16.05	8	2	30.00	2153.53	3533.06	188.00	0.013411	1000.00	0.001341
C	15	T-Mobile	RFS	APX16DWV-16DWV-S-E-A20	Panel	2100	LTE	330	65	15.85	4.66	2	60.00	4113.21	6748.10	190.00	0.000214	1000.00	0.000021

Table 2.1: Antenna Inventory & Power Data

*NOTE: 75% Duty Cycle and adjusted power reduction factor of 0.32 was applied to the AIR6449 & AIR6449 antennas per guidance from AT&T. Specifications were not available for the Ericsson AIR 6449 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6449 due to its similarity.

Sector	Ant ID	Operator	Antenna Mfg	Antenna Model	Antenna Type	FREQ. (MHz)	TECH.	AZ. (°)	H B W (°)	Antenna Gain (dBd)	Antenna Aperture (ft)	#of Channels	Transmitter Power Per Channel (Watts)	Total ERP (Watts)	Total EIRP (Watts)	Height (ft)	Calculated Power Density (μW/cm ²)	Allowable MPE (μW/cm ²)	Calculated MPE%
A	16	Verizon	Antel	LPA-80080/4CF	Panel	850	CDMA	30	80	12.5	4	1	40.00	633.96	1040.06	169.00	0.009793	566.67	0.001728
A	17	Verizon	CommScope	NHH-65B-R2B	Panel	700	LTE	30	65	12.75	6	4	40.00	2686.09	4406.77	169.00	0.000395	466.67	0.000085
A	17	Verizon	CommScope	NHH-65B-R2B	Panel	850	LTE	30	60	12.85	6	4	40.00	2748.65	4509.41	169.00	0.000078	566.67	0.000014
A	18	Verizon	CommScope	NHH-65B-R2B	Panel	1900	LTE	30	69	15.75	6	4	40.00	5359.45	8792.65	169.00	0.000018	1000.00	0.000002
A	18	Verizon	CommScope	NHH-65B-R2B	Panel	2100	LTE	30	64	16.25	6	4	40.00	6013.40	9865.52	169.00	0.000025	1000.00	0.000002
A	19	Verizon	Samsung	MT6407-77A	Panel	3700	5G	30	17	22.85	2.92	4	35.00	26985.35	44271.89	169.00	0.000519	1000.00	0.000052
A	20	Verizon	Antel	LPA-80080/4CF	Panel	850	CDMA	30	80	12.5	4	1	40.00	633.96	1040.06	169.00	0.000008	566.67	0.000001
B	21	Verizon	Antel	LPA-80080/4CF	Panel	850	CDMA	150	80	12.5	4	1	40.00	633.96	1040.06	169.00	0.000008	566.67	0.000001
B	22	Verizon	CommScope	NHH-65B-R2B	Panel	700	LTE	170	65	12.75	6	4	40.00	2686.09	4406.77	169.00	0.052886	466.67	0.011333
B	22	Verizon	CommScope	NHH-65B-R2B	Panel	850	LTE	170	60	12.85	6	4	40.00	2748.65	4509.41	169.00	0.053652	566.67	0.009468
B	23	Verizon	CommScope	NHH-65B-R2B	Panel	1900	LTE	170	69	15.75	6	4	40.00	5359.45	8792.65	169.00	0.005208	1000.00	0.000521
B	23	Verizon	CommScope	NHH-65B-R2B	Panel	2100	LTE	170	64	16.25	6	4	40.00	6013.40	9865.52	169.00	0.004289	1000.00	0.000429
B	24	Verizon	Samsung	MT6407-77A	Panel	3700	5G	170	17	22.85	2.92	4	35.00	26985.35	44271.89	169.00	0.351010	1000.00	0.035101
B	25	Verizon	Antel	LPA-80080/4CF	Panel	850	CDMA	150	80	12.5	4	1	40.00	633.96	1040.06	169.00	0.007734	566.67	0.001365
C	26	Verizon	Antel	LPA-80080/4CF	Panel	850	CDMA	270	80	12.5	4	1	40.00	633.96	1040.06	169.00	0.007831	566.67	0.001382
C	27	Verizon	CommScope	NHH-65B-R2B	Panel	700	LTE	295	65	12.75	6	4	40.00	2686.09	4406.77	169.00	0.000073	466.67	0.000016
C	28	Verizon	CommScope	NHH-65B-R2B	Panel	850	LTE	295	60	12.85	6	4	40.00	2748.65	4509.41	169.00	0.000013	566.67	0.000002
C	28	Verizon	CommScope	NHH-65B-R2B	Panel	1900	LTE	295	69	15.75	6	4	40.00	5359.45	8792.65	169.00	0.000028	1000.00	0.000003
C	29	Verizon	CommScope	NHH-65B-R2B	Panel	2100	LTE	295	64	16.25	6	4	40.00	6013.40	9865.52	169.00	0.000020	1000.00	0.000002
C	29	Verizon	Samsung	MT6407-77A	Panel	3700	5G	295	17	22.85	2.92	4	35.00	26985.35	44271.89	169.00	0.000141	1000.00	0.000014
C	30	Verizon	Antel	LPA-80080/4CF	Panel	850	CDMA	270	80	12.5	4	1	40.00	633.96	1040.06	169.00	0.000028	566.67	0.000005
A	31	Sprint	RFS	APXV9ERR18-C-A20	Panel	850	CDMA	330	80	11.85	6	1	20.00	272.92	447.74	151.00	0.000005	566.67	0.000001
A	31	Sprint	RFS	APXV9ERR18-C-A20	Panel	850	LTE	330	80	11.85	6	2	50.00	1364.58	2238.72	151.00	0.000024	566.67	0.000004
A	31	Sprint	RFS	APXV9ERR18-C-A20	Panel	1900	CDMA	330	80	14.85	6	5	16.00	2178.16	3573.47	151.00	0.000007	1000.00	0.000001
A	31	Sprint	RFS	APXV9ERR18-C-A20	Panel	1900	LTE	330	80	14.85	6	2	40.00	2178.16	3573.47	151.00	0.000007	1000.00	0.000001
A	32	Sprint	RFS	APXVTM14-ALU-I20	Panel	2500	LTE	330	65	16.5	4.59	8	20.00	2158.57	3541.33	151.00	0.000018	1000.00	0.000002
B	33	Sprint	RFS	APXV9ERR18-C-A20	Panel	850	CDMA	90	80	11.85	6	1	20.00	272.92	447.74	151.00	0.001159	566.67	0.000205
B	33	Sprint	RFS	APXV9ERR18-C-A20	Panel	850	LTE	90	80	11.85	6	2	50.00	1364.58	2238.72	151.00	0.005794	566.67	0.001023
B	33	Sprint	RFS	APXV9ERR18-C-A20	Panel	1900	CDMA	90	80	14.85	6	5	16.00	2178.16	3573.47	151.00	0.005269	1000.00	0.000527
B	33	Sprint	RFS	APXV9ERR18-C-A20	Panel	1900	LTE	90	80	14.85	6	2	40.00	2178.16	3573.47	151.00	0.005269	1000.00	0.000527
B	34	Sprint	RFS	APXVTM14-ALU-I20	Panel	2500	LTE	90	65	16.5	4.59	8	20.00	2158.57	3541.33	151.00	0.014011	1000.00	0.001401
C	35	Sprint	RFS	APXV9ERR18-C-A20	Panel	850	CDMA	210	80	11.85	6	1	20.00	272.92	447.74	151.00	0.002432	566.67	0.000429
C	35	Sprint	RFS	APXV9ERR18-C-A20	Panel	850	LTE	210	80	11.85	6	2	50.00	1364.58	2238.72	151.00	0.012159	566.67	0.002146
C	35	Sprint	RFS	APXV9ERR18-C-A20	Panel	1900	CDMA	210	80	14.85	6	5	16.00	2178.16	3573.47	151.00	0.010543	1000.00	0.001054
C	35	Sprint	RFS	APXV9ERR18-C-A20	Panel	1900	LTE	210	80	14.85	6	2	40.00	2178.16	3573.47	151.00	0.010543	1000.00	0.001054
C	36	Sprint	RFS	APXVTM14-ALU-I20	Panel	2500	LTE	210	65	16.5	4.59	8	20.00	2158.57	3541.33	151.00	0.018417	1000.00	0.001842

Table 2.2: Antenna Inventory & Power Data

*NOTE: 75% Duty Cycle and adjusted power reduction factor of 0.32 was applied to the AIR6449 & AIR6449 antennas per guidance from AT&T. Specifications were not available for the Ericsson AIR 6449 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6449 due to its similarity.

Sector	Ant ID	Operator	Antenna Mfg	Antenna Model	Antenna Type	FREQ. (MHz)	TECH.	AZ. (°)	H B W (°)	Antenna Gain (dBd)	Antenna Aperture (ft)	#of Channels	Transmitter Power Per Channel (Watts)	Total ERP (Watts)	Total EIRP (Watts)	Height (ft)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated MPE%
A	37	Nextel	Generic	Generic	Panel	850	LTE	0	90	12	4	2	50.00	1412.54	2317.39	134.00	0.047305	566.67	0.008348
A	38	Nextel	Generic	Generic	Panel	850	LTE	0	90	12	4	2	50.00	1412.54	2317.39	134.00	0.000147	566.67	0.000026
B	39	Nextel	Generic	Generic	Panel	850	LTE	120	90	12	4	2	50.00	1412.54	2317.39	134.00	0.057399	566.67	0.010129
B	40	Nextel	Generic	Generic	Panel	850	LTE	120	90	12	4	2	50.00	1412.54	2317.39	134.00	0.000033	566.67	0.000006
C	41	Nextel	Generic	Generic	Panel	850	LTE	240	90	12	4	2	50.00	1412.54	2317.39	134.00	0.001483	566.67	0.000262
C	42	Nextel	Generic	Generic	Panel	850	LTE	240	90	12	4	2	50.00	1412.54	2317.39	134.00	0.000343	566.67	0.000061
A	43	Clearwire	Generic	Generic	Panel	2600	LTE	0	65	15.83	6	1	60.00	2047.89	3358.55	120.00	0.015293	1000.00	0.002699
B	44	Clearwire	Generic	Generic	Panel	2600	LTE	120	65	15.83	6	1	60.00	2047.89	3358.55	120.00	0.000150	1000.00	0.000026
C	45	Clearwire	Generic	Generic	Panel	2600	LTE	240	65	15.83	6	1	60.00	2047.89	3358.55	120.00	0.000485	1000.00	0.000086
A	46	Other	Generic	Generic_OMNI_20FT	Omni	2100	LTE	360	360	2.85	20	1	60.00	103.07	169.10	188.75	0.000878	1000.00	0.000088
A	47	Other	Generic	Generic_OMNI_6FT	Omni	850	LTE	360	360	5.96	6	1	60.00	210.94	346.06	180.00	0.003255	566.67	0.000574
A	48	Other	Generic	Generic_OMNI_2FT	Omni	2100	LTE	360	360	2.85	2	1	60.00	103.07	169.10	106.00	0.020077	1000.00	0.002008
																Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	1.809876%	Calculated MPE%	0.2184%

Table 2.3: Antenna Inventory & Power Data

**NOTE: 75% Duty Cycle and adjusted power reduction factor of 0.32 was applied to the AIR6449 & AIR6449 antennas per guidance from AT&T. Specifications were not available for the Ericsson AIR 6449 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6449 due to its similarity.*

3. Compliance Summary

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

The anticipated composite MPE value for this site assuming all carriers present is 0.2184% of the allowable FCC established general public limit sampled at the ground level.

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

PROJECT INFORMATION

SCOPE OF WORK: **ITEMS TO BE MOUNTED ON THE EXISTING GUYED TOWER:**

- INSTALL AT&T ANTENNAS: AIR6419 B77G (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- INSTALL AT&T ANTENNAS: AIR6449 B77D (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- INSTALL AT&T ANTENNAS: TPA65R-BU8DA-K (TYP. OF 1 PER ALPHA & GAMMA SECTOR, TOTAL OF 2)
- INSTALL AT&T ANTENNAS: DMP65R-BU8DA (TYP. OF 1 PER ALPHA & GAMMA SECTOR, TOTAL OF 2)
- INSTALL AT&T ANTENNAS: TPA65R-BU6DA-K (BETA SECTOR, TOTAL OF 1)
- INSTALL AT&T ANTENNAS: DMP65R-BU6DA (BETA SECTOR, TOTAL OF 1)
- RELOCATED EXISTING RRUS-32 B30 (WCS) @ POS. 4 (TYP. OF 1 PER SECTOR, TOTAL OF 3)
- INSTALL RRUS-4449 B5/B12 (850/700) (TYP. OF 1 PER SECTOR, TOTAL OF 3) (ADD "Y" CABLE)
- INSTALL RRUS-4415 B25 (1900) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- INSTALL AT&T SURGE ARRESTOR DC9-48-60-24-8C-EV (GAMMA SECTOR, TOTAL OF 1)
- RELOCATE (2) EXISTING 4478 B14 FROM GROUND TO TOWER TOP. INSTALL (1) NEW 4478 B14 UP TOP. RELOCATE (3) EXISTING 4426 B66.
- INSTALL (3) #6AWG6 DC TRUNKS AND (1) 24 PAIR FIBER TRUNK.

