



INDUSTRIAL AVE,  
SUITE 3  
MORRISTOWN NJ 07430

PHONE: 201.684.0055  
FAX: 201.684.0066

August 13, 2021

Members of the Siting Council  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

RE: Notice of Exempt Modification  
36 Toomey Road, Cornwall, CT 06759 (aka Mohawk Mountain)  
Latitude: 41.82130278  
Longitude: -73.29644167  
T-Mobile Site#: CTNH545A - L600

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennas at the 56' level of the 65' tower located at 36 Toomey Road in Cornwall, CT. The tower and property is owned by American Tower. T-Mobile now intends to replace three (3) of its existing antennas with three (3) N600/L600/L700 antennas. The new antennas would be installed at the same 56' level of the tower. The new antennas support 5G services.

**Planned Modifications:**

**Tower:**

Install New:

- (3) APXVAALL24 43-U-NA20 Antennas
- (3) Radio 4449 B71 B85

To Be Removed:

- (3) Inx-65156DS A1M Antennas
- (3) RRU11 B12

To Remain:

- (3) APC16DWV-16DWV Antennas
- (3) RRU11 B2
- (3) RRU11 B4
- (3) 1 ¼" Hybrid Cables

Ground Work:

**Install (1) BB 6648**

This tower was not originally approved by the Connecticut Siting Council and the Town of Cornwall was unable to find an initial zoning decision in previous filings. There will be no expansion of height or ground space.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to First Selectman Gordon Ridgway, Elected Official, and Anna Timell of the Planning and Zoning Commission, as well as the property and tower owner.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

**Eric Breun**

Transcend Wireless

Cell: 201-658-7728

Email: [ebreun@transcendwireless.com](mailto:ebreun@transcendwireless.com)

Attachments

cc: Gordon Ridgway - First Selectwoman of Cornwall

Anna Timell - Planning and Zoning Commission

American Towers - Tower Owner

ERIC BREUN  
2016587728  
10 INDUSTRIAL AVE  
MAHWAH NJ 07430

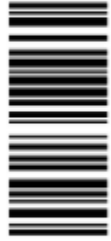
1 LBS

1 OF 1

**SHIP TO:**  
PLANNING AND ZONING COMMISSION  
ANNA TIMMEL  
26 PINE STREET  
CORNWALL CT 06753

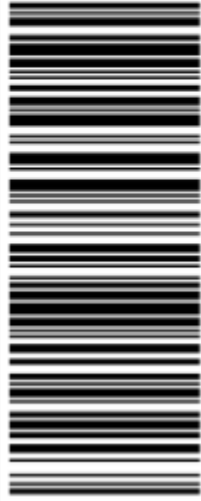


**CT 067 9-02**



**UPS GROUND**

TRACKING #: 1Z V25 742 03 9296 7929



BILLING: P/P

Reference #1: CTNH545A

XOL 21.07.05 NV45 32.0A 08/2021\*



TM

ERIC BREUN  
2016587728  
10 INDUSTRIAL AVE  
MAHWAH NJ 07430

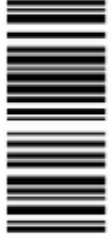
1 LBS

1 OF 1

**SHIP TO:**  
FIRST SELECTMAN  
GORDON RIDGWAY  
26 PINE STREET  
CORNWALL CT 06753

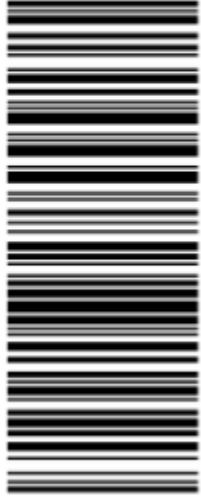


**CT 067 9-02**



**UPS GROUND**

TRACKING #: 1Z V25 742 03 9379 7914



BILLING: P/P

Reference #1: CTNH545A

XOL 21.07.05 NV45 32.0A 08/2021\*



TM

ERIC BREUN  
2016587728  
10 INDUSTRIAL AVE  
MAHWAH NJ 07430

1 LBS

1 OF 1

**SHIP TO:**  
AMERICAN TOWER CORPORATION  
10 PRESIDENTIAL WAY  
**WOBURN MA 01801**

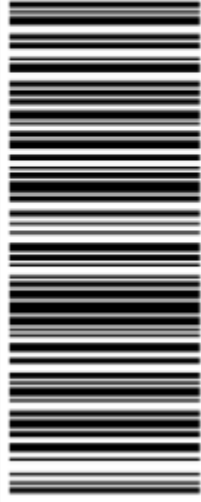


**MA 018 9-04**



**UPS GROUND**

TRACKING #: 1Z V25 742 03 9014 1930



BILLING: P/P

Reference #1: CTNH545A



XOL 21.07.05 NV45 32.0A 08/2021\*

TM

**Hello, your package has been delivered.**

**Delivery Date:** Thursday, 08/12/2021

**Delivery Time:** 11:34 AM

**Left At:** FRONT DESK

**Signed by:** ANCRI

**TRANSCEND WIRELESS**

<b>Tracking Number:</b>	<a href="#"><u>1ZV257420390141930</u></a>
<b>Ship To:</b>	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 01801 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.0 LBS
<b>Reference Number:</b>	CTNH545A

**Hello, your package has been delivered.**

**Delivery Date:** Friday, 08/13/2021

**Delivery Time:** 12:54 PM

**Left At:** RESIDENTIAL

**Signed by:** V DINNEEN

**TRANSCEND WIRELESS**

<b>Tracking Number:</b>	<a href="#"><u>1ZV257420393797914</u></a>
<b>Ship To:</b>	GORDON RIDGWAY 26 PINE STREET CORNWALL, CT 06753 US
<b>Number of Packages:</b>	1
<b>UPS Service:</b>	UPS Ground
<b>Package Weight:</b>	1.0 LBS
<b>Reference Number:</b>	CTNH545A

**Hello, your package has been delivered.**

**Delivery Date:** Friday, 08/13/2021

**Delivery Time:** 12:54 PM

**Left At:** RESIDENTIAL

**Signed by:** V DINNEEN

## **TRANSCEND WIRELESS**

**Tracking Number:** [1ZV257420392967929](#)

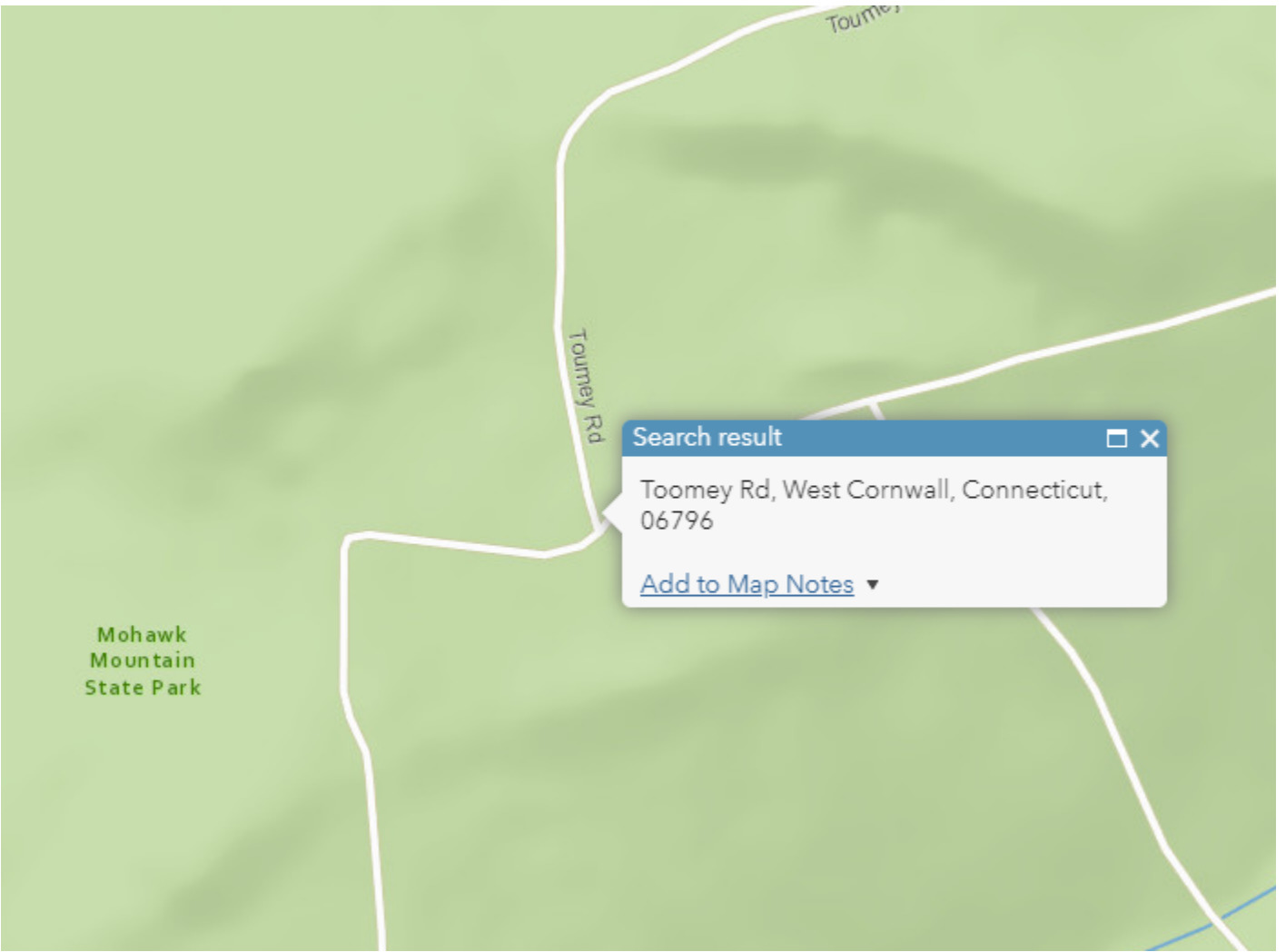
**Ship To:** ANNA TIMELL  
26 PINE STREET  
CORNWALL, CT 06753  
US

**Number of Packages:** 1

**UPS Service:** UPS Ground

**Package Weight:** 1.0 LBS

**Reference Number:** CTNH545A



Search result

Toomey Rd, West Cornwall, Connecticut, 06796

[Add to Map Notes](#) ▼

Mohawk Mountain State Park

Property Location: 036 TOOMEY RD

MAP ID: F04/ 01/ //

Bldg Name:

State Use: 2-1

Vision ID: 10

Account #98100011

Bldg #: 1 of 1

Sec #: 1 of 1 Card 1 of 1

Print Date: 02/17/2021 11:15

CURRENT OWNER		TOPO.	UTILITIES	STRT./ROAD	LOCATION	CURRENT ASSESSMENT			
AMERICAN TOWER MGMT INC						Description	Code	Appraised Value	Assessed Value
PO BOX 723597						COM OUTBL	2-5	76,800	53,800
ATLANTA, GA 31139		<b>SUPPLEMENTAL DATA</b>							
Additional Owners:									
Other ID: CENSUS TRAC 2632 SURVEY # 662									
GIS ID:		ASSOC PID#			Total		76,800	53,800	

6031  
CORNWALL, CT

**VISION**

RECORD OF OWNERSHIP		BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.	PREVIOUS ASSESSMENTS (HISTORY)								
AMERICAN TOWER MGMT INC		088/811	04/03/2000	Q		221,229	QC	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
								2020	2-5	53,800	2019	2-5	53,800	2018	2-5	53,800
								Total:		53,800	Total:		53,800	Total:		53,800

EXEMPTIONS				OTHER ASSESSMENTS				
Year	Type	Description	Amount	Code	Description	Number	Amount	Comm. Int.
Total:								

This signature acknowledges a visit by a Data Collector or Assessor

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

**APPRAISED VALUE SUMMARY**

Appraised Bldg. Value (Card)	0
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	76,800
Appraised Land Value (Bldg)	0
Special Land Value	0
Total Appraised Parcel Value	76,800
Valuation Method:	C
Adjustment:	0
<b>Net Total Appraised Parcel Value</b>	<b>76,800</b>

**NOTES**

BLDGS ONLY ON STATE LAND (E6-3-6)  
 POLE ON PERSONAL PROPERTY  
 2016 PRICE 2014 IMPROVEMENTS  
 2017 CHANGED ADDRESS TO TOOMEY RD  
 PREVIOUSLY MOHAWK MOUNTAIN RD

BUILDING PERMIT RECORD										VISIT/ CHANGE HISTORY					
Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments	Date	Type	IS	ID	Cd.	Purpose/Result	
11128	10/06/2014	RE	Remodel	25,000		0		UPGRADE EQUIPMEN							

LAND LINE VALUATION SECTION																					
B #	Use Code	Use Description	Zone	D	Front	Depth	Units	Unit Price	I. Factor	S.A.	Acre Disc	C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing		S Adj Fact	Adj. Unit Price	Land Value	
																Spec Use	Spec Calc				
1	2-1V	COMM LND MDL-00					0 SF	0.00	1.0000	0	1.0000	1.00		0.00					.00		0