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:

- INSTALL (1) 6651+IDLE XCEDE CABLE, FINAL CONFIG. 1X6601/1X5216/2XXMU03|XXXXX/1X6630 MIXED-MODE/XXXXX+ //1X6651+IDLE XCEDE.
- INSTALL (1) RECTIFIER.
- INSTALL (1) BATTERY RACK WITH (2) STRINGS OF BATTERIES AND REPLACE EXISTING BATTERIES UNDER POWER PLANT WITH (3) NEW STRINGS OF BATTERIES.

ITEMS TO BE REMOVED:

- EXISTING RRUS-11 B12 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING RRUS-12 B2 (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- EXISTING RRUS-4478 B5 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING TMAS TT19-08BP111-001 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING REMOVE (6) LGP21901 AND (6) DBCT108F1V92-1 DIPLEXERS.
- EXISTING AT&T UMTS ANTENNA: 7770 @ POS. 1 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T LTE ANTENNA: TPA-65R-LCUUUU-H8 @ POS. 3 (1 FROM ALPHA & 1 FROM GAMMA).
- EXISTING AT&T LTE ANTENNA: QS66512-2 @ POS. 3 (TOTAL OF 1 FOR BETA).
- EXISTING AT&T LTE ANTENNA: HPA-65R-BUU-H8 @ POS. 4 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T (6) 1-1/4" COAX CABLES.
- EXISTING BATTERIES.

ITEMS TO REMAIN:

- (8) RRHs, (2) SURGE ARRESTORS, (6) 1-1/4" COAX CABLES, (4) DC POWER & (2) FIBER.

RFDS: FINAL APPROVED V4 RFDS 05/01/23

SITE ADDRESS: 57 COOK DRIVE
UNCASVILLE, CT 06382

LATITUDE: 41.4749917° N 41° 28' 30.0" N
LONGITUDE: 72.1050269° W 72° 06' 18.1" W

TYPE OF SITE: GUYED TOWER / INDOOR EQUIPMENT

STRUCTURE HEIGHT: 193'-0"±
RAD CENTER: 180'-0"±

CURRENT USE: TELECOMMUNICATIONS FACILITY
PROPOSED USE: TELECOMMUNICATIONS FACILITY

NOTE TO GENERAL CONTRACTOR: (PRIOR TO CONSTRUCTION COMPLETION)

- TEP NORTHEAST (TEP OPCO, LLC.) TO PERFORM POST/CLIMB AND INSPECTION TO CONFIRM PROPOSED INSTALLATION COMPLIES WITH THE RECORD STAMPED DRAWINGS AND STRUCTURAL REPORTS PRIOR TO SUBMITTING FCCA (FINAL CONSTRUCTION CONTROL AFFIDAVIT). GC IS RESPONSIBLE FOR COORDINATING INSPECTIONS WITH TEP NORTHEAST (TEP OPCO, LLC.) PRIOR TO CONSTRUCTION BEING COMPLETED.



SITE NUMBER: CTL02171
SITE NAME: MONTVILLE EAST
FA CODE: 10035116

PACE ID: MRCTB056267,MRCTB055343,MRCTB056253,MRCTB054631,MRCTB054191, MRCTB053588

PROJECT: 5G NR RADIO, 5G NR 1SR CBAND, ANTENNA MODIFICATIONS, 4TXRX ANTENNA RETROFIT, 5G NR SOFTWARE RADIO, 2023 UPGRADE

VICINITY MAP

DIRECTIONS TO SITE: (FROM AT&T ADDRESS)

START OUT GOING EAST ON ENTERPRISE DR TOWARD CAPITAL BLVD.TURN LEFT ONTO CAPITAL BLVD.TURN LEFT ONTO WEST ST.MERGE ONTO I-91 N VIA THE RAMP ON THE LEFT TOWARD HARTFORD.MERGE ONTO CT-3 N VIA EXIT 25 TOWARD GLASTONBURY.MERGE ONTO CT-2 E TOWARD NORWICH.MERGE ONTO I-395 S/CT-2A E VIA EXIT 28S TOWARD NEW HAVEN.MERGE ONTO CT-2A E VIA EXIT 9 TOWARD LEDYARD/PRESTON.TAKE THE CT-32 EXIT, EXIT 5, TOWARD UNCASVILLE/NORWICH. TURN RIGHT ONTO NORWICH NEW LONDON TURNPIKE/CT-32.TURN RIGHT ONTO COOK DR.57 COOK DR, UNCASVILLE, CT 06382 IS ON THE RIGHT.



GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
4. CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OF RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.

DRAWING INDEX

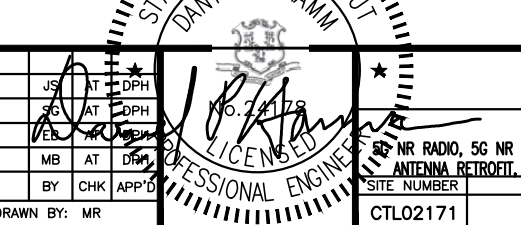
SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	3
GN-1	GENERAL NOTES	3
A-1	ROOF & EQUIPMENT PLAN	3
A-2	ANTENNA LAYOUTS	3
A-3	ELEVATION	3
A-4	DETAILS	3
SN-1	STRUCTURAL NOTES	3
S-1	TOWER MODIFICATIONS	3
S-2	TOWER MODIFICATIONS	3
G-1	GROUNDING DETAILS	3
RF-1	RF PLUMBING DIAGRAM	3

72 HOURS



CALL BEFORE YOU DIG
CALL TOLL FREE 1-800-922-4455
OR CALL 811

UNDERGROUND SERVICE ALERT



SITE NUMBER: CTL02171
SITE NAME: MONTVILLE EAST

57 COOK DRIVE
UNCASVILLE, CT 06382
NEW LONDON COUNTY



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D	SITE NUMBER	DRAWING NUMBER	REV
3	12/11/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH	CTL02171	T-1	3
2	07/08/22	ISSUED FOR CONSTRUCTION	SG	AT	DPH			
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0	04/08/22	ISSUED FOR REVIEW	MB	AT	DPH			

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: MR

AT&T

TITLE SHEET
5G NR RADIO, 5G NR 1SR CBAND, ANTENNA MODIFICATIONS, 4TXRX ANTENNA RETROFIT, 5G NR SOFTWARE RADIO, 2023 UPGRADE

GROUNDING NOTES

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

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR – SMARTLINK
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER – AT&T MOBILITY
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.
20. **APPLICABLE BUILDING CODES:**
 SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

**BUILDING CODE: IBC 2021 WITH 2022 CT STATE BUILDING CODE AMENDMENTS
 ELECTRICAL CODE: 2020 NATIONAL ELECTRICAL CODE (NFPA 70-2020)**

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

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

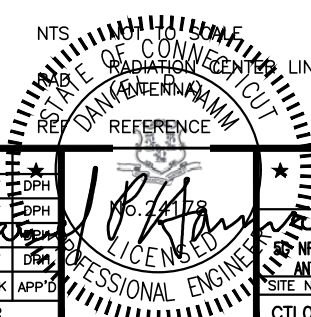
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

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

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

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	REF	REFERENCE	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING				



**SITE NUMBER: CTL02171
 SITE NAME: MONTVILLE EAST**

 57 COOK DRIVE
 UNCASVILLE, CT 06382
 NEW LONDON COUNTY



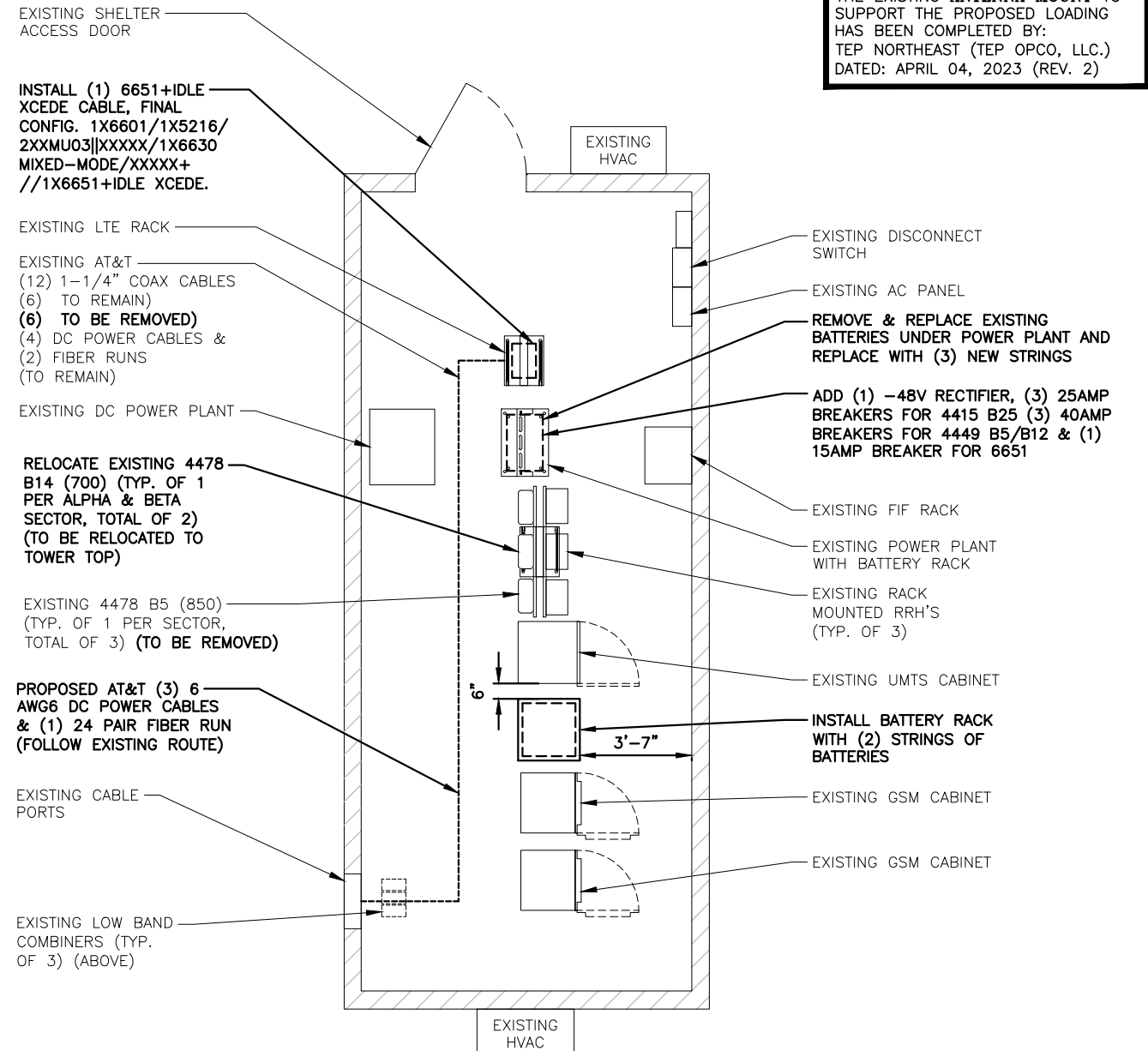
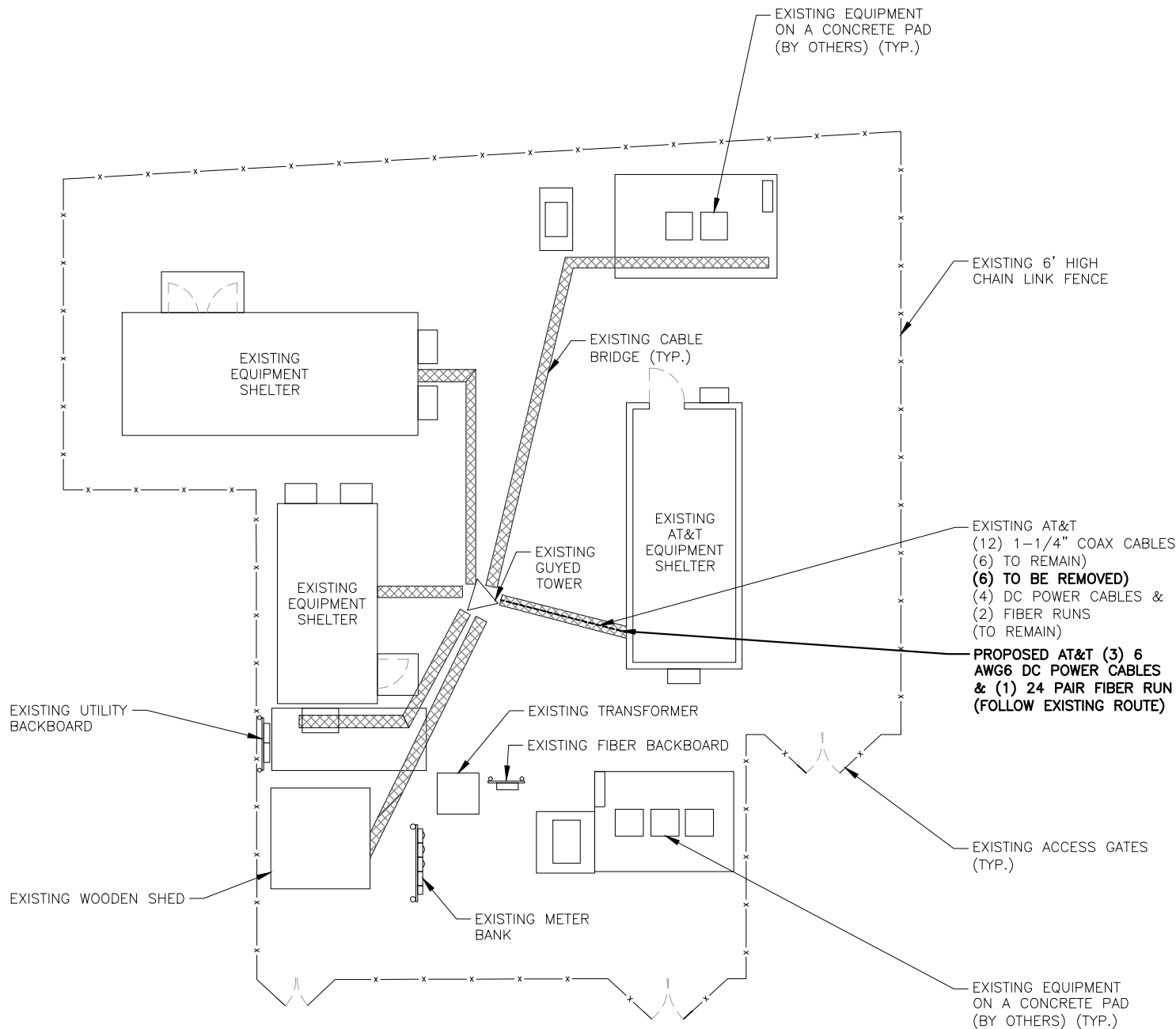
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NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: MR		