Total Card Land Units: 0.00 AC Parcel Total Land Area: 0 AC Total Land Value: 0



CONSTRUCTION DETAIL				CONSTRUCTION DETAIL (CONTINUED)			
Element	Cd.	Ch.	Description	Element	Cd.	Ch.	Description
Model	00		Vacant				
<b>MIXED USE</b>							
	<b>Code</b>		<b>Description</b>				<b>Percentage</b>
	2-1V		COMMLND MDL-00				100
<b>COST/MARKET VALUATION</b>							
	Adj. Base Rate:		0.00				
	Replace Cost		0				
	AYB						
	EYB		0				
	Dep Code						
	Remodel Rating						
	Year Remodeled						
	Dep %						
	Functional Obslnc						
	External Obslnc						
	Cost Trend Factor						
	Condition						
	% Complete						
	Overall % Cond						
	Apprais Val						
	Dep % Ovr		0				
	Dep Ovr Comment						
	Misc Imp Ovr		0				
	Misc Imp Ovr Comment						
	Cost to Cure Ovr		0				
	Cost to Cure Ovr Comment						

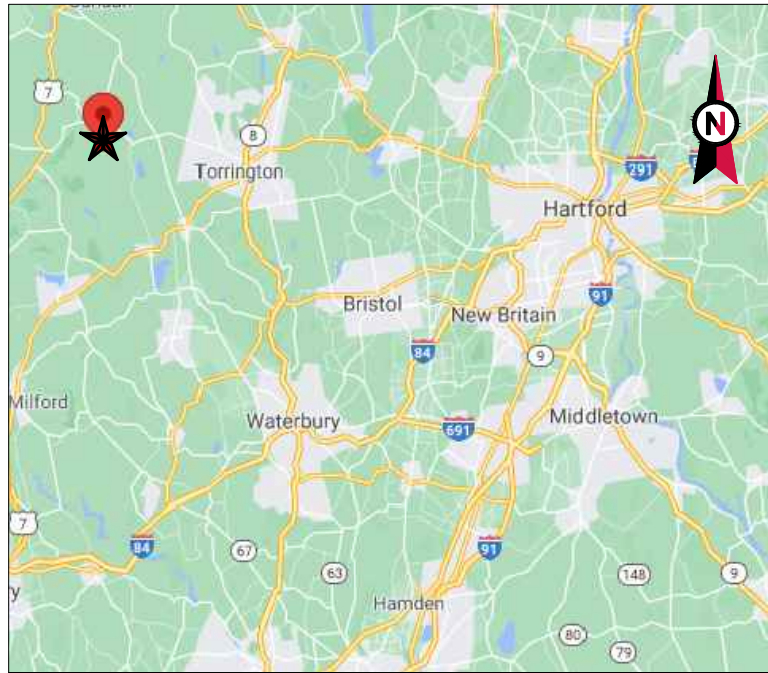
**OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)**

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value
FGR1	GARAGE-AVE			L	946	25.00	0		0		100	23,700
SHP2	WORK SHOP			L	936	30.00	0		0		100	28,100
	TOWER EQUI			L	1	25,000.00	2015				Null	25,000

No Photo On Record

**BUILDING SUB-AREA SUMMARY SECTION**

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
<b>Ttl. Gross Liv/Lease Area:</b>		0	0			



VICINITY MAP



**AMERICAN TOWER®**

ATC SITE NAME: CORNWALL CT  
 ATC SITE NUMBER: 88009  
 T-MOBILE SITE NAME: CTNH545A  
 T-MOBILE SITE NUMBER: CTNH545A  
 SITE ADDRESS: 36 TOOMEY RD.  
 CORNWALL, CT 06759-4232



LOCATION MAP

**T-MOBILE AMENDMENT ANTENNA AMENDMENT PLAN  
 67D07C 6102 MUAC CONFIGURATION**

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.  1. 2015 INTERNATIONAL BUILDING CODE (IBC) 2. 2017 NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 36 TOOMEY RD. CORNWALL, CT 06759-4232 COUNTY: LITCHFIELD  <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.82130278 LONGITUDE: -73.29644167 GROUND ELEVATION: 1678' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (3) LNX-6515DS-A1M ANTENNA(s), (3) RRUS11 B12 RRU(s), INSTALL (3) APXVAALL24_43-U-NA20 ANTENNA(s), (3) RADIO 4449 B71+B85 RRU(s), EXISTING (3) APC16DWV-16DWV-S-E-A20 ANTENNA(s), (3) RRUS11 B2 RRU(s), (3) RRUS11 B4 RRU(s), AND (3) 6X12 1 1/4' HYBRID CABLE(S) TO REMAIN <u>GROUND WORK:</u> INSTALL (1) BB 6648 EXISTING (1) RBS 6102 MU AC, (1) PURCELL SFX17 2824, (1) BB6630, (1) DUW30 TO REMAIN THE PROPOSED PROJECT DOES NOT INCLUDE ELECTRICAL SCOPE	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u>  <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801  <u>ENGINEER:</u> KIMLEY-HORN & ASSOCIATES, INC. 421 FAYETTEVILLE ST, STE 600 RALEIGH, NC 27601 COA: PEC.0000738  <u>PROPERTY OWNER:</u> PN LL NO VENDOR 36 TOOMEY RD. - CORNWALL - CT - 06759	<u>PROJECT NOTES</u> 1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED. 6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).	G-001	TITLE SHEET	0	07/09/21	RCG
<u>UTILITY COMPANIES</u>  POWER COMPANY: EVERSOURCE PHONE: (877) 659-6326  TELEPHONE COMPANY: FRONTIER COMMUNICATIONS PHONE: (800) 376-6843	<u>APPLICANT:</u> T-MOBILE  SUE EMERY SUSAN.EMERY@T-MOBILE.COM	<u>PROJECT LOCATION DIRECTIONS</u>  FROM HARTFORD, CT TAKE I-84 WEST TO RT 4 WEST. FOLLOW RT 4 TO GOSHEN, CT. GO PAST THE GOSHEN MOTEL AND TAKE A LEFT ONTO ALLYN ROAD. ALLYN ROAD WILL TURN INTO MOWHAWK MOUNTAIN ROAD WHERE THE STATE FOREST BEGINS. FOLLOW THIS TO THE TOP OF THE MOUNTAIN. ATC TOWER IS THE FIRST ONE ON THE LEFT AT THE TOP.	G-002	GENERAL NOTES	0	07/09/21	RCG
			C-101	DETAILED SITE PLAN	0	07/09/21	RCG
			C-102	DETAILED GROUND PLAN	0	07/09/21	RCG
			C-201	TOWER ELEVATION	0	07/09/21	RCG
			C-401	ANTENNA INFORMATION & SCHEDULE	0	07/09/21	RCG
			C-501	CONSTRUCTION DETAILS	0	07/09/21	RCG
			E-501	GROUNDING DETAILS	0	07/09/21	RCG
			R-601	SUPPLEMENTAL			
			R-602	SUPPLEMENTAL			

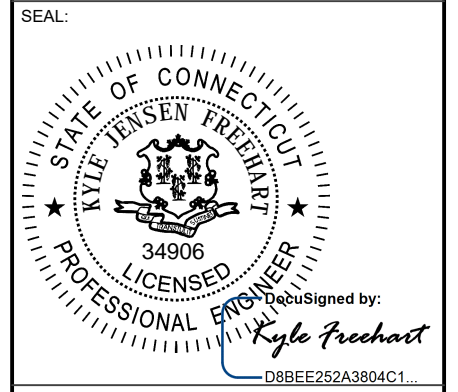


**Kimley»Horn**

COA: PEC.0000738  
 421 FAYETTEVILLE ST, SUITE 600  
 RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
A	PRELIM	CCG	06/10/21
0	ISSUED FOR CONSTRUCTION	RCG	07/09/21

ATC SITE NUMBER:  
**88009**  
 ATC SITE NAME:  
**CORNWALL CT**  
 T-MOBILE SITE NAME:  
**CTNH545A**  
 SITE ADDRESS:  
 36 TOOMEY RD.  
 CORNWALL, CT 06759-4232



DATE DRAWN:	07/09/21
ATC JOB NO:	13681679_D1
CUSTOMER ID:	CTNH545A
CUSTOMER #:	CTNH545A

**TITLE SHEET**

SHEET NUMBER:  
**G-001**

REVISION:  
**0**

Copyright © 2021 ATC IP, LLC, All Rights Reserved.

**GENERAL CONSTRUCTION NOTES:**

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
  - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
  - B. AC/TELCO INTERFACE BOX (PPC)
  - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
  - D. TOWERS, MONOPOLES
  - E. TOWER LIGHTING
  - F. GENERATORS & LIQUID PROPANE TANK
  - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
  - H. ANTENNAS (INSTALLED BY OTHERS)
  - I. TRANSMISSION LINE
  - J. TRANSMISSION LINE JUMPERS
  - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
  - L. TRANSMISSION LINE GROUND KITS
  - M. HANGERS
  - N. HOISTING GRIPS
  - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

**SPECIAL CONSTRUCTION**

**ANTENNA INSTALLATION NOTES:**

1. WORK INCLUDED:
  - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.
  - B. INSTALL ANTENNA AS INDICATED ON DRAWINGS AND T-MOBILE SPECIFICATIONS.
  - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
  - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
  - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
  - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
  - G. ANTENNA AND COAXIAL CABLE GROUNDING:
    - i. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
    - ii. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS).

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.



COA: PEC.0000738  
421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
A	PRELIM	CCG	06/10/21
0	ISSUED FOR CONSTRUCTION	RCG	07/09/21

ATC SITE NUMBER:  
**88009**  
ATC SITE NAME:  
**CORNWALL CT**  
T-MOBILE SITE NAME:  
**CTNH545A**  
SITE ADDRESS:  
36 TOOMEY RD.  
CORNWALL, CT 06759-4232

SEAL:



DATE DRAWN:	07/09/21
ATC JOB NO:	13681679_D1
CUSTOMER ID:	CTNH545A
CUSTOMER #:	CTNH545A

**GENERAL NOTES**

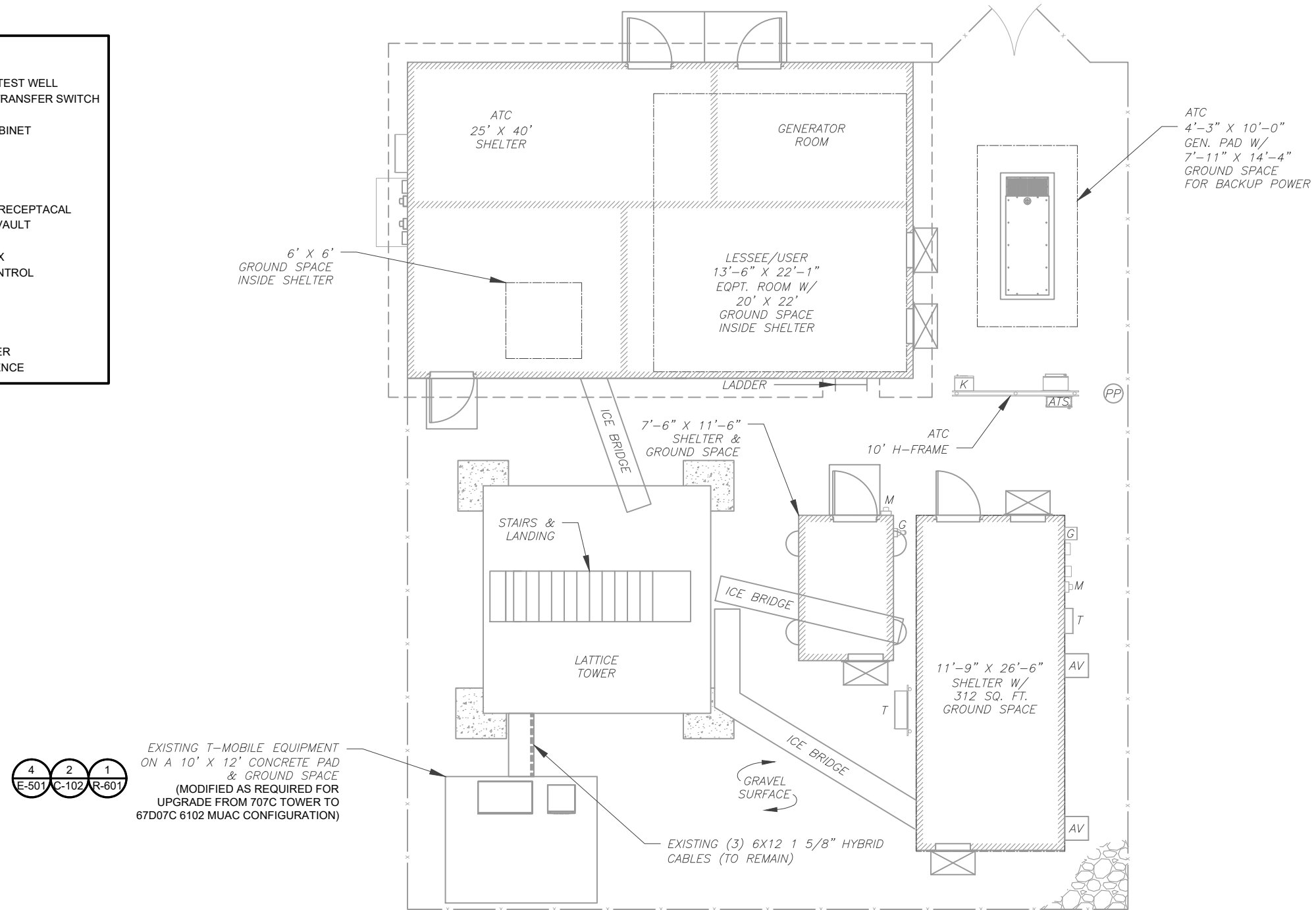
SHEET NUMBER: <b>G-002</b>	REVISION: <b>0</b>
-------------------------------	-----------------------

Copyright © 2021 ATC IP LLC, All Rights Reserved.