AT&T	
GENERAL NOTES	
5G NR RADIO, 5G NR 15R CBAND, ANTENNA MODIFICATIONS, 4TRX ANTENNA RETROFIT, 5G NR SOFTWARE RADIO, 2023 UPGRADE	
SITE NUMBER	DRAWING NUMBER
CTL02171	GN-1
	3

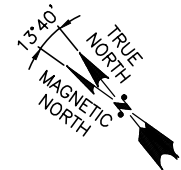
NOTE:
REFER TO STRUCTURAL ANALYSIS BY: TEP NORTHEAST (TEP OPCO, LLC.) DATED: APRIL 12, 2023 (REV. 2), FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:
REFER TO FINAL APPROVED V4 RFDS 05/01/23

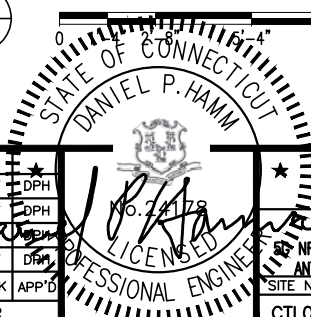
NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: TEP NORTHEAST (TEP OPCO, LLC.) DATED: APRIL 04, 2023 (REV. 2)



COMPOUND PLAN 1 A-1
22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"
0 4'-0" 8'-0" 16'-0" 24'-0"



EQUIPMENT PLAN 2 A-1
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"
0 4'-0" 8'-0"



SITE NUMBER: CTL02171
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57 COOK DRIVE
UNCASVILLE, CT 06382
NEW LONDON COUNTY



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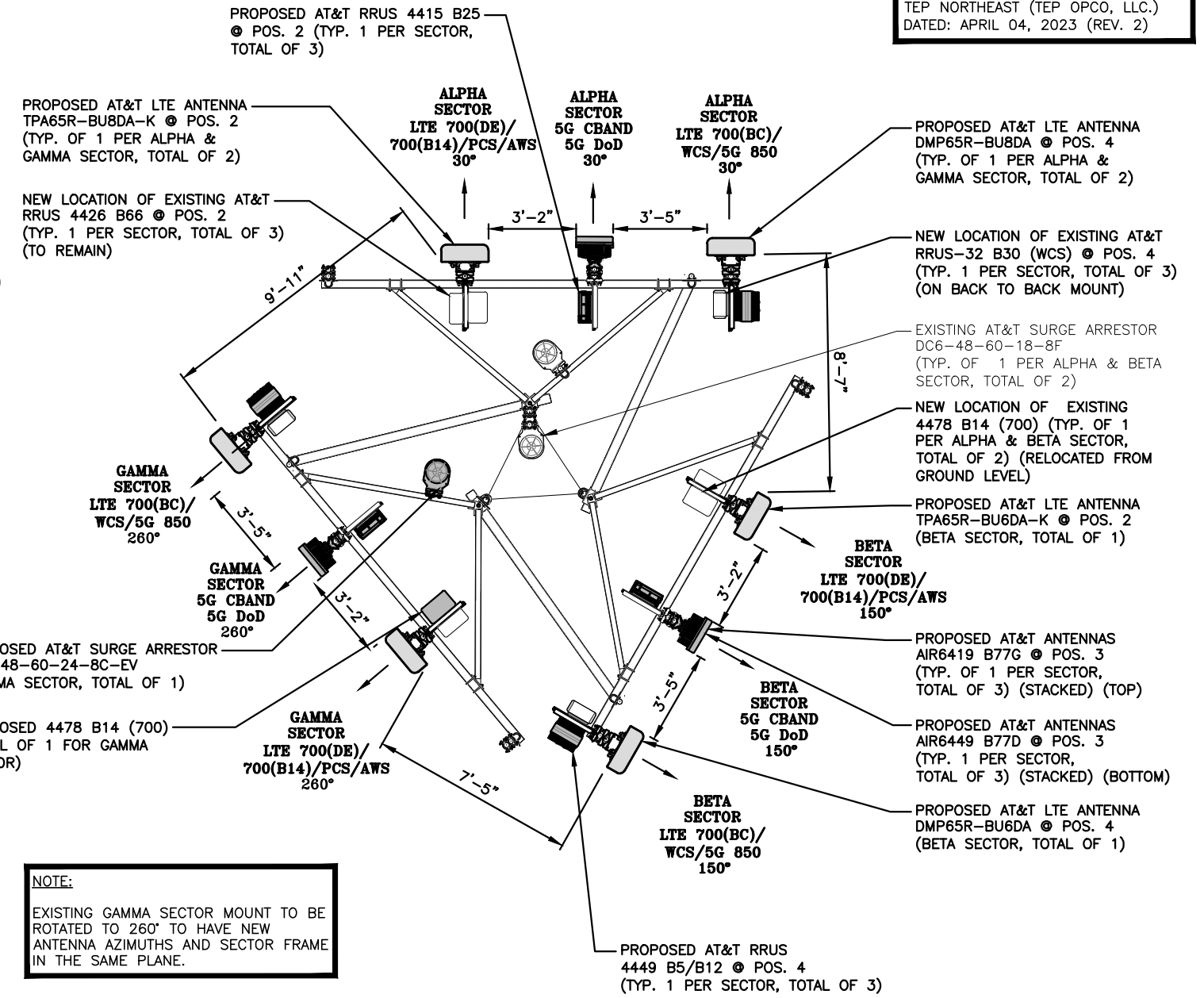
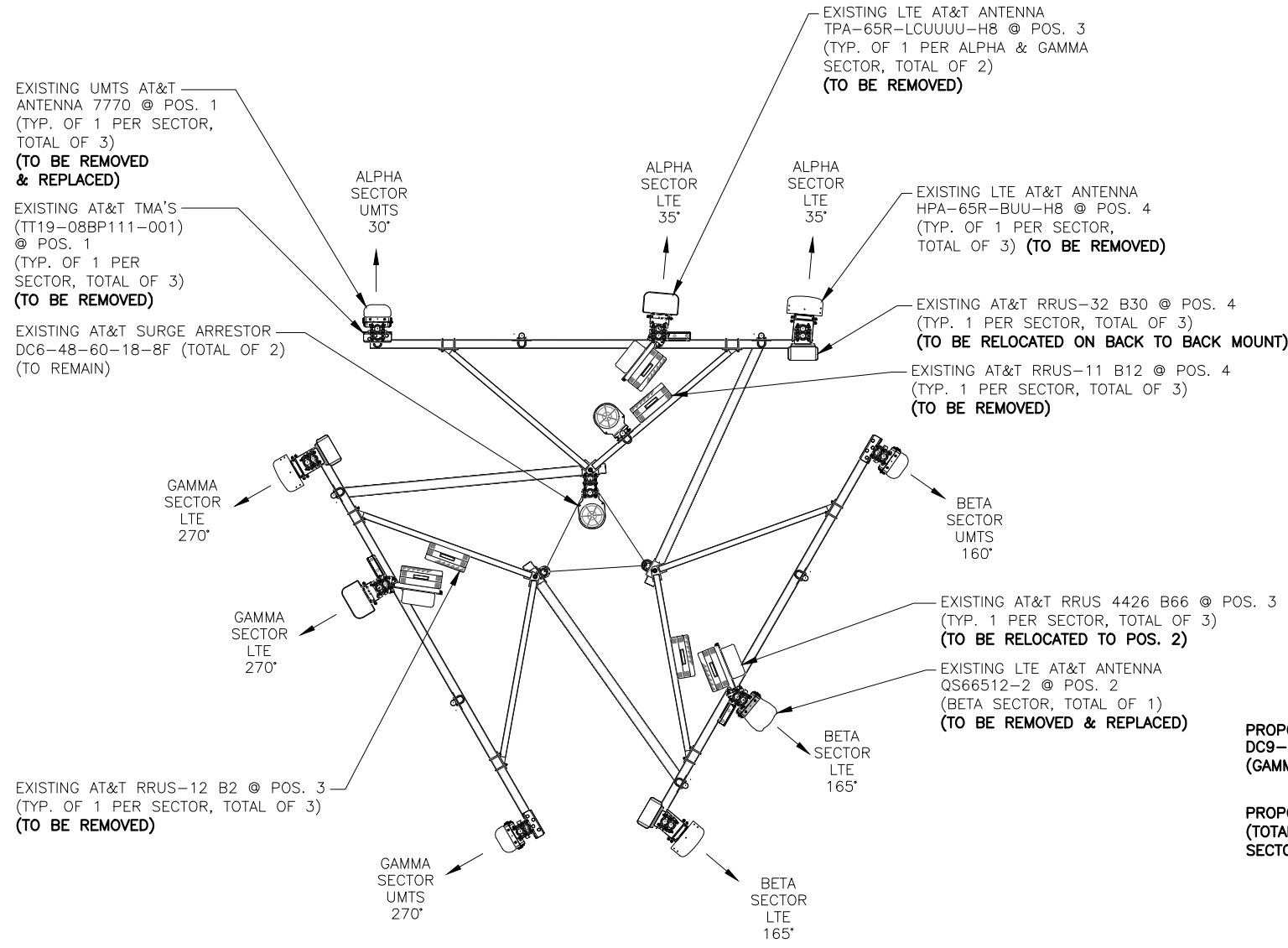
SITE NUMBER	DRAWING NUMBER	REV
CTL02171	A-1	3

AT&T
COMPOUND & EQUIPMENT PLANS
5G NR RADIO, 5G NR 15R CBAND, ANTENNA MODIFICATIONS, 4TXRX ANTENNA RETROFIT, 5G NR SOFTWARE RADIO, 2023 UPGRADE

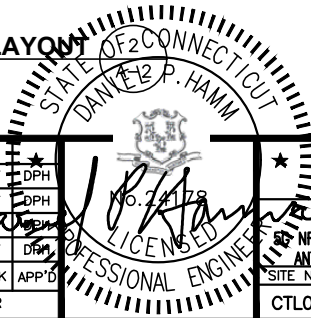
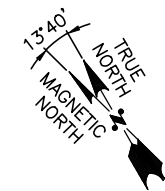
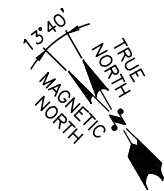
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NOTE:
REFER TO FINAL APPROVED V4 RFDS 05/01/23

NOTE:
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NOTE:
EXISTING GAMMA SECTOR MOUNT TO BE ROTATED TO 260° TO HAVE NEW ANTENNA AZIMUTHS AND SECTOR FRAME IN THE SAME PLANE.