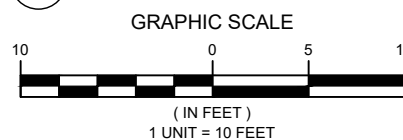
**SITE PLAN NOTES:**

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. THIS PROJECT INCLUDES NO INSTALL OR MODIFICATION AT GRADE.

LEGEND	
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
-x-	CHAINLINK FENCE



**1 DETAILED SITE PLAN**



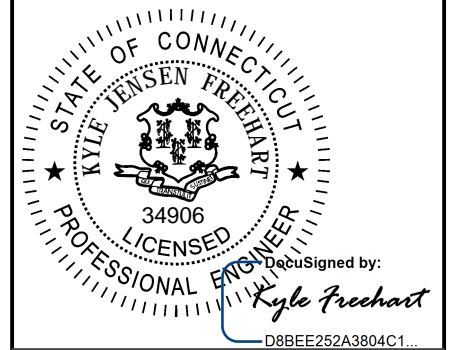
**Kimley»Horn**

COA: PEC.0000738  
 421 FAYETTEVILLE ST, SUITE 600  
 RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
A	PRELIM	CCG	06/10/21
0	ISSUED FOR CONSTRUCTION	RCG	07/09/21

ATC SITE NUMBER:  
**88009**  
 ATC SITE NAME:  
**CORNWALL CT**  
 T-MOBILE SITE NAME:  
**CTNH545A**  
 SITE ADDRESS:  
 36 TOOMEY RD.  
 CORNWALL, CT 06759-4232

SEAL:



DATE DRAWN:	07/09/21
ATC JOB NO:	13681679_D1
CUSTOMER ID:	CTNH545A
CUSTOMER #:	CTNH545A

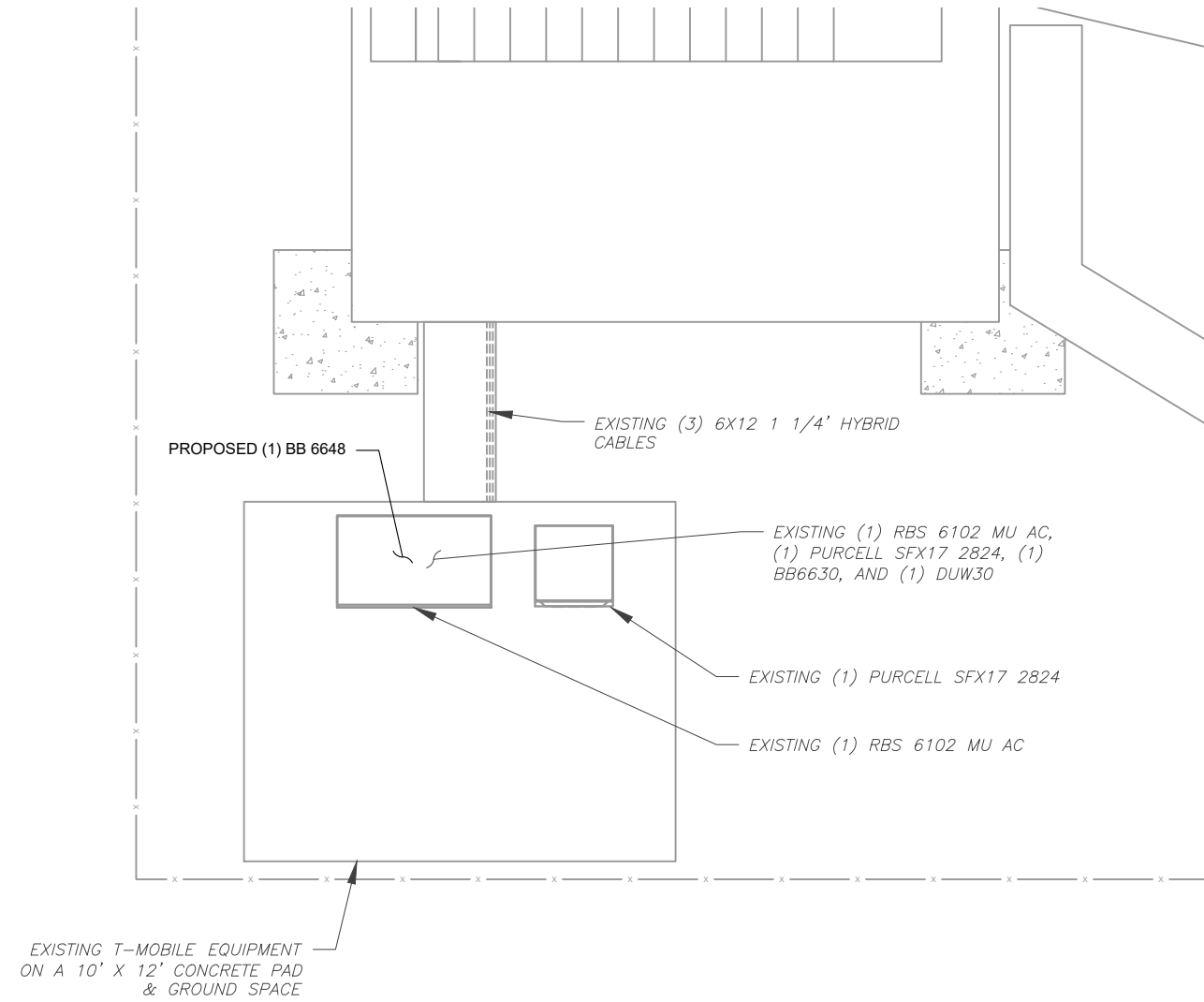
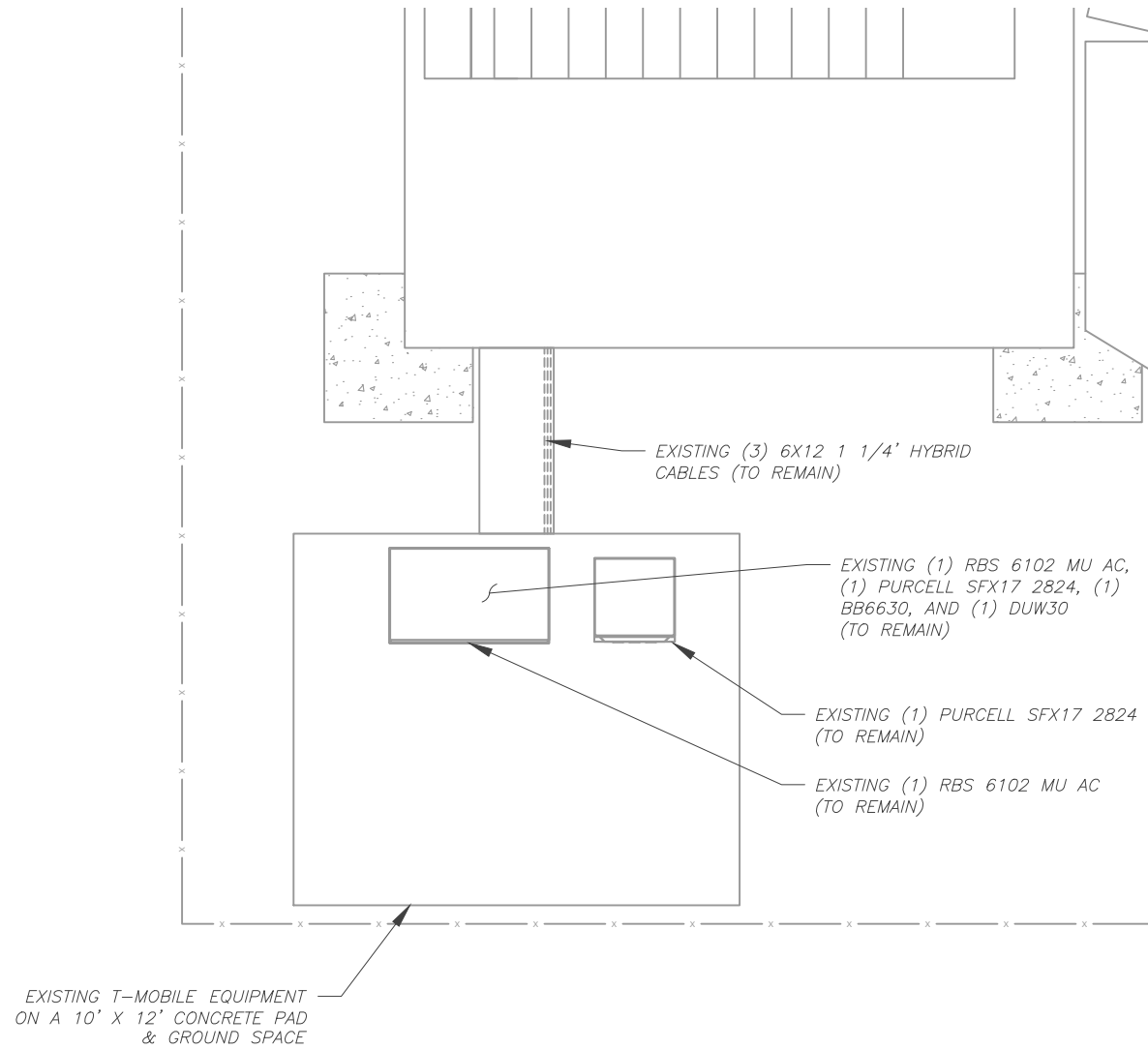
**DETAILED SITE PLAN**

SHEET NUMBER:  
**C-101**  
 REVISION:  
**0**

**SITE PLAN NOTES:**

1. CONTRACTOR TO VERIFY THERE IS NO LIVE AAV FIBER RUNNING THROUGH EXISTING DEAD EQUIPMENT. IF SO, THIS WILL NEED TO BE RERUN THROUGH CONDUIT PRIOR TO REMOVING DEAD 2G (6201 CABS) EQUIPMENT.
2. REMOVE EXISTING 2G CABINETS, AND POWER / TELCO WHIPS ASSOCIATED WITH THE DEAD EQUIPMENT IF APPLICABLE.
3. ALL OPEN PORTS NEED TO BE SEALED / WEATHERPROOFED PROPERLY
4. ALL UNNEEDED / EXCESS EQUIPMENT AND GARBAGE TO BE REMOVED FROM EQUIPMENT AREA. DISPOSE OF MATERIALS PROPERLY OFF SITE.

T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS



1 EXISTING GROUND EQUIPMENT LAYOUT



SCALE: 1"=5' (11X17)  
1"=2.5' (22X34)



2 PROPOSED GROUND EQUIPMENT LAYOUT



SCALE: 1"=5' (11X17)  
1"=2.5' (22X34)



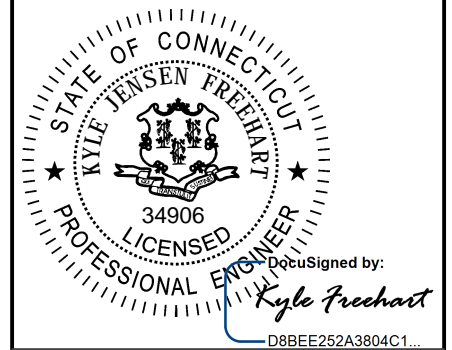
**Kimley»Horn**

COA: PEC.0000738  
421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
0	PRELIM	CCG	06/10/21
0	ISSUED FOR CONSTRUCTION	RCG	07/09/21

ATC SITE NUMBER:  
**88009**  
ATC SITE NAME:  
**CORNWALL CT**  
T-MOBILE SITE NAME:  
**CTNH545A**  
SITE ADDRESS:  
36 TOOMEY RD.  
CORNWALL, CT 06759-4232

SEAL:



**T-Mobile**

DATE DRAWN:	07/09/21
ATC JOB NO:	13681679_D1
CUSTOMER ID:	CTNH545A
CUSTOMER #:	CTNH545A

**DETAILED GROUND PLAN**

SHEET NUMBER:  
**C-102**

REVISION:  
**0**



Kimley»Horn

COA: PEC.0000738  
421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
A	PRELIM	CCG	06/10/21
0	ISSUED FOR CONSTRUCTION	RGC	07/09/21

ATC SITE NUMBER:

88009

ATC SITE NAME:

CORNWALL CT

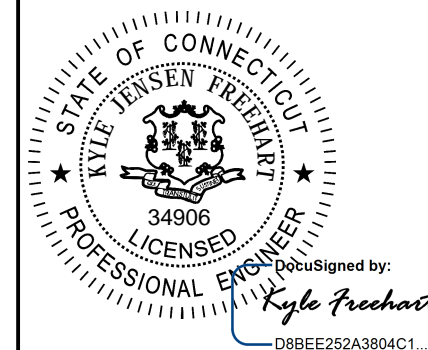
T-MOBILE SITE NAME:

CTNH545A

SITE ADDRESS:

36 TOOMEY RD.  
CORNWALL, CT 06759-4232

SEAL:

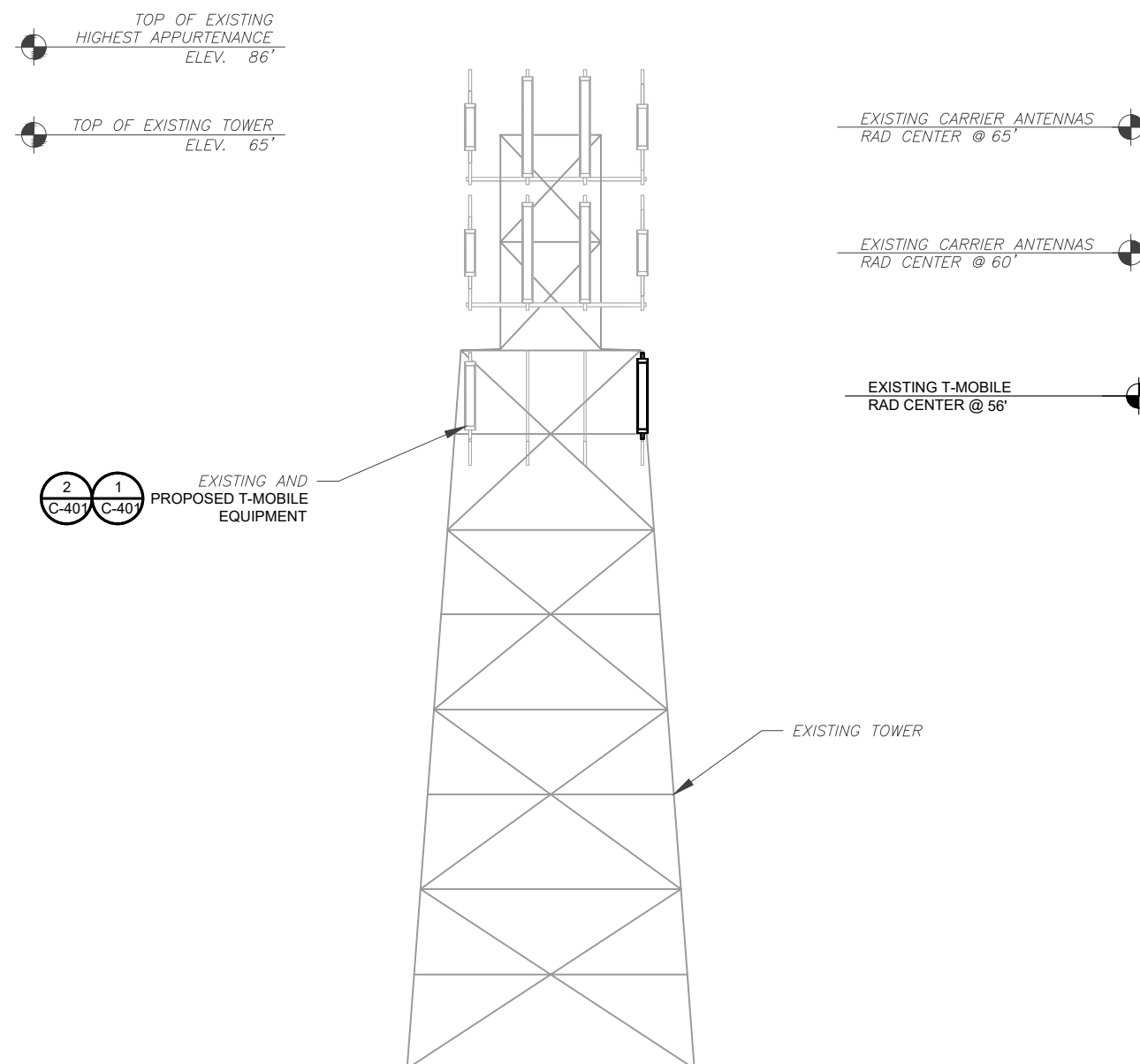


DATE DRAWN:	07/09/21
ATC JOB NO:	13681679_D1
CUSTOMER ID:	CTNH545A
CUSTOMER #:	CTNH545A

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0

ATC HAS NOT ANALYZED THE EXISTING ANTENNA MOUNT(S) TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR PROPOSED CARRIER LOADING.



TOWER NOTE:

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
- WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
- TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

1 TOWER ELEVATION  
SCALE: N.T.S.



**Kimley»Horn**

COA: PEC.0000738  
421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
A	PRELIM	CCG	06/10/21
0	ISSUED FOR CONSTRUCTION	RCG	07/09/21

ATC SITE NUMBER:

**88009**

ATC SITE NAME:

**CORNWALL CT**

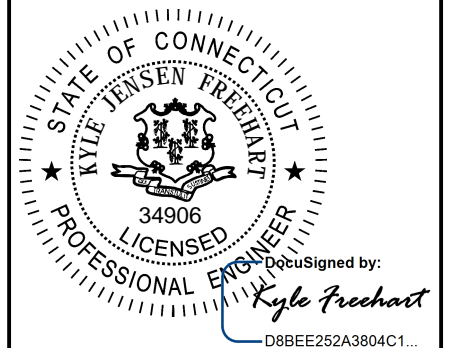
T-MOBILE SITE NAME:

**CTNH545A**

SITE ADDRESS:

36 TOOMEY RD.  
CORNWALL, CT 06759-4232

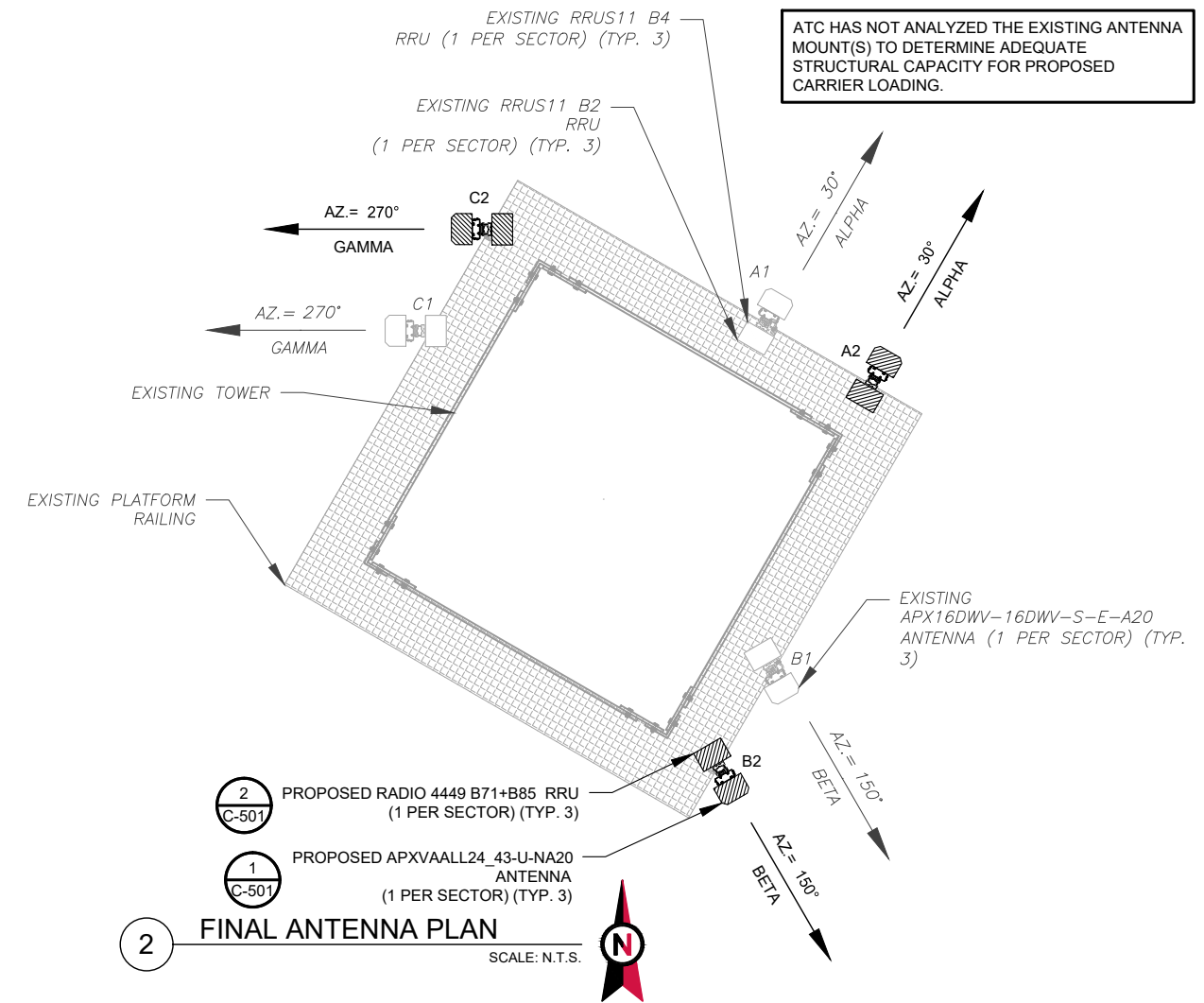
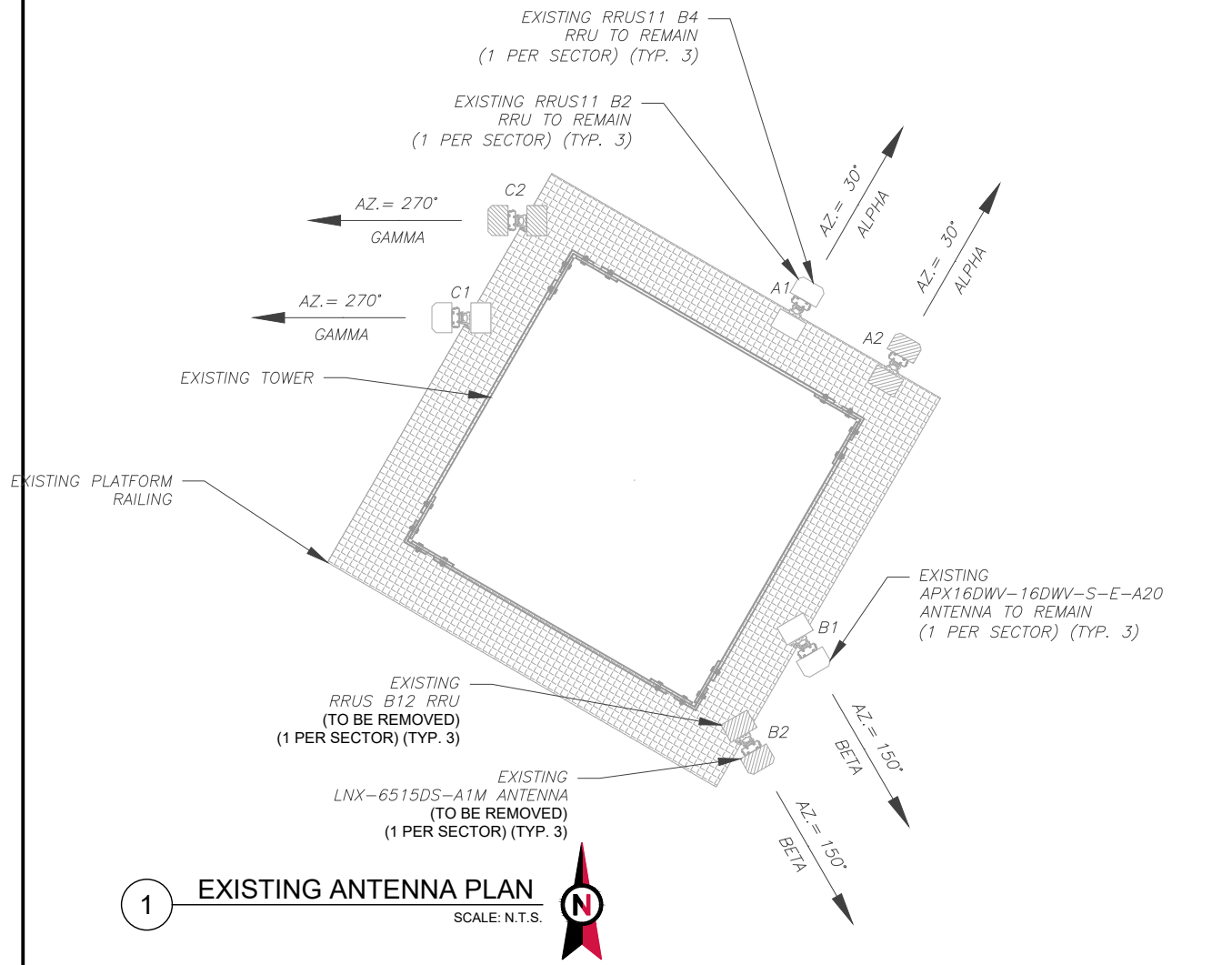
SEAL:



DATE DRAWN:	07/09/21
ATC JOB NO:	13681679_D1
CUSTOMER ID:	CTNH545A
CUSTOMER #:	CTNH545A

**ANTENNA INFORMATION & SCHEDULE**

SHEET NUMBER: **C-401**  
REVISION: **0**



EXISTING ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	56'	30°	A1	APX16DWV-16DWV-S-E-A20	U1900/L2100	0°/2°	RMN	RRUS11 B2 RRUS11 B4	RMN RMN
			A2	LNX-6515DS-A1M	L700	0°/2°	RMV	RRUS11 B12	RMV
BETA	56'	150°	B1	APX16DWV-16DWV-S-E-A20	U1900/L2100	0°/2°	RMN	RRUS11 B2 RRUS11 B4	RMN RMN
			B2	LNX-6515DS-A1M	L700	0°/2°	RMV	RRUS11 B12	RMV
GAMMA	56'	270°	C1	APX16DWV-16DWV-S-E-A20	U1900/L2100	0°/2°	RMN	RRUS11 B2 RRUS11 B4	RMN RMN
			C2	LNX-6515DS-A1M	L700	0°/2°	RMV	RRUS11 B12	RMV

- NOTES**
- CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
  - CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

**STATUS ABBREVIATIONS**

RMV: TO BE REMOVED  
RMN: TO REMAIN  
REL: TO BE RELOCATED  
ADD: TO BE ADDED

**CABLE LENGTHS FOR JUMPERS**

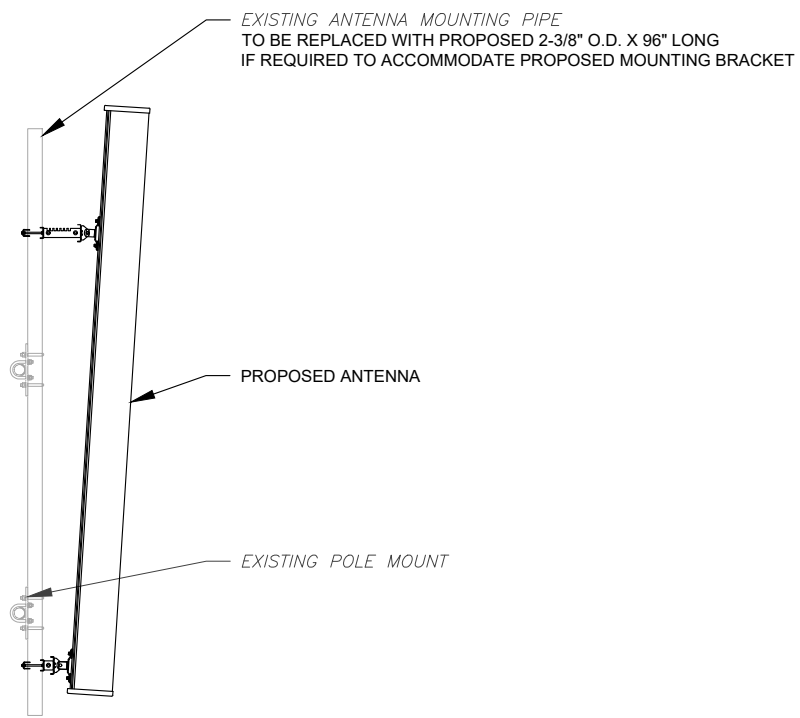
JUNCTION BOX TO RRU: 15'  
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	56'	30°	A1	APX16DWV-16DWV-S-E-A20	U1900/L2100	0°/2°	RMN	RRUS11 B2 RRUS11 B4	RMN RMN
			A2	APXVAALL24_43-U-NA20	L700/L600/N600	0°/2°	ADD	RADIO 4449 B71+B85	ADD
BETA	56'	150°	B1	APX16DWV-16DWV-S-E-A20	U1900/L2100	0°/2°	RMN	RRUS11 B2 RRUS11 B4	RMN RMN
			B2	APXVAALL24_43-U-NA20	L700/L600/N600	0°/2°	ADD	RADIO 4449 B71+B85	ADD
GAMMA	56'	270°	C1	APX16DWV-16DWV-S-E-A20	U1900/L2100	0°/2°	RMN	RRUS11 B2 RRUS11 B4	RMN RMN
			C2	APXVAALL24_43-U-NA20	L700/L600/N600	0°/2°	ADD	RADIO 4449 B71+B85	ADD

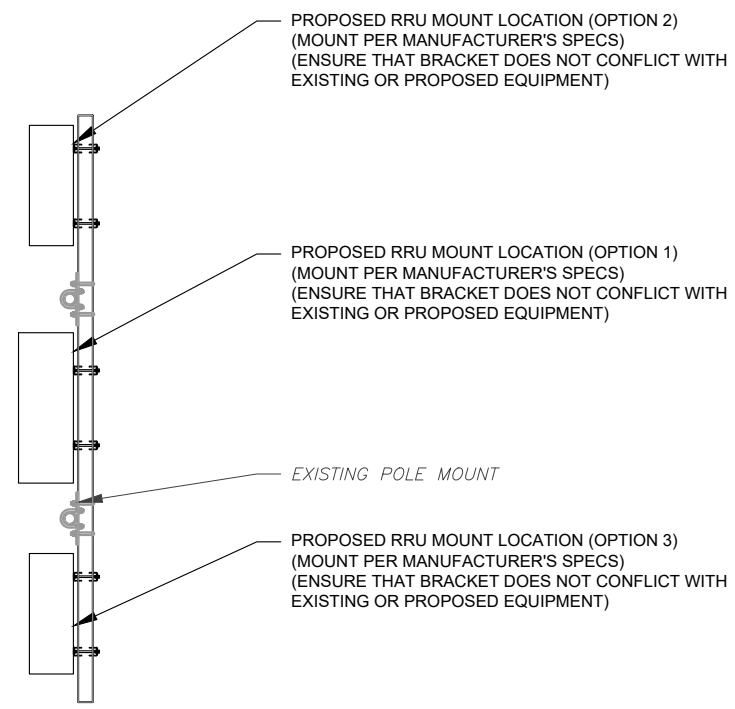
EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	-	(3) 6X12 1 1/4"	RMN
-	-	-	-	-

**3 EQUIPMENT SCHEDULES**

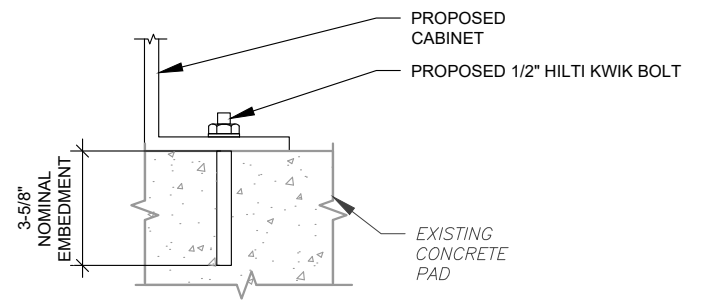
FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	-	(3) 6X12 1 1/4"	RMN
-	-	-	-	-



1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL  
SCALE: N.T.S.



2 PROPOSED RRU MOUNTING DETAIL - TYPICAL  
SCALE: N.T.S.



NOTE:  
INSTALL HILTI KWIK BOLT ANCHORS STRICTLY PER INSTALLATION INSTRUCTIONS INCLUDED WITH PRODUCT OR FOUND ONLINE AT WWW.US.HILTI.COM. PROPER INSTALLATION IS CRITICAL FOR FULL PERFORMANCE.

3 CABINET ATTACHMENT DETAIL  
SCALE: NOT TO SCALE



**Kimley»Horn**

COA: PEC.0000738  
421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
A	PRELIM	CCG	06/10/21
0	ISSUED FOR CONSTRUCTION	RCG	07/09/21

ATC SITE NUMBER:  
**88009**  
ATC SITE NAME:  
**CORNWALL CT**  
T-MOBILE SITE NAME:  
**CTNH545A**  
SITE ADDRESS:  
36 TOOMEY RD.  
CORNWALL, CT 06759-4232

SEAL:

DocuSigned by:  
*Kyle Freehart*  
D8BEE252A3804C1...

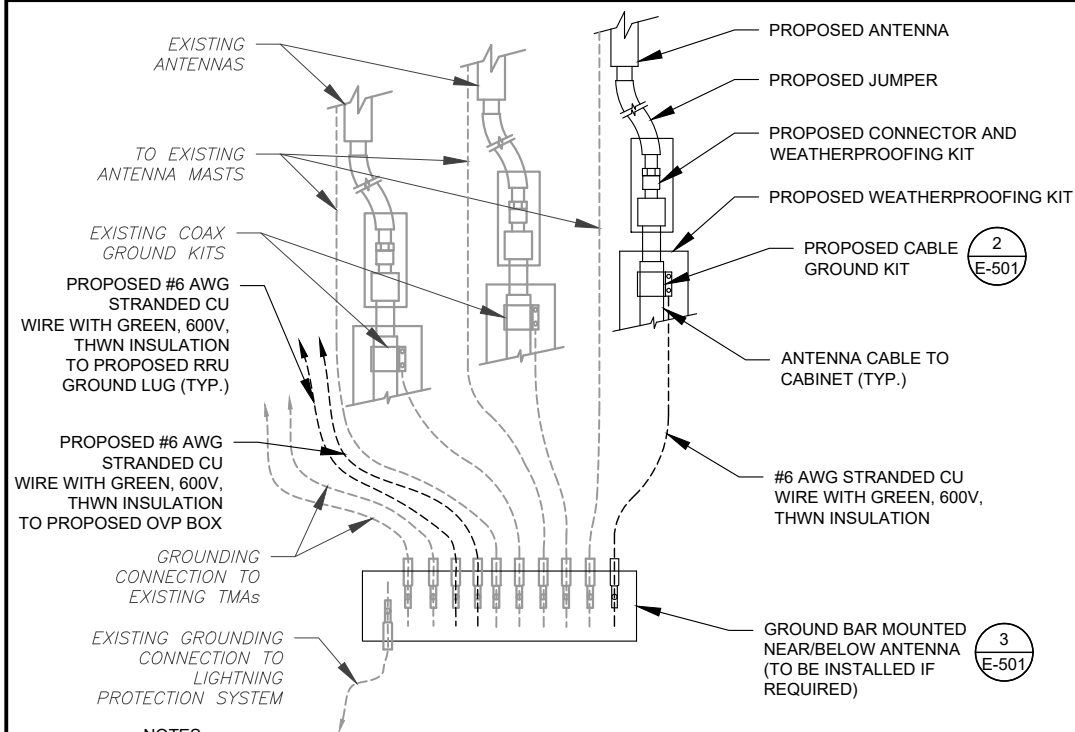


DATE DRAWN:	07/09/21
ATC JOB NO:	13681679_D1
CUSTOMER ID:	CTNH545A
CUSTOMER #:	CTNH545A

**CONSTRUCTION  
DETAILS**

SHEET NUMBER: <b>C-501</b>	REVISION: <b>0</b>
-------------------------------	-----------------------

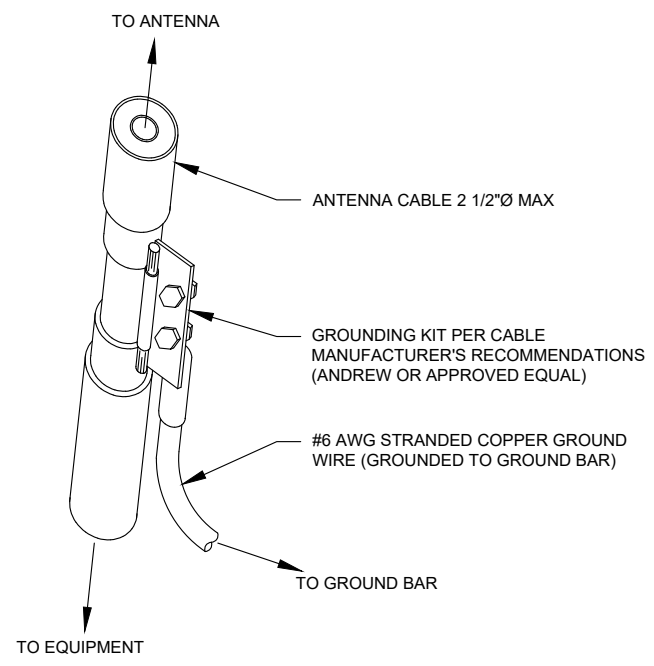




**NOTES:**

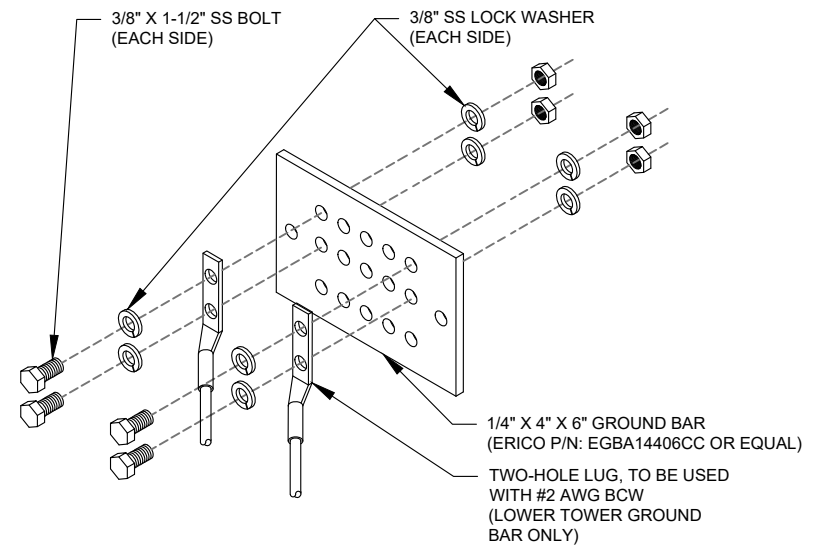
1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