TEP NORTHEAST
TEP OPCO, LLC.
45 BEECHWOOD DRIVE, NORTH ANDOVER, MA 01845
TEL: (978) 557-5553

smartlink
SMARTLINK
1997 ANNAPOLIS EXCHANGE PKWY SUITE 200
ANNAPOLIS, MD 21401

SITE NUMBER: CTL02171
SITE NAME: MONTVILLE EAST

57 COOK DRIVE
UNCASVILLE, CT 06382
NEW LONDON COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
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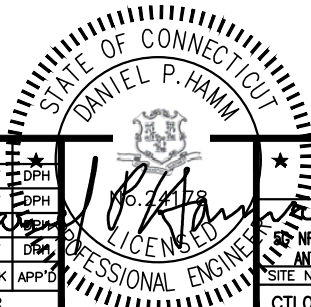
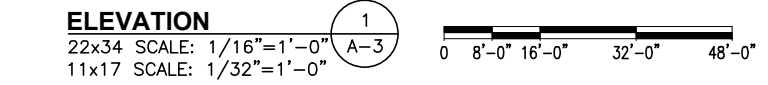
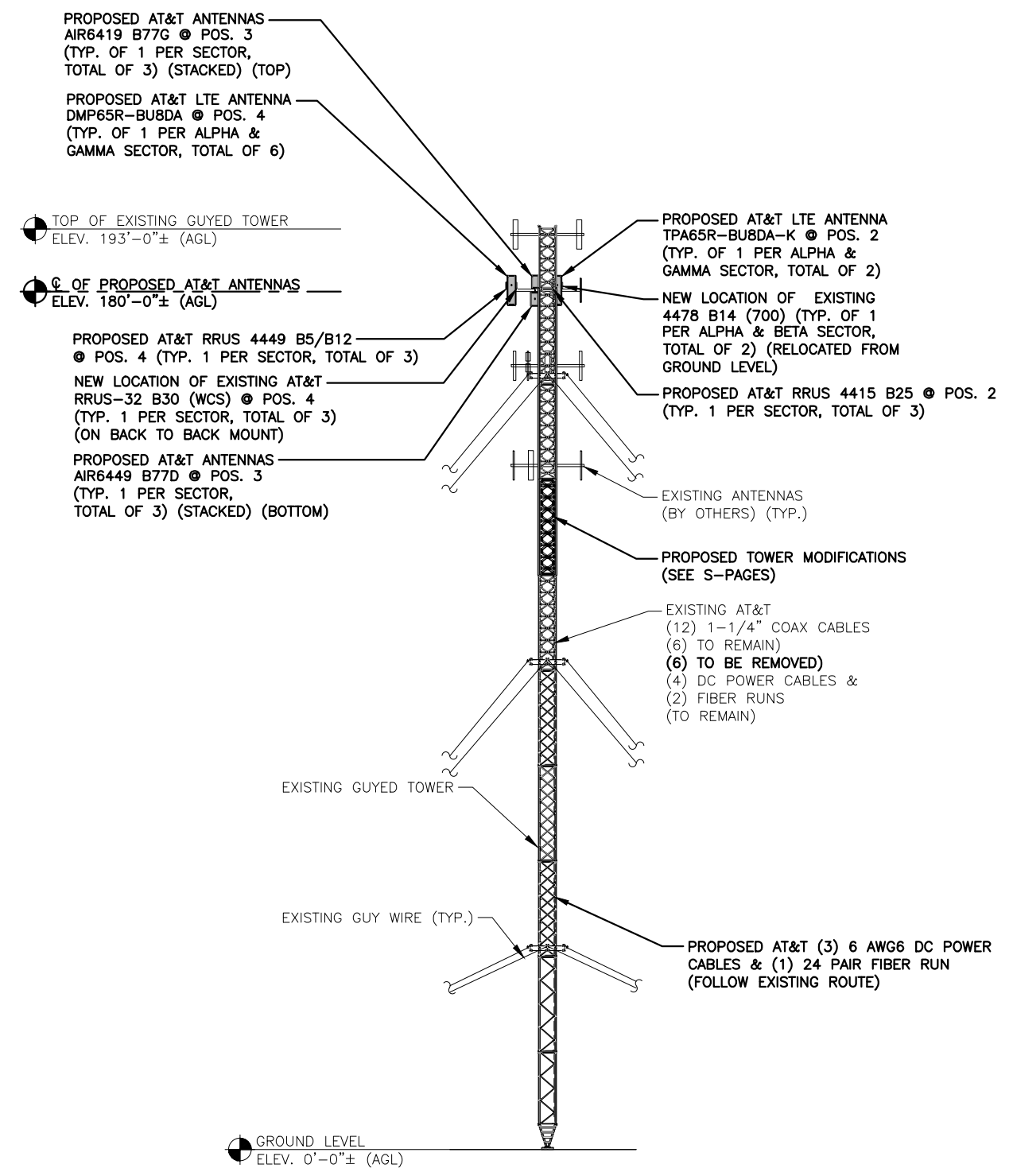
AT&T
ANTENNA LAYOUTS
5G NR RADIO, 5G NR 1SR CBAND, ANTENNA MODIFICATIONS, 4TXRX ANTENNA RETROFIT, 5G NR SOFTWARE RADIO, 2023 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CTL02171	A-2	3

NOTE:
 REFER TO STRUCTURAL ANALYSIS
 BY: TEP NORTHEAST (TEP OPCO, LLC.)
 DATED: APRIL 12, 2023 (REV. 2),
 FOR THE CAPACITY OF THE EXISTING
 STRUCTURES TO SUPPORT THE
 PROPOSED EQUIPMENT.

NOTE:
 REFER TO FINAL APPROVED V4 RFDS
 05/01/23

NOTE:
 AN ANALYSIS FOR THE CAPACITY OF
 THE EXISTING **ANTENNA MOUNT** TO
 SUPPORT THE PROPOSED LOADING
 HAS BEEN COMPLETED BY:
 TEP NORTHEAST (TEP OPCO, LLC.)
 DATED: APRIL 04, 2023 (REV. 2)



SITE NUMBER: CTL02171
SITE NAME: MONTVILLE EAST
 57 COOK DRIVE
 UNCASVILLE, CT 06382
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SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: MR

SITE NUMBER	DRAWING NUMBER	REV
CTL02171	A-3	3

AT&T
 ELEVATION
 5G NR RADIO, 5G NR 1SR CBAND, ANTENNA MODIFICATIONS, 4TXRX
 ANTENNA RETROFIT, 5G NR SOFTWARE RADIO, 2023 UPGRADE

ANTENNA SCHEDULE

FINAL APPROVED V4 RFDS 05/01/23

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA ϕ HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	-	-	-	-	-	-	-	-	-	(E)(2) 1-1/4" COAX	(E)(1) RAYCAP DC6-48-60-18-8F
A2	PROPOSED	LTE 700(DE)/700(B14) /PCS/AWS	TPA65R-BU8DA-K	96"X20.7"X7.7"	180'-0"±	30°	-	(E)(1) RRUS-4426 B66 (E)(1) 4478 B14 (700) (P)(1) 4415 B25 (1900)	14.9"x13.2"x10.9"	(E)(2) DC POWER (E)(1) FIBER	
A3	PROPOSED	C-BAND DOD	AIR 6419 B77G AIR 6449 B77D	30.4"X15.9"X8.1" 31.1"X16.1X7.3"	180'-0"±	30°	-	-	-	-	
A4	PROPOSED	LTE 700(BC)/WCS/ 5G 850	DMP65R-BU8DA	96.0x20.7x7.7	180'-0"±	30°	-	(P)(1) 4449 B5/B12 (850/700) (E) RRUS-32 B30 (WCS)	17.9"x13.2"x10.4"	(1)(P) Y-CABLE	
B1	-	-	-	-	-	-	-	-	-	(E)(2) 1-1/4" COAX	(E)(1) RAYCAP DC6-48-60-18-8F
B2	PROPOSED	LTE 700(DE)/700(B14) /PCS/AWS	TPA65R-BU8DA-K	72"X22"X9.6"	180'-0"±	150°	-	(E)(1) RRUS-4426 B66 (E)(1) 4478 B14 (700) (P)(1) 4415 B25 (1900)	14.9"x13.2"x10.9"	(E)(2) DC POWER (E)(1) FIBER	
B3	PROPOSED	C-BAND DOD	AIR 6419 B77G AIR 6449 B77D	30.4"X15.9"X8.1" 31.1"X16.1X7.3"	180'-0"±	150°	-	-	-	-	
B4	PROPOSED	LTE 700(BC)/WCS/ 5G 850	DMP65R-BU8DA	71.2x20.7x7.7	180'-0"±	150°	-	(P)(1) 4449 B5/B12 (850/700) (E) RRUS-32 B30 (WCS)	17.9"x13.2"x10.4"	(1)(P) Y-CABLE	
C1	-	-	-	-	-	-	-	-	-	(E)(2) 1-1/4" COAX	(P)(1) RAYCAP DC9-48-60-24-8C-EV
C2	PROPOSED	LTE 700(DE)/700(B14) /PCS/AWS	TPA65R-BU8DA-K	96"X20.7"X7.7"	180'-0"±	260°	-	(E)(1) RRUS-4426 B66 (P)(1) 4478 B14 (700) (P)(1) 4415 B25 (1900)	18.1"x13.4"x8.3" 14.9"x13.2"x10.9"	(P)(3) 6AWG6 DC POWER (P)(1) 24 PAIR FIBER	
C3	PROPOSED	C-BAND DOD	AIR 6419 B77G AIR 6449 B77D	30.4"X15.9"X8.1" 31.1"X16.1X7.3"	180'-0"±	260°	-	-	-	-	
C4	PROPOSED	LTE 700(BC)/WCS/ 5G 850	DMP65R-BU8DA	96.0x20.7x7.7	180'-0"±	260°	-	(P)(1) 4449 B5/B12 (850/700) (E) RRUS-32 B30 (WCS)	17.9"x13.2"x10.4"	(1)(P) Y-CABLE	

NOTE:
REFER TO STRUCTURAL ANALYSIS
BY: TEP NORTHEAST (TEP OPCO, LLC.)
DATED: APRIL 12, 2023 (REV. 2),
FOR THE CAPACITY OF THE EXISTING
STRUCTURES TO SUPPORT THE
PROPOSED EQUIPMENT.

NOTE:
REFER TO FINAL APPROVED V4 RFDS
05/01/23

NOTE:
AN ANALYSIS FOR THE CAPACITY OF
THE EXISTING ANTENNA MOUNT TO
SUPPORT THE PROPOSED LOADING
HAS BEEN COMPLETED BY:
TEP NORTHEAST (TEP OPCO, LLC.)
DATED: APRIL 04, 2023 (REV. 2)

RRU CHART

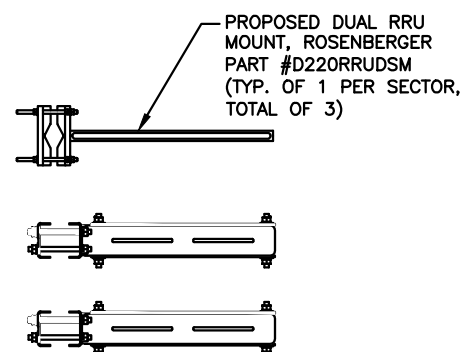
QUANTITY	MODEL	SIZE (L x W x D)
2(E)1(P)	4478 B14 (700)	18.1"x13.4"x8.3"
3(E)	RRUS-32 B30 (WCS)	27.2"x12.1x7.0"
3(E)	RRUS-4426 B66	14.9"x13.19"x5.8"
3(P)	4415 B25 (1900)	14.9"x13.2"x10.9"
3(P)	4449 B5/B12 (850/700)	17.9"x13.2"x10.4"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

FINAL ANTENNA CONFIGURATION

SCALE: N.T.S

1
A-4



NOTE:
SEE RFDS FOR RRU FREQUENCY AND MODEL NUMBER

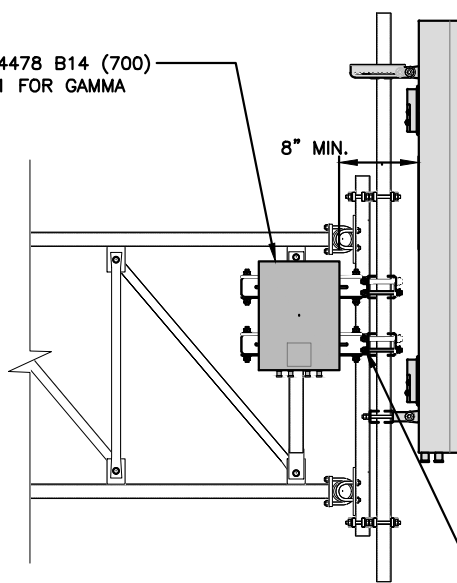
PROPOSED RRU REFER TO THE FINAL RFDS AND CHART FOR QUANTITY, MODEL AND DIMENSIONS

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRU DETAIL
SCALE: N.T.S

3
A-4

PROPOSED 4478 B14 (700)
(TOTAL OF 1 FOR GAMMA SECTOR)

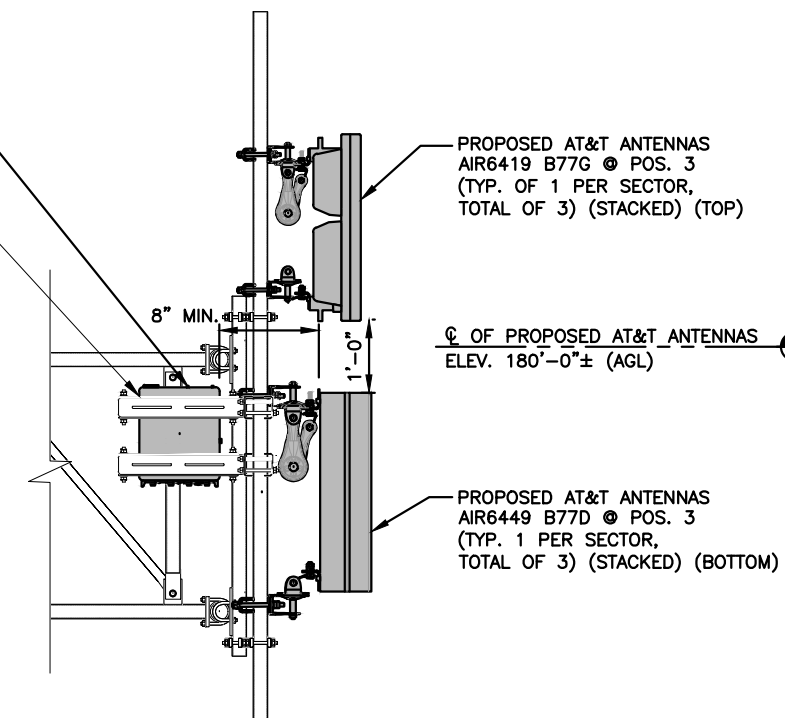


PROPOSED ANTENNA MOUNTING DETAIL @ POS. 2 & 4

22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"

4
A-4

PROPOSED AT&T ANTENNAS AIR6419 B77G ● POS. 3 (TYP. OF 1 PER SECTOR, TOTAL OF 3) (STACKED) (TOP)



● ϕ OF PROPOSED AT&T ANTENNAS
ELEV. 180'-0"± (AGL)

PROPOSED ANTENNA MOUNTING DETAIL @ POS. 3

22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"

0' 0'-6" 1'-0" 2'-0" 3'-0"

PROPOSED BACK TO BACK RRU MOUNT DETAIL
SCALE: N.T.S

2
A-4



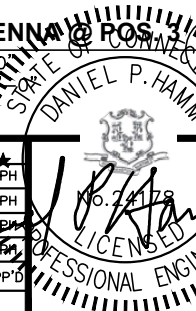
SITE NUMBER: CTL02171
SITE NAME: MONTVILLE EAST

57 COOK DRIVE
UNCASVILLE, CT 06382
NEW LONDON COUNTY



NO.	DATE	REVISIONS	BY	CHK	APP'D
3	12/11/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
2	07/08/22	ISSUED FOR CONSTRUCTION	SG	AT	DPH
1	06/28/22	ISSUED FOR CONSTRUCTION	EL	AT	DPH
0	04/08/22	ISSUED FOR REVIEW	MB	AT	DPH

SCALE: AS SHOWN
DESIGNED BY: AT
DRAWN BY: MR



AT&T

DETAILS
5G NR RADIO, 5G NR 15R CBAND, ANTENNA MODIFICATIONS, 4TRX
ANTENNA RETROFIT, 5G NR SOFTWARE RADIO, 2023 UPGRADE

SITE NUMBER: CTL02171
DRAWING NUMBER: A-4
REV: 3

STRUCTURAL NOTES:

- DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, EIA/TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
- DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
- STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
- STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
- FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
- CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D.I.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
- INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
- UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
- EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-270 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
- EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
- WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
- ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
- NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
- SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

GENERAL: WHERE APPLICATION IS MADE FOR CONSTRUCTION, THE OWNER OR THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN THE INSPECTION CHECKLIST ABOVE.

THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND ENGINEERS OF RECORD INVOLVED IN THE DESIGN OF THE PROJECT ARE PERMITTED TO ACT AS THE APPROVED AGENCY AND THEIR PERSONNEL ARE PERMITTED TO ACT AS THE SPECIAL INSPECTOR FOR THE WORK DESIGNED BY THEM, PROVIDED THOSE PERSONNEL MEET THE QUALIFICATION REQUIREMENTS.

STATEMENT OF SPECIAL INSPECTIONS: THE APPLICANT SHALL SUBMIT A STATEMENT OF SPECIAL INSPECTIONS PREPARED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE IN ACCORDANCE WITH SECTION 107.1 AS A CONDITION FOR ISSUANCE. THIS STATEMENT SHALL BE IN ACCORDANCE WITH SECTION 1705.

REPORT REQUIREMENT: SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS SHALL BE SUBMITTED.

SPECIAL INSPECTION CHECKLIST	
BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	ENGINEER OF RECORD APPROVED SHOP DRAWINGS ¹
REQUIRED	MATERIAL SPECIFICATIONS REPORT ²
N/A	FABRICATOR NDE INSPECTION
REQUIRED	PACKING SLIPS ³
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS ⁴
REQUIRED	FOUNDATION INSPECTIONS
REQUIRED	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION ⁵
N/A	GROUT VERIFICATION
REQUIRED	CERTIFIED WELD INSPECTION
REQUIRED	EARTHWORK: LIFT AND DENSITY
REQUIRED	ON SITE COLD GALVANIZING VERIFICATION
REQUIRED	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS ⁶
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

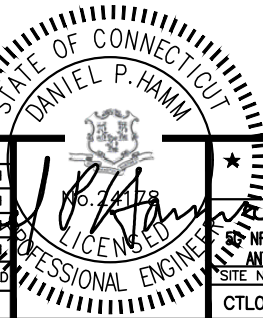


SITE NUMBER: CTL02171
SITE NAME: MONTVILLE EAST

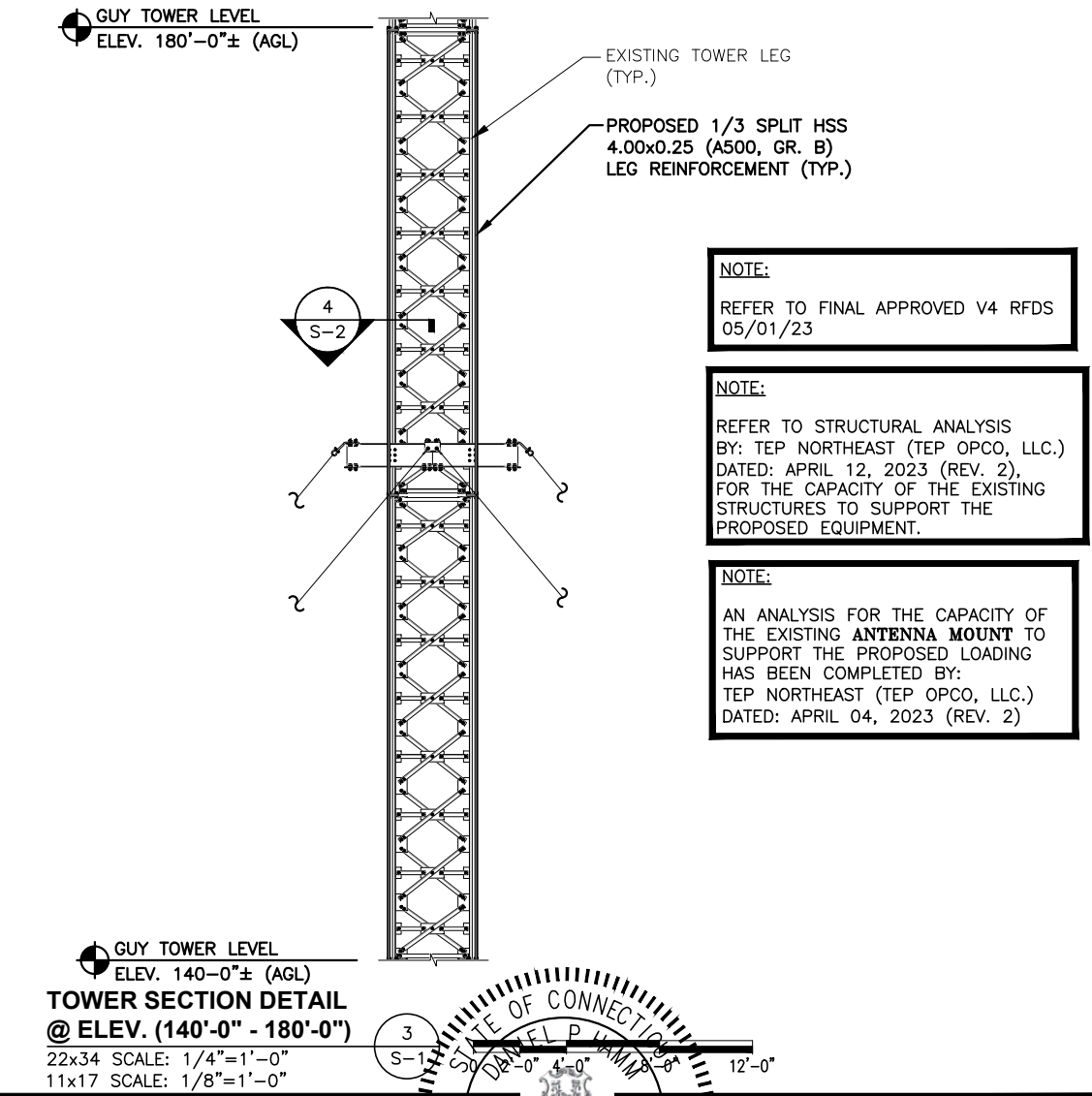
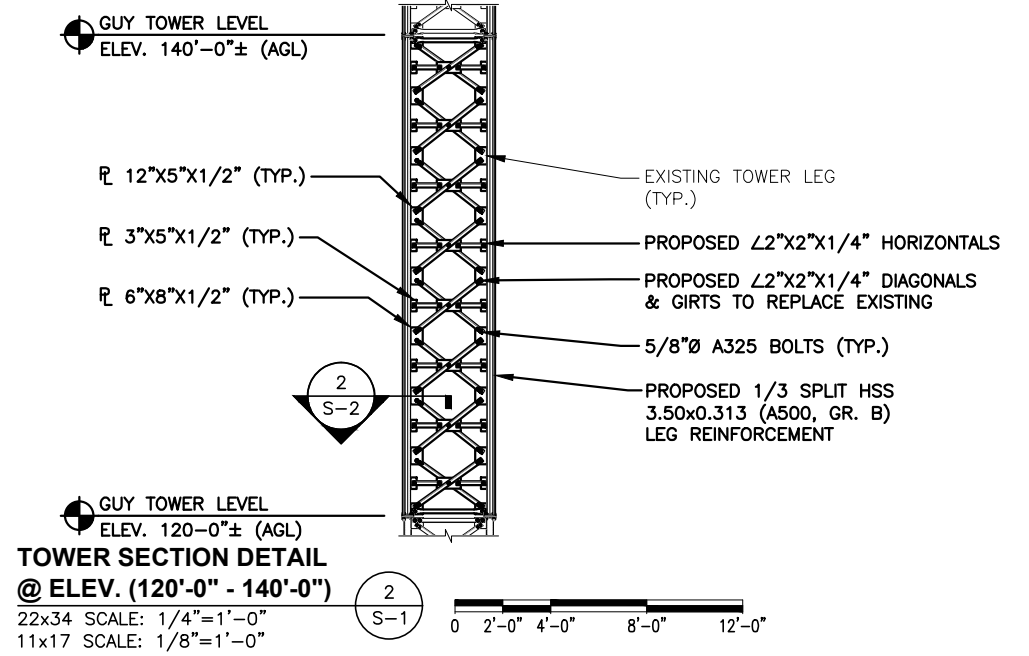
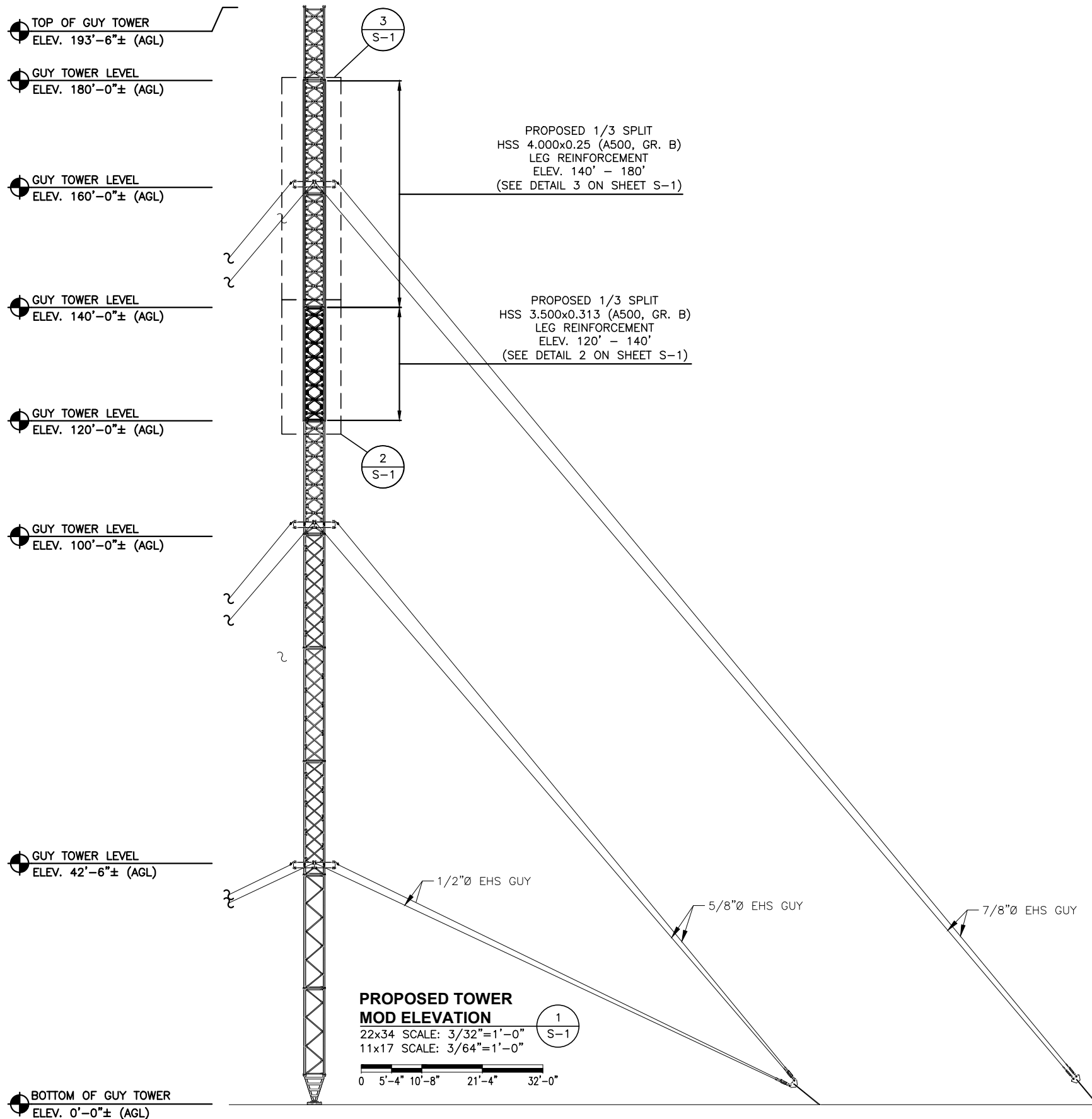
57 COOK DRIVE
 UNCASVILLE, CT 06382
 NEW LONDON COUNTY