**1** TYPICAL ANTENNA GROUNDING DIAGRAM  
SCALE: N.T.S.



- GROUND KIT NOTES:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
  2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

**2** CABLE GROUND KIT CONNECTION DETAIL  
SCALE: N.T.S.



- GROUND BAR NOTES:**
1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
  2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

**3** TOWER GROUND BAR DETAIL  
SCALE: N.T.S.



**Kimley»Horn**

COA: PEC.0000738  
421 FAYETTEVILLE ST, SUITE 600  
RALEIGH, NC 27601

REV.	DESCRIPTION	BY	DATE
A	PRELIM	CCG	06/10/21
0	ISSUED FOR CONSTRUCTION	RCG	07/09/21

ATC SITE NUMBER:  
**88009**  
ATC SITE NAME:  
**CORNWALL CT**  
T-MOBILE SITE NAME:  
**CTNH545A**  
SITE ADDRESS:  
36 TOOMEY RD.  
CORNWALL, CT 06759-4232

SEAL:



DATE DRAWN:	07/09/21
ATC JOB NO:	13681679_D1
CUSTOMER ID:	CTNH545A
CUSTOMER #:	CTNH545A

**GROUNDING DETAILS**

SHEET NUMBER:	REVISION:
<b>E-501</b>	<b>0</b>

Copyright © 2021 ATC IP, LLC. All Rights Reserved.

4/27/2021

CTNH545A\_L600\_3\_draft\_2021-04-27

RAN Template: 67D07C 6102 MUAC A&L Template: 67D07C\_TOP+10P

CTNH545A\_L600\_3\_draft  
Print Name: Standard

Section 5 - RAN Equipment

Existing RAN Equipment	
Template: 707C Tower	
Enclosure	1 2
Enclosure Type	RBS 6102 MU AC Purcell SFX17 2824
Baseband	BB 6630 L2100 L700 DUW30 U1900
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG* (x 3)

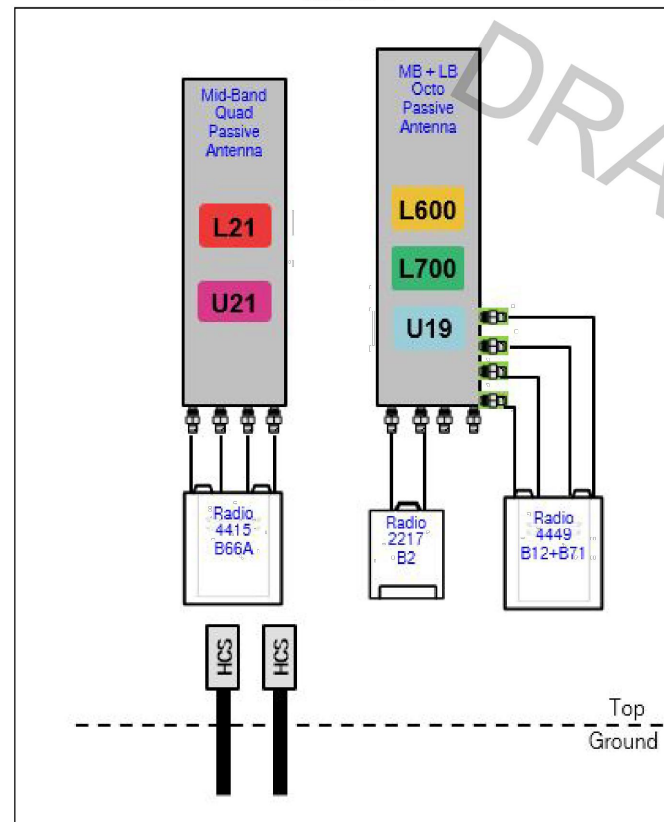
Proposed RAN Equipment	
Template: 67D07C 6102 MUAC	
Enclosure	1 2
Enclosure Type	RBS 6102 MU AC Purcell SFX17 2824
Baseband	BB 6630 L2100 L700 L900 N600 DUW30 U1900 BB 6648
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG* (x 3)

RAN Scope of Work:

Current service is 200 Amp

Section 3 - Proposed Template Images

67D07C.JPG



Notes:

<https://rfd-prod-web-core-secure.geo.cf.t-mobile.com/DataSheet/Printout/168a8140-4679-4ad6-821c-88f1fb752f5b?layoutId=c8bf0698-6926-47d9-9...> 4/11

1 CABINET CONFIGURATION  
SCALE: NOT TO SCALE

<https://rfd-prod-web-core-secure.geo.cf.t-mobile.com/DataSheet/Printout/168a8140-4679-4ad6-821c-88f1fb752f5b?layoutId=c8bf0698-6926-47d9-9...> 2/11

2 ANTENNA CONFIGURATION  
SCALE: NOT TO SCALE

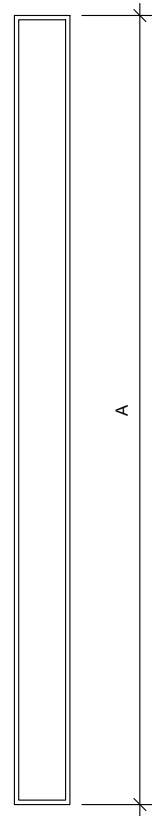
SUPPLEMENTAL

SHEET NUMBER: REVISION:

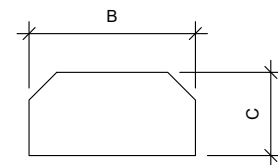
R-601

0

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.



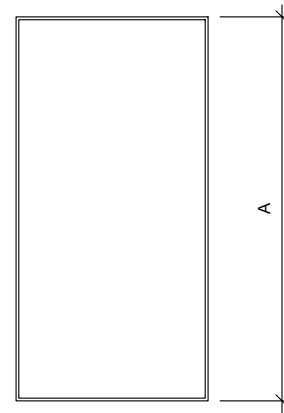
FRONT VIEW



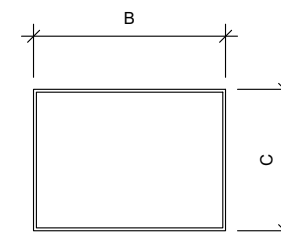
TOP VIEW

**1 ANTENNA SPECIFICATIONS**  
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
APXVAALL24_43-U-NA20	95.9"	24.0"	8.5"	122.8



FRONT VIEW



TOP VIEW

**2 RRU SPECIFICATIONS**  
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RADIO 4449 B71 B85A	15.0"	13.2"	10.5"	75.0

SUPPLEMENTAL

SHEET NUMBER: **R-602** REVISION: **0**

## **Structural Analysis Report**

*Antenna Mount Analysis*

*Proposed T-Mobile  
Upgrade*

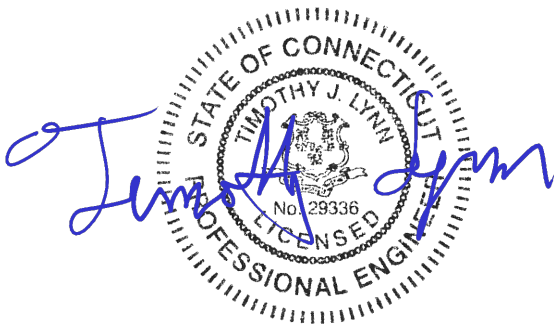
*T-Mobile Site #: CTNH545A*

*36 Toomey Road  
Cornwall, CT*

*Centek Project No. 21022.25*

*Date: July 27, 2021*

*Max Stress Ratio = 64.3%*



**Prepared for:**  
T-Mobile USA  
35 Griffin Road  
Bloomfield, CT 06002

## **Table of Contents**

### **SECTION 1 – REPORT**

- ANTENNA AND APPURTENANCE SUMMARY
- STRUCTURE LOADING
- CONCLUSION

### **SECTION 2 – CALCULATIONS**

- WIND LOAD ON APPURTENANCES
- RISA3D OUTPUT REPORT

### **SECTION 3 – REFERENCE MATERIALS (NOT INCLUDED WITHIN REPORT)**

- T-MOBILE CONSTRUCTION DOCUMENTS PREPARED BY AMERICAN TOWER, DATED JUNE 10, 2021.

July 27, 2021

Mr. Dan Reid  
Transcend Wireless  
10 Industrial Ave  
Mahwah, NJ 07430

Re: *Structural Letter ~ Antenna Mount*  
*T-Mobile – Site Ref: CTNH545A*  
*36 Toomey Road*  
*Cornwall, CT 06759*

Centek Project No. 21022.25

Dear Mr. Reid,

Centek Engineering, Inc. has reviewed the T-Mobile antenna installation at the above-referenced site. The purpose of the review is to determine the structural adequacy of the existing mount, consisting of pipe masts and L3x3 kickers attached to the hosting structure, to support the equipment configuration. The review considered the effects of wind load, dead load, and ice load in accordance with the 2015 International Building Code as modified by the 2018 Connecticut State Building Code (CTBC), including ASCE 7-10 and ANSI/TIA-222-G *Structural Standards for Steel Antenna Towers and Supporting Structures*.

The loads considered in this analysis consist of the following:

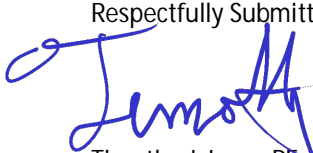
- T-Mobile:  
Sector Frames: Three (3) RFS APXVAALL24\_43-U-NA20 panel antennas, three (3) RFS APX16DWV-16DWV-S-E-A20 panel antennas, three (3) Ericsson 4449 remote radio heads and three (3) Ericsson RRUS-11 remote radio heads on the existing mount with a RAD center elevation of 56-ft +/- AGL.

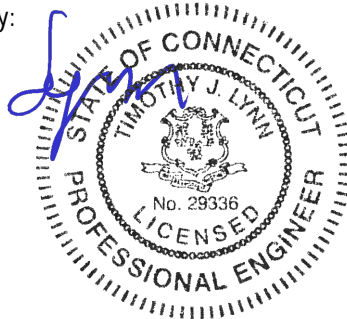
The antenna mount was analyzed per the requirements of the 2015 International Building Code as modified by the 2018 Connecticut State Building Code considering a nominal design wind speed of 89 mph for Cornwall as required in Appendix N of the 2018 Connecticut State Building Code.

Based on our review of the installation, it is our opinion that the subject antenna mount has sufficient capacity to support the aforementioned antenna configuration.

If there are any questions regarding this matter, please feel free to call.

Respectfully Submitted by:

  
Timothy J. Lynn, PE  
Structural Engineer



Prepared by:

  
Fernando J. Palacios  
Engineer

## **Section 2 - Calculations**



**Figure 1** Existing Antenna Mount, Frontal view (left), Back view (back).





**Development of Wind & Ice Load on Antennas**

**Antenna Data:**

Antenna Model =	RFS APXVAALL24_43-U-NA20	
Antenna Shape =	Flat	(User Input)
Antenna Height =	$L_{ant} := 95.9$	in (User Input)
Antenna Width =	$W_{ant} := 24.0$	in (User Input)
Antenna Thickness =	$T_{ant} := 8.5$	in (User Input)
Antenna Weight =	$WT_{ant} := 150$	lbs (User Input)
Number of Antennas =	$N_{ant} := 1$	(User Input)
Antenna Aspect Ratio =	$Ar_{ant} := \frac{L_{ant}}{W_{ant}} = 4.0$	
Antenna Force Coefficient =	$Ca_{ant} = 1.27$	

**Wind Load (without ice)**

Surface Area for One Antenna =  $SA_{antF} := \frac{L_{ant} \cdot W_{ant}}{144} = 16$  sf

**Total Antenna Wind Force Front =  $F_{ant} := qz \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{antF} = 361$  lbs**

Surface Area for One Antenna =  $SA_{antS} := \frac{L_{ant} \cdot T_{ant}}{144} = 5.7$  sf

**Total Antenna Wind Force Side =  $F_{ant} := qz \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{antS} = 128$  lbs**

**Wind Load (with ice)**

Surface Area for One Antenna w/ Ice =  $SA_{ICEantF} := \frac{(L_{ant} + 2 \cdot t_{iz}) \cdot (W_{ant} + 2 \cdot t_{iz})}{144} = 19.6$  sf

**Total Antenna Wind Force w/ Ice Front =  $F_{ant} := qz_{ice} \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{ICEantF} = 89$  lbs**

Surface Area for One Antenna w/ Ice =  $SA_{ICEantS} := \frac{(L_{ant} + 2 \cdot t_{iz}) \cdot (T_{ant} + 2 \cdot t_{iz})}{144} = 8.8$  sf