3	12/11/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
2	07/08/22	ISSUED FOR CONSTRUCTION	SG	AT	DPH
1	06/28/22	ISSUED FOR CONSTRUCTION	EL	AT	DPH
0	04/08/22	ISSUED FOR REVIEW	MB	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: MR		



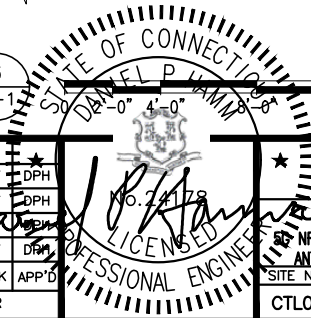
AT&T	
DETAILS	
5G NR RADIO, 5G NR 15R CBAND, ANTENNA MODIFICATIONS, 4TXRX ANTENNA RETROFIT, 5G NR SOFTWARE RADIO, 2023 UPGRADE	
SITE NUMBER	DRAWING NUMBER
CTL02171	SN-1
	REV 3



NOTE:
REFER TO FINAL APPROVED V4 RFDS 05/01/23

NOTE:
REFER TO STRUCTURAL ANALYSIS BY: TEP NORTHEAST (TEP OPCO, LLC.) DATED: APRIL 12, 2023 (REV. 2), FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING **ANTENNA MOUNT** TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: TEP NORTHEAST (TEP OPCO, LLC.) DATED: APRIL 04, 2023 (REV. 2)



SITE NUMBER: CTL02171
SITE NAME: MONTVILLE EAST

57 COOK DRIVE
UNCASVILLE, CT 06382
NEW LONDON COUNTY



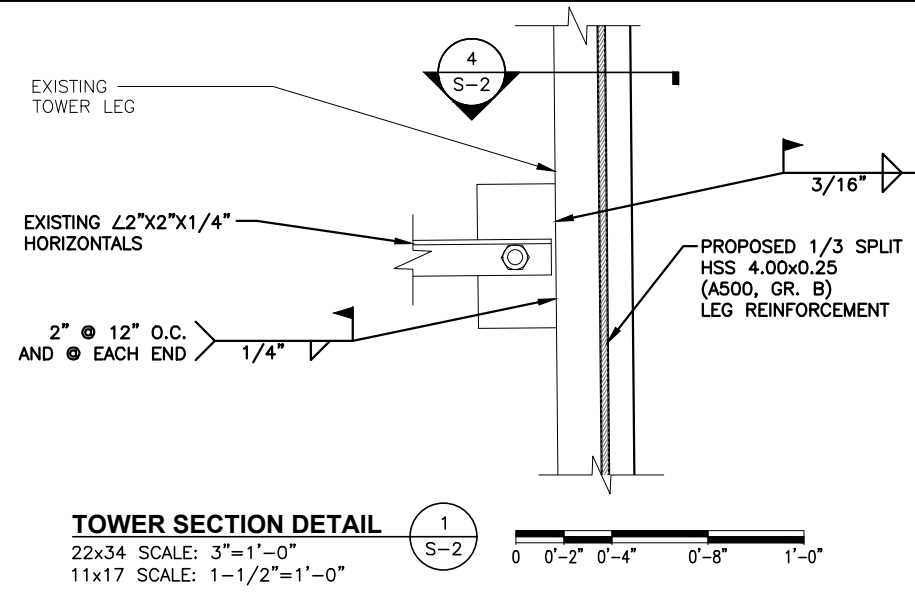
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2	07/08/22	ISSUED FOR CONSTRUCTION	SG	AT	DPH
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NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN			DESIGNED BY: AT	DRAWN BY: MR	

AT&T		TOWER MODIFICATIONS	
5G NR RADIO, 5G NR 15R CBAND, ANTENNA MODIFICATIONS, 4TXRX ANTENNA RETROFIT, 5G NR SOFTWARE RADIO, 2023 UPGRADE		DRAWING NUMBER	
SITE NUMBER	CTL02171	DRAWING NUMBER	S-1
REV			3

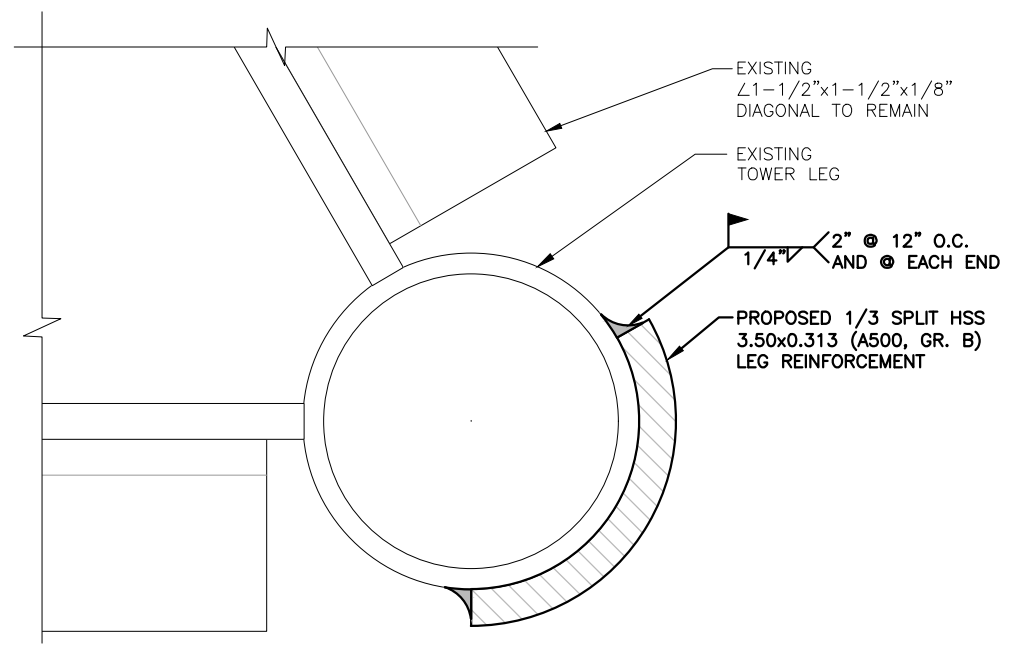
NOTE:
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NOTE:
REFER TO STRUCTURAL ANALYSIS
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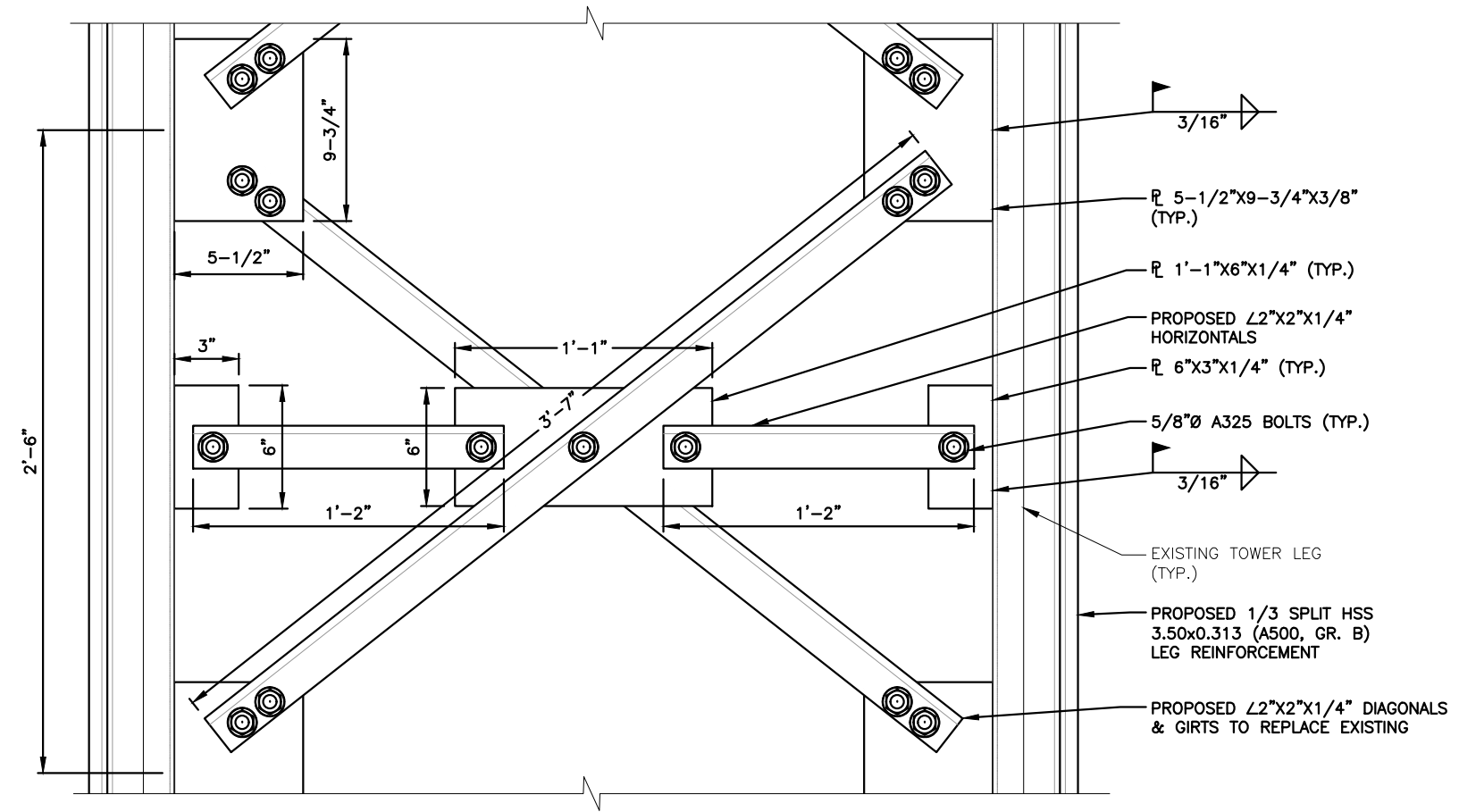
NOTE:
AN ANALYSIS FOR THE CAPACITY OF
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TEP NORTHEAST (TEP OPCO, LLC.)
DATED: APRIL 04, 2023 (REV. 2)



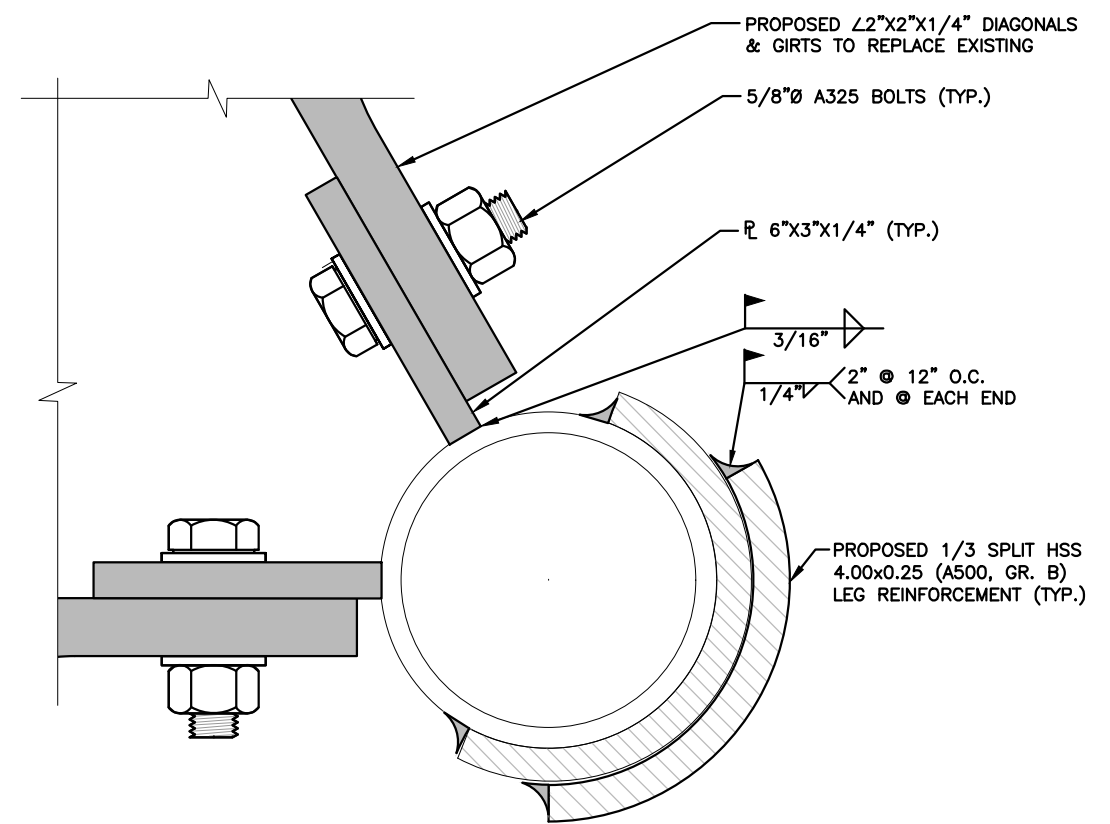
TOWER SECTION DETAIL 1
22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"



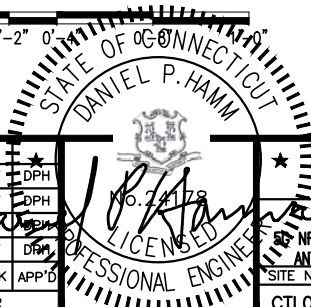
TOWER SECTION DETAIL 2
22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"



TOWER CONNECTION DETAIL 3
22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"



TOWER SECTION DETAIL 4
22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"



SITE NUMBER: CTL02171
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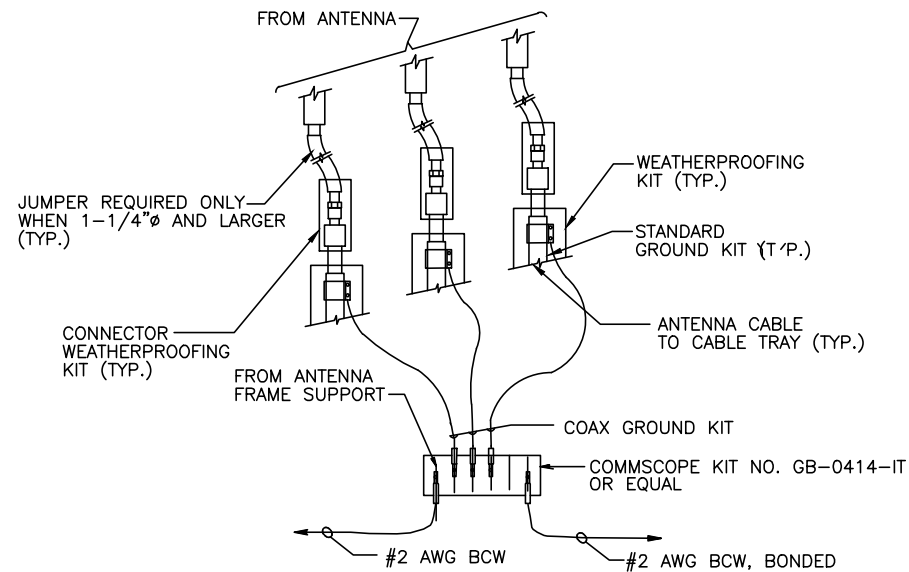


NO.	DATE	REVISIONS	BY	CHK	APP'D
3	12/11/23	ISSUED FOR CONSTRUCTION	JL	AT	DPH
2	07/08/22	ISSUED FOR CONSTRUCTION	SG	AT	DPH
1	06/28/22	ISSUED FOR CONSTRUCTION	EL	AT	DPH
0	04/08/22	ISSUED FOR REVIEW	MB	AT	DPH

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: MR

SITE NUMBER	DRAWING NUMBER	REV
CTL02171	S-2	3

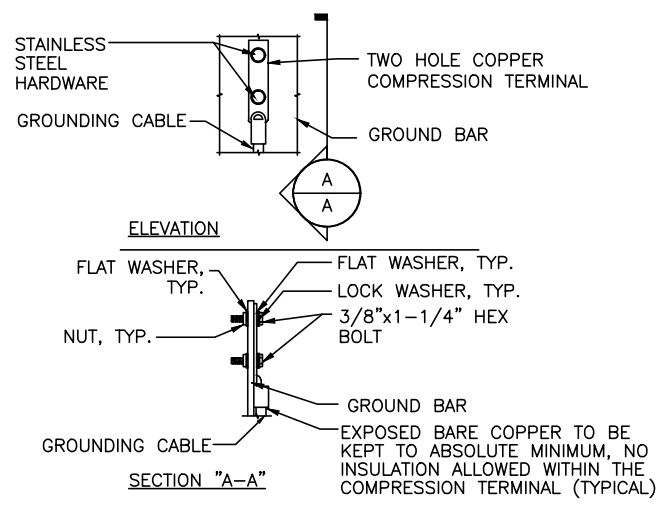
AT&T
TOWER MODIFICATIONS
5G NR RADIO, 5G NR 15R CBAND, ANTENNA MODIFICATIONS, 4TXRX
ANTENNA RETROFIT, 5G NR SOFTWARE RADIO, 2023 UPGRADE



NOTE:
 1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

GROUND WIRE TO GROUND BAR CONNECTION DETAIL 1
 SCALE: N.T.S. G-1

AT&T GROUNDING STANDARDS TO BE FOLLOWED:
 ATT-TP-76416
 ATT-TP-76300
 ATT-CEM-18002
 ATT-002-290-531
 ATT-002-290-701
 ATT-CEM-23001



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

TYPICAL GROUND BAR CONNECTION DETAIL 3
 SCALE: N.T.S. G-1

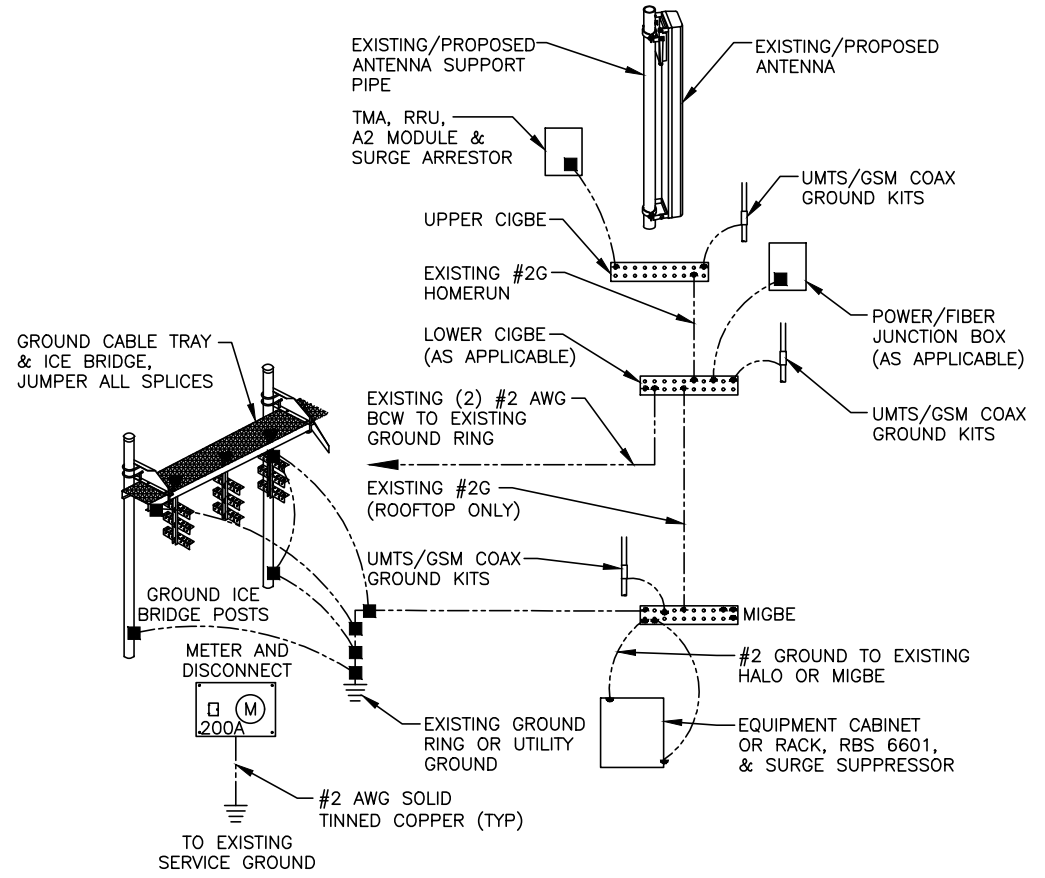
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

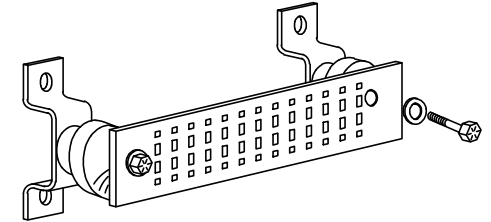
- CABLE ENTRY PORTS (HATCH PLATES) (#2 AWG)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2 AWG)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2 AWG)
- +24V POWER SUPPLY RETURN BAR (#2 AWG)
- 48V POWER SUPPLY RETURN BAR (#2 AWG)
- RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

- INTERIOR GROUND RING (#2 AWG)
- EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2 AWG)
- METALLIC COLD WATER PIPE (IF AVAILABLE) (#2 AWG)
- BUILDING STEEL (IF AVAILABLE) (#2 AWG)



GROUNDING RISER DIAGRAM 2
 SCALE: N.T.S. G-1



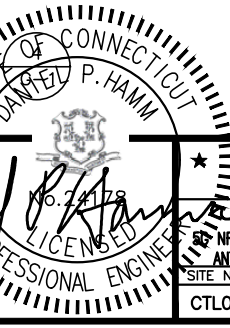
GROUND BAR - DETAIL (AS REQUIRED)
 SCALE: N.T.S.