**Total Antenna Wind Force w/ Ice Side =  $F_{ant} := qz_{ice} \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{ICEantS} = 40$  lbs**

**Gravity Load (without ice)**

**Weight of All Antennas =  $WT_{ant} \cdot N_{ant} = 150$  lbs**

**Gravity Loads (ice only)**

Volume of Each Antenna =  $V_{ant} := L_{ant} \cdot W_{ant} \cdot T_{ant} = 2 \cdot 10^4$  cu in

Volume of Ice on Each Antenna =  $V_{ice} := (L_{ant} + 2 \cdot t_{iz}) \cdot (W_{ant} + 2 \cdot t_{iz}) \cdot (T_{ant} + 2 \cdot t_{iz}) - V_{ant} = 2 \cdot 10^4$

Weight of Ice on Each Antenna =  $W_{ICEant} := \frac{V_{ice}}{1728} \cdot \rho_d = 530$  lbs

**Weight of Ice on All Antennas =  $W_{ICEant} \cdot N_{ant} = 530$  lbs**

**Development of Wind & Ice Load on Antennas**

**Antenna Data:**

Antenna Model =	RFS - APX16DWV-16DWV-S-E-A20	
Antenna Shape =	Flat	(User Input)
Antenna Height =	$L_{ant} := 55.9$	in (User Input)
Antenna Width =	$W_{ant} := 13.0$	in (User Input)
Antenna Thickness =	$T_{ant} := 3.15$	in (User Input)
Antenna Weight =	$WT_{ant} := 41.8$	lbs (User Input)
Number of Antennas =	$N_{ant} := 1$	(User Input)
Antenna Aspect Ratio =	$Ar_{ant} := \frac{L_{ant}}{W_{ant}} = 4.3$	
Antenna Force Coefficient =	$Ca_{ant} = 1.28$	

**Wind Load (without ice)**

Surface Area for One Antenna =  $SA_{antF} := \frac{L_{ant} \cdot W_{ant}}{144} = 5$  sf

**Total Antenna Wind Force Front =  $F_{ant} := qz \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{antF} = 115$  lbs**

Surface Area for One Antenna =  $SA_{antS} := \frac{L_{ant} \cdot T_{ant}}{144} = 1.2$  sf

**Total Antenna Wind Force Side =  $F_{ant} := qz \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{antS} = 28$  lbs**

**Wind Load (with ice)**

Surface Area for One Antenna w/ Ice =  $SA_{ICEantF} := \frac{(L_{ant} + 2 \cdot t_{iz}) \cdot (W_{ant} + 2 \cdot t_{iz})}{144} = 7.2$  sf

**Total Antenna Wind Force w/ Ice Front =  $F_{ant} := qz_{ice} \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{ICEantF} = 33$  lbs**

Surface Area for One Antenna w/ Ice =  $SA_{ICEantS} := \frac{(L_{ant} + 2 \cdot t_{iz}) \cdot (T_{ant} + 2 \cdot t_{iz})}{144} = 3.1$  sf

**Total Antenna Wind Force w/ Ice Side =  $F_{ant} := qz_{ice} \cdot G_H \cdot Ca_{ant} \cdot K_a \cdot SA_{ICEantS} = 14$  lbs**

**Gravity Load (without ice)**

**Weight of All Antennas =  $WT_{ant} \cdot N_{ant} = 42$  lbs**

**Gravity Loads (ice only)**

Volume of Each Antenna =  $V_{ant} := L_{ant} \cdot W_{ant} \cdot T_{ant} = 2289$  cu in

Volume of Ice on Each Antenna =  $V_{ice} := (L_{ant} + 2 \cdot t_{iz}) \cdot (W_{ant} + 2 \cdot t_{iz}) \cdot (T_{ant} + 2 \cdot t_{iz}) - V_{ant} = 5336$

Weight of Ice on Each Antenna =  $W_{ICEant} := \frac{V_{ice}}{1728} \cdot Id = 173$  lbs

**Weight of Ice on All Antennas =  $W_{ICEant} \cdot N_{ant} = 173$  lbs**

**Development of Wind & Ice Load on RRUS's**

**RRUS Data:**

RRUS Model =	Ericsson 4449 B71+B85	
RRUS Shape =	Flat	(User Input)
RRUS Height =	$L_{RRUS} := 14.9$	in (User Input)
RRUS Width =	$W_{RRUS} := 13.2$	in (User Input)
RRUS Thickness =	$T_{RRUS} := 5.4$	in (User Input)
RRUS Weight =	$WT_{RRUS} := 74$	lbs (User Input)
Number of RRUS's =	$N_{RRUS} := 1$	
RRUS Aspect Ratio =	$Ar_{RRUS} := \frac{L_{RRUS}}{W_{RRUS}} = 1.1$	
RRUS Force Coefficient =	$Ca_{RRUS} = 1.2$	

**Wind Load (without ice)**

Surface Area for One RRUS =  $SA_{RRUSF} := \frac{L_{RRUS} \cdot W_{RRUS}}{144} = 1.4$  sf

**Total RRUS Wind Force =**  $F_{RRUS} := qz \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{RRUSF} = 29$  lbs

Surface Area for One RRUS =  $SA_{RRUSS} := \frac{L_{RRUS} \cdot T_{RRUS}}{144} = 0.6$  sf

**Total RRUS Wind Force =**  $F_{RRUS} := qz \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{RRUSS} = 12$  lbs

**Wind Load (with ice)**

Surface Area for One RRUS w/ Ice =  $SA_{ICERRUSF} := \frac{(L_{RRUS} + 2 \cdot t_{iz}) \cdot (W_{RRUS} + 2 \cdot t_{iz})}{144} = 2.3$  sf

**Total RRUS Wind Force w/ Ice =**  $F_{IRRUS} := qz_{ice} \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{ICERRUSF} = 10$  lbs

Surface Area for One RRUS w/ Ice =  $SA_{ICERRUSS} := \frac{(L_{RRUS} + 2 \cdot t_{iz}) \cdot (T_{RRUS} + 2 \cdot t_{iz})}{144} = 1.3$  sf

**Total RRUS Wind Force w/ Ice =**  $F_{IRRUS} := qz_{ice} \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{ICERRUSS} = 6$  lbs

**Gravity Load (without ice)**

**Weight of All RRUSs =**  $WT_{RRUS} \cdot N_{RRUS} = 74$  lbs

**Gravity Loads (ice only)**

Volume of Each RRUS =  $V_{RRUS} := L_{RRUS} \cdot W_{RRUS} \cdot T_{RRUS} = 1062$  cu in

Volume of Ice on Each RRUS =  $V_{ice} := (L_{RRUS} + 2 \cdot t_{iz}) \cdot (W_{RRUS} + 2 \cdot t_{iz}) \cdot (T_{RRUS} + 2 \cdot t_{iz}) - V_{RRUS} = 2140$  cu in

Weight of Ice on Each RRUS =  $W_{ICERRUS} := \frac{V_{ice}}{1728} \cdot Id = 69$  lbs

**Weight of Ice on All RRUSs =**  $W_{ICERRUS} \cdot N_{RRUS} = 69$  lbs

**Development of Wind & Ice Load on RRUS's**

**RRUS Data:**

RRUS Model =	Ericsson RRUS 11	
RRUS Shape =	Flat	(User Input)
RRUS Height =	$L_{RRUS} := 19.7$	in (User Input)
RRUS Width =	$W_{RRUS} := 17.0$	in (User Input)
RRUS Thickness =	$T_{RRUS} := 7.2$	in (User Input)
RRUS Weight =	$WT_{RRUS} := 50.7$	lbs (User Input)
Number of RRUS's =	$N_{RRUS} := 1$	
RRUS Aspect Ratio =	$Ar_{RRUS} := \frac{L_{RRUS}}{W_{RRUS}} = 1.2$	
RRUS Force Coefficient =	$Ca_{RRUS} = 1.2$	

**Wind Load (without ice)**

Surface Area for One RRUS =  $SA_{RRUSF} := \frac{L_{RRUS} \cdot W_{RRUS}}{144} = 2.3$  sf

**Total RRUS Wind Force =  $F_{RRUS} := qz \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{RRUSF} = 50$  lbs**

Surface Area for One RRUS =  $SA_{RRUSS} := \frac{L_{RRUS} \cdot T_{RRUS}}{144} = 1$  sf

**Total RRUS Wind Force =  $F_{RRUS} := qz \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{RRUSS} = 21$  lbs**

**Wind Load (with ice)**

Surface Area for One RRUS w/ Ice =  $SA_{ICERRUSF} := \frac{(L_{RRUS} + 2 \cdot t_{iz}) \cdot (W_{RRUS} + 2 \cdot t_{iz})}{144} = 3.5$  sf

**Total RRUS Wind Force w/ Ice =  $F_{IRRUS} := qz_{ice} \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{ICERRUSF} = 15$  lbs**

Surface Area for One RRUS w/ Ice =  $SA_{ICERRUSS} := \frac{(L_{RRUS} + 2 \cdot t_{iz}) \cdot (T_{RRUS} + 2 \cdot t_{iz})}{144} = 1.9$  sf

**Total RRUS Wind Force w/ Ice =  $F_{IRRUS} := qz_{ice} \cdot G_H \cdot Ca_{RRUS} \cdot K_a \cdot SA_{ICERRUSS} = 8$  lbs**

**Gravity Load (without ice)**

**Weight of All RRUSs =  $WT_{RRUS} \cdot N_{RRUS} = 51$  lbs**

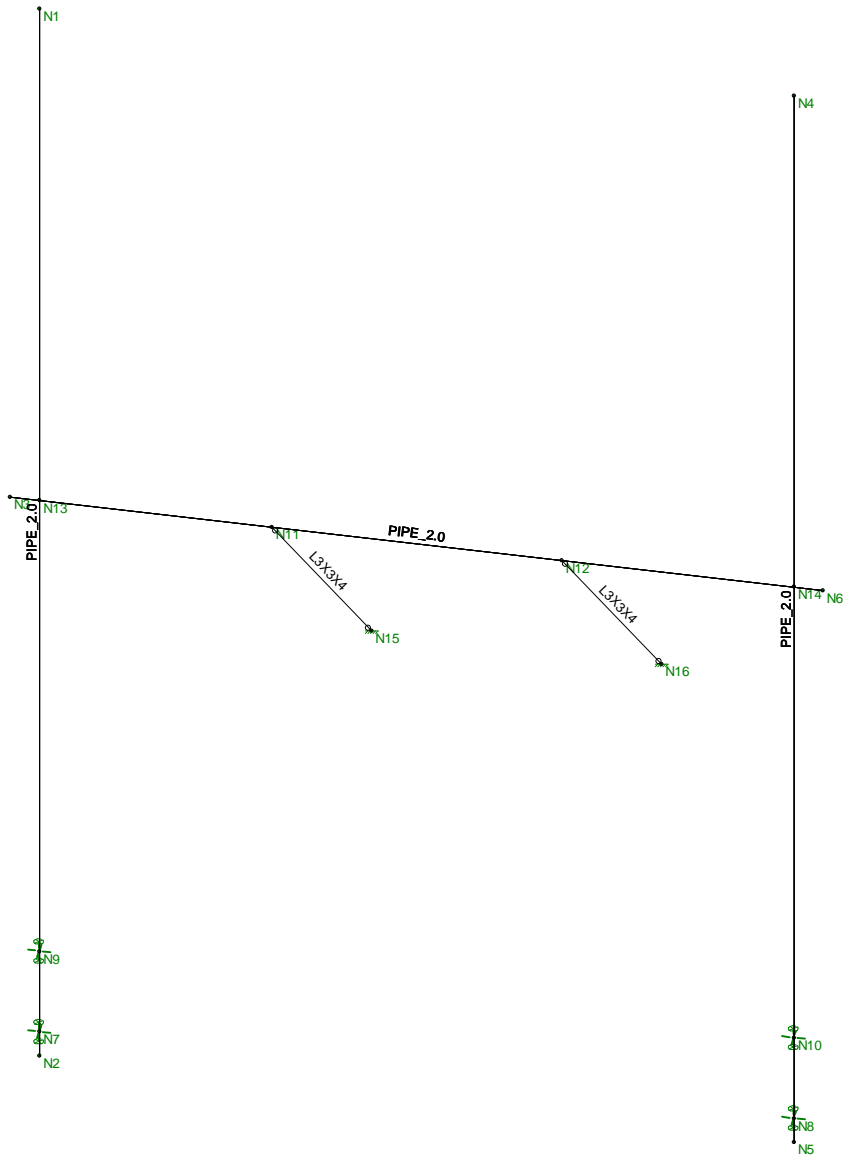
**Gravity Loads (ice only)**

Volume of Each RRUS =  $V_{RRUS} := L_{RRUS} \cdot W_{RRUS} \cdot T_{RRUS} = 2411$  cu in

Volume of Ice on Each RRUS =  $V_{ice} := (L_{RRUS} + 2 \cdot t_{iz}) \cdot (W_{RRUS} + 2 \cdot t_{iz}) \cdot (T_{RRUS} + 2 \cdot t_{iz}) - V_{RRUS} = 3382$  cu in