SITE NUMBER: CTL02171
SITE NAME: MONTVILLE EAST
 57 COOK DRIVE
 UNCASVILLE, CT 06382
 NEW LONDON COUNTY

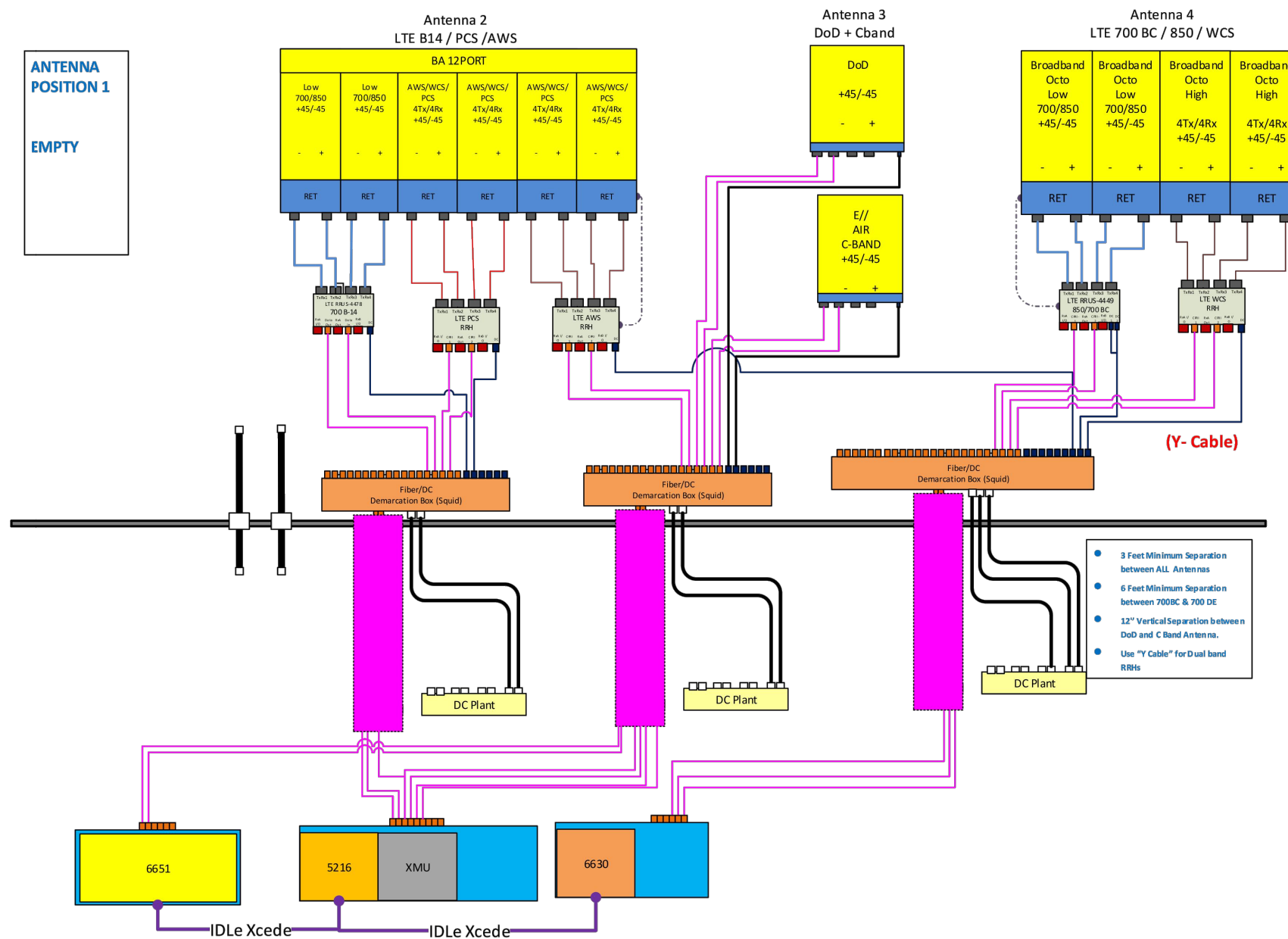


NO.	DATE	REVISIONS	BY	CHK	APP'D
3	12/11/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
2	07/08/22	ISSUED FOR CONSTRUCTION	SG	AT	DPH
1	06/28/22	ISSUED FOR CONSTRUCTION	EL	AT	DPH
0	04/08/22	ISSUED FOR REVIEW	MB	AT	DPH



AT&T	
SITE NUMBER	DRAWING NUMBER
CTL02171	G-1
GROUNDING DETAILS 5G NR RADIO, 5G NR 1SR CBAND, ANTENNA MODIFICATIONS, 4TXRX ANTENNA RETROFIT, 5G NR SOFTWARE RADIO, 2023 UPGRADE	
NO.	REV
	3

FINAL APPROVED V4 RFDS 05/01/23



NOTE:
1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS

NOTE:
REFER TO FINAL APPROVED V4 RFDS 05/01/23

RF PLUMBING DIAGRAM 1
SCALE: N.T.S. RF-1



SITE NUMBER: CTL02171
SITE NAME: MONTVILLE EAST

57 COOK DRIVE
UNCASVILLE, CT 06382
NEW LONDON COUNTY



NO.	DATE	REVISIONS	BY	CHK	APP'D
3	12/11/23	ISSUED FOR CONSTRUCTION	JS	AT	DPH
2	07/08/22	ISSUED FOR CONSTRUCTION	SG	AT	DPH
1	06/28/22	ISSUED FOR CONSTRUCTION	EB	AT	DPH
0	04/08/22	ISSUED FOR REVIEW	MB	AT	DPH

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: MR

AT&T		
RF PLUMBING DIAGRAM		
5G NR RADIO, 5G NR 1SR CBAND, ANTENNA MODIFICATIONS, 4TXRX ANTENNA RETROFIT, 5G NR SOFTWARE RADIO, 2023 UPGRADE		
SITE NUMBER	DRAWING NUMBER	REV
CTL02171	RF-1	3



FedEx® Tracking



SHOPRUNNER by FedEx.

READY TO SHOP AGAIN? SAVE ON YOUR NEXT ORDER.



SHOP NOW

DELIVERED

Thursday

12/28/23 at 10:16 AM

Signed for by: M.MEAD

[↓ Obtain proof of delivery](#)

DELIVERY STATUS

Delivered

TRACKING ID

774601981311

FROM

Oxford, MA US

Label Created

12/26/23 9:59 AM

WE HAVE YOUR PACKAGE

WEST BOYLSTON, MA

12/26/23 3:55 PM

ON THE WAY

JOHNSTON, RI

12/28/23 5:39 AM

OUT FOR DELIVERY

JOHNSTON, RI

12/28/23 6:29 AM

DELIVERED

UNCASVILLE, CT US

Delivered

12/28/23 at 10:16 AM

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YOUR EMAIL

pbaker915

Your email is invalid.

[MORE OPTIONS](#)

SUBMIT



Shipment facts



Shipment overview

TRACKING NUMBER 774601981311

DELIVERED TO Shipping/Receiving

SHIP DATE  12/26/23

STANDARD TRANSIT  12/28/23 before 8:00 PM

ACTUAL DELIVERY 12/28/23 at 10:16 AM

Services

SERVICE FedEx 2Day

TERMS Shipper

SPECIAL HANDLING SECTION Deliver Weekday

Package details

WEIGHT 0.5 lbs / 0.23 kgs

TOTAL PIECES 1

TOTAL SHIPMENT WEIGHT 0.5 lbs / 0.23 kgs

PACKAGING FedEx Envelope

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Travel history



Ascending 

Local Scan Time 



9:55 AM

Shipment information sent to FedEx

3:55 PM

Picked up

WEST BOYLSTON, MA

3:56 PM

Shipment arriving early

WEST BOYLSTON, MA

8:32 PM

Left FedEx origin facility

WEST BOYLSTON, MA

Wednesday, 12/27/23

2:22 AM

Arrived at FedEx hub

WILLINGTON, CT

3:54 AM

Departed FedEx hub

WILLINGTON, CT

5:48 AM

At local FedEx facility

JOHNSTON, RI

Thursday, 12/28/23

4:53 AM

Arrived at FedEx hub

JOHNSTON, RI

5:37 AM

At local FedEx facility

JOHNSTON, RI

5:39 AM

Shipment arriving On-Time

JOHNSTON, RI

6:29 AM

On FedEx vehicle for delivery

JOHNSTON, RI



10:16 AM

Delivered

UNCASVILLE, CT

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LANGUAGE

 [United States](#)

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SHOP NOW

DELIVERED

Wednesday

12/27/23 at 9:37 AM



Signed for by: E.EGBERT

[↓ Obtain proof of delivery](#)

DELIVERY STATUS

Delivered 

TRACKING ID

774601868984   

FROM

Oxford, MA US

Label Created

12/26/23 9:51 AM

WE HAVE YOUR PACKAGE

WEST BOYLSTON, MA

12/26/23 3:55 PM

ON THE WAY

JOHNSTON, RI

12/27/23 5:46 AM

OUT FOR DELIVERY

JOHNSTON, RI

12/27/23 6:15 AM

DELIVERED

UNCASVILLE, CT US

Delivered

12/27/23 at 9:37 AM

[↓ View travel history](#)

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LANGUAGE

 United States

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SHOP NOW

DELIVERED

Wednesday

12/27/23 at 9:35 AM

Signed for by: M.MALCHIODI

[↓ Obtain proof of delivery](#)

DELIVERY STATUS

Delivered

TRACKING ID

774601831130

FROM

Oxford, MA US

Label Created

12/26/23 9:48 AM

WE HAVE YOUR PACKAGE

WEST BOYLSTON, MA

12/26/23 3:55 PM

ON THE WAY

JOHNSTON, RI

12/27/23 5:48 AM

OUT FOR DELIVERY

JOHNSTON, RI

12/27/23 6:15 AM

DELIVERED

UNCASVILLE, CT US

Delivered

12/27/23 at 9:35 AM

[↓ View travel history](#)

Want updates on this shipment? Enter your email and we will do the rest!

YOUR EMAIL

pbaker915

Your email is invalid.

[MORE OPTIONS](#)

SUBMIT



Shipment facts



Shipment overview

TRACKING NUMBER 774601831130

DELIVERED TO Shipping/Receiving

SHIP DATE  12/26/23

STANDARD TRANSIT  12/28/23 before 5:00 PM

ACTUAL DELIVERY 12/27/23 at 9:35 AM

Services

SERVICE FedEx 2Day

TERMS Shipper

SPECIAL HANDLING SECTION Deliver Weekday

Package details

WEIGHT 0.5 lbs / 0.23 kgs

TOTAL PIECES 1

TOTAL SHIPMENT WEIGHT 0.5 lbs / 0.23 kgs

PACKAGING FedEx Envelope

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Travel history



Ascending 

Local Scan Time 



9:48 AM

Shipment information sent to FedEx

3:55 PM

Picked up

WEST BOYLSTON, MA

3:56 PM

Shipment arriving early

WEST BOYLSTON, MA

8:32 PM

Left FedEx origin facility

WEST BOYLSTON, MA

Wednesday, 12/27/23

2:21 AM

Arrived at FedEx hub

WILLINGTON, CT

3:54 AM

Departed FedEx hub

WILLINGTON, CT

5:48 AM

At local FedEx facility

JOHNSTON, RI

6:15 AM

On FedEx vehicle for delivery

JOHNSTON, RI



9:35 AM

Delivered

UNCASVILLE, CT

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