Weight of Ice on Each RRUS =  $W_{ICERRUS} := \frac{V_{ice}}{1728} \cdot Id = 110$  lbs

**Weight of Ice on All RRUSs =  $W_{ICERRUS} \cdot N_{RRUS} = 110$  lbs**



Envelope Only Solution

Centek Engineering Inc.	CTNH545A - AMA Member Framing	
FJP		July 13, 2021 at 2:13 PM
21022.25		CTNH545A_AMA.r3d





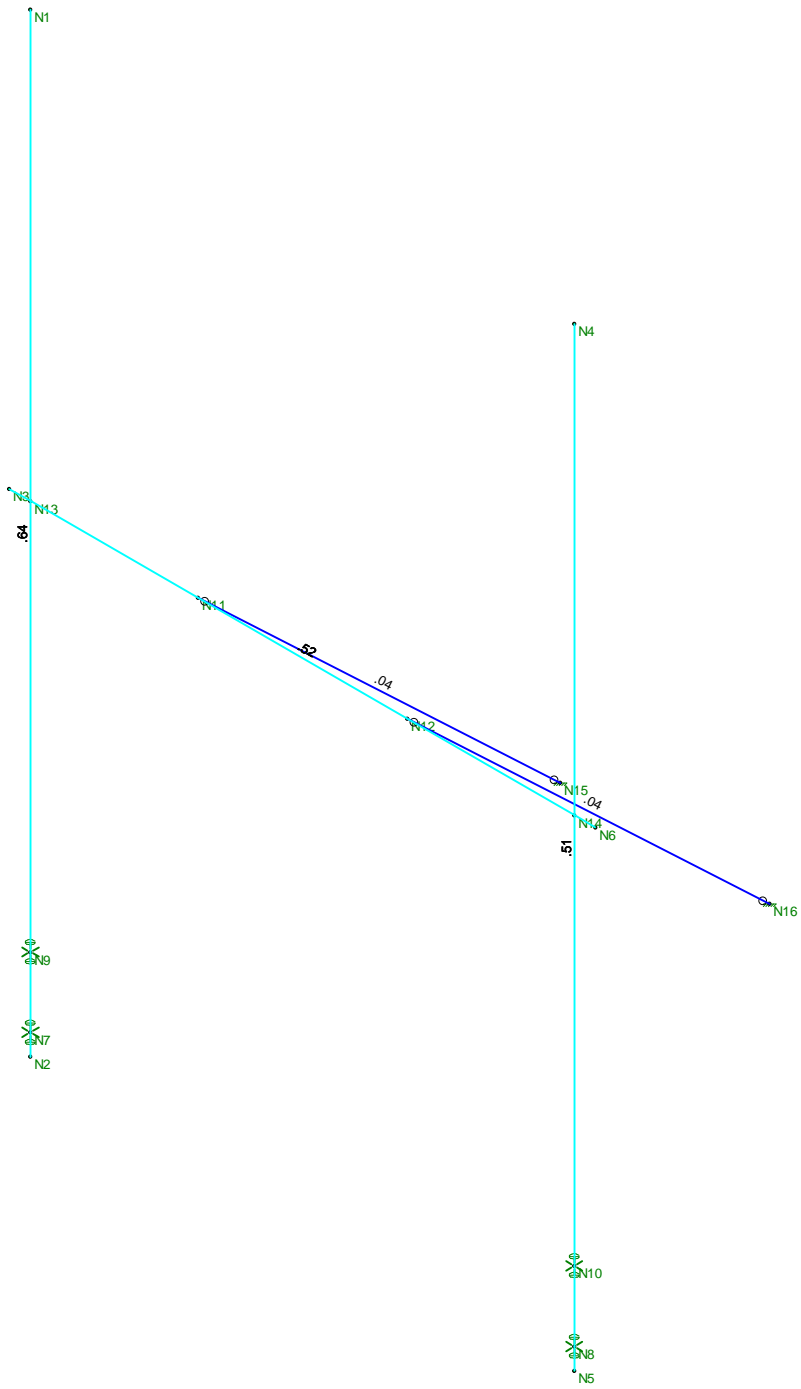












Member Code Checks Displayed (Enveloped)  
Envelope Only Solution

Centek Engineering Inc.
FJP
21022.25

CTNH545A - AMA
Member Untiy Check

July 13, 2021 at 2:09 PM
CTNH545A_AMA.r3d

**Existing Bottom  
 Connection to Host Structure**

Bolts Grade	A325	(User Input)
Number of Bolts =	$n_b := 2$	(User Input)
Bolt Diameter =	$d\phi := \frac{1}{2} \text{ in}$	(User Input)
Nominal Tensile Strength=	$F_{nt} := 90 \text{ ksi}$	(User Input)
Nominal Shear Strength=	$F_{nv} := 54 \text{ ksi}$	(User Input)
Safety Factor=	$\phi := 0.75$	(User Input)
Horizontal Spacing Between Bolts=	$S := 4 \text{ in}$	(User Input)

**Reactions at Connection:**

Shear X =	$\text{Shear}_x := .891 \cdot \text{kip}$	(User Input)
Vertical=	$\text{Vertical} := 1.026 \text{ kip}$	(User Input)
Shear Z =	$\text{Shear}_z := .319 \cdot \text{kip}$	(User Input)
Moment X=	$M_x := 0 \cdot \text{kip} \cdot \text{ft}$	(User Input)
Moment Y=	$M_y := .297 \cdot \text{kip} \cdot \text{ft}$	(User Input)
Moment Z=	$M_z := 0 \text{ kip} \cdot \text{ft}$	(User Input)

**Anchor Check:**

Bolt Area=	$a_b := \pi \cdot \left(\frac{d\phi}{2}\right)^2 = 0.196 \text{ in}^2$
Allowable Shear Strength=	$R_{nv} := F_{nv} \cdot a_b \cdot \phi = 7.952 \text{ kip}$
Shear Stress per Bolt=	$V_{act} := \frac{\sqrt{\text{Shear}_x^2 + \text{Shear}_z^2}}{n_b} + \frac{M_y}{S \cdot \frac{n_b}{2}} = 1.364 \text{ kip}$

Condition1 := If ( $V_{act} \leq R_{nv}$ , "OK", "Overstressed") = "OK"

Condition1 = "OK"

$f_v := \frac{V_{act}}{a_b} = 6.948 \text{ ksi}$

$\frac{V_{act}}{R_{nv}} = 17.2\%$

Tensile Stress Adjusted for Shear=

$$F'_{nt} := \left\| \begin{array}{l} \text{if} \left( 1.3 F_{nt} - \frac{F_{nt}}{\phi \cdot F_{nv}} \cdot f_v \right) \leq F_{nt} \\ \left\| \begin{array}{l} 1.3 F_{nt} - \frac{F_{nt}}{\phi \cdot F_{nv}} \cdot f_v \\ \text{else} \\ F_{nt} \end{array} \right\| \end{array} \right\| = 90 \text{ ksi}$$

Allowable Tensile Strength=  $R_{nt} := F'_{nt} \cdot a_b \cdot \phi = 13.254 \text{ kip}$

Tension Force Each Bolt=  $T_{act} := \frac{\text{Vertical}}{n_b} = 0.513 \text{ kip}$

Tension Stress Each Bolt=  $f_t := \frac{T_{act}}{a_b} = 2.613 \text{ ksi}$

Condition2 := If ( $f_t \leq F'_{nt} \cdot \phi$ , "OK", "Overstressed") = "OK"

Condition2 = "OK"

$\frac{T_{act}}{R_{nt}} = 3.9\%$

**Existing Bottom Connection to Host Structure for Kickers**

Bolts Grade	A325	(User Input)
Number of Bolts =	$n_b := 2$	(User Input)
Bolt Diameter =	$d\phi := \frac{1}{2} \text{ in}$	(User Input)
Nominal Tensile Strength=	$F_{nt} := 90 \text{ ksi}$	(User Input)
Nominal Shear Strength=	$F_{nv} := 54 \text{ ksi}$	(User Input)
Safety Factor=	$\phi := 0.75$	(User Input)
Horizontal Spacing Between Bolts=	$S := 6 \text{ in}$	(User Input)

**Reactions at Connection:**

Shear X =	$\text{Shear}_x := .016 \cdot \text{kip}$	(User Input)
Vertical=	$\text{Vertical} := .542 \text{ kip}$	(User Input)
Shear Z =	$\text{Shear}_z := .612 \cdot \text{kip}$	(User Input)
Moment X=	$M_x := 0 \cdot \text{kip} \cdot \text{ft}$	(User Input)
Moment Y=	$M_y := 0 \cdot \text{kip} \cdot \text{ft}$	(User Input)
Moment Z=	$M_z := 0 \text{ kip} \cdot \text{ft}$	(User Input)

**Anchor Check:**

Bolt Area=	$a_b := \pi \cdot \left(\frac{d\phi}{2}\right)^2 = 0.196 \text{ in}^2$	
Allowable Shear Strength=	$R_{nv} := F_{nv} \cdot a_b \cdot \phi = 7.952 \text{ kip}$	
Shear Stress per Bolt=	$V_{act} := \frac{\sqrt{\text{Shear}_x^2 + \text{Shear}_z^2}}{n_b} + \frac{M_y}{S \cdot \frac{n_b}{2}} = 0.306 \text{ kip}$	
	Condition1 := If ( $V_{act} \leq R_{nv}$ , "OK", "Overstressed") = "OK"	
	Condition1 = "OK"	
	$f_v := \frac{V_{act}}{a_b} = 1.559 \text{ ksi}$	
Tensile Stress Adjusted for Shear=	$F'_{nt} := \left\  \begin{array}{l} \text{if } \left( 1.3 F_{nt} - \frac{F_{nt}}{\phi \cdot F_{nv}} \cdot f_v \right) \leq F_{nt} \\ \left\  \begin{array}{l} 1.3 F_{nt} - \frac{F_{nt}}{\phi \cdot F_{nv}} \cdot f_v \\ \text{else} \\ F_{nt} \end{array} \right\  \end{array} \right\  = 90 \text{ ksi}$	
Allowable Tensile Strength=	$R_{nt} := F'_{nt} \cdot a_b \cdot \phi = 13.254 \text{ kip}$	
Tension Force Each Bolt=	$T_{act} := \frac{\text{Vertical}}{n_b} = 0.271 \text{ kip}$	
Tension Stress Each Bolt=	$f_t := \frac{T_{act}}{a_b} = 1.38 \text{ ksi}$	

$\frac{V_{act}}{R_{nv}} = 3.8\%$

$\frac{T_{act}}{R_{nt}} = 2\%$

Condition2 = "OK"



**AMERICAN TOWER®**  
CORPORATION

---

## Structural Analysis Report

**Structure** : 65 ft Self Supported Tower  
**ATC Site Name** : CORNWALL CT, CT  
**ATC Asset Number** : 88009  
**Engineering Number** : 13681679\_C3\_02  
**Proposed Carrier** : T-MOBILE  
**Carrier Site Name** : CTNH545A  
**Carrier Site Number** : CTNH545A  
**Site Location** : 36 Toomey Rd.  
Cornwall, CT 06759-4232  
41.821300,-73.296400  
**County** : Litchfield  
**Date** : May 28, 2021  
**Max Usage** : 72%  
**Result** : Pass

Prepared By:  
Lyle Morin  
Structural Engineer I

Reviewed By:



Authorized by "EOR"  
28 May 2021 03:27:41

**COA: PEC.0001553**



**Table of Contents**

Introduction .....	1
Supporting Documents .....	1
Analysis .....	1
Conclusion.....	1
Existing and Reserved Equipment.....	2
Equipment to be Removed.....	2
Proposed Equipment .....	3
Structure Usages .....	3
Foundations .....	3
Deflection, Twist, and Sway.....	3
Standard Conditions .....	4
Calculations .....	Attached





## Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 65 ft self supported tower to reflect the change in loading by T-MOBILE.

## Supporting Documents

<b>Tower Drawings</b>	CSEI ATC Engineering #26472221, dated September 19, 2006
<b>Foundation Drawing</b>	TEP Project #74252-101870, dated November 22, 2016
<b>Geotechnical Report</b>	FDH Project #16PWAQ1600, dated November 30, 2016
<b>Modifications</b>	ATC Project #OAA687939_C6_07, dated November 6, 2017

## Analysis

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

<b>Basic Wind Speed:</b>	114 mph (3-Second Gust)
<b>Basic Wind Speed w/ Ice:</b>	40 mph (3-Second Gust) w/ 1" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
<b>Exposure Category:</b>	B
<b>Risk Category:</b>	II
<b>Topographic Factor Procedure:</b>	Method 2
<b>Feature:</b>	Hill
<b>Crest Height (H):</b>	585 ft
<b>Crest Length (L):</b>	3106 ft
<b>Spectral Response:</b>	$S_s = 0.17, S_1 = 0.05$
<b>Site Class:</b>	D - Stiff Soil

## Conclusion

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

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



**Existing and Reserved Equipment**

Elev. <sup>1</sup> (ft)	Qty	Equipment	Mount Type	Lines	Carrier
75.0	1	Generic 12' Dipole	Leg	-	OTHER
74.0	1	Generic 18' Omni	Leg	(1) 7/8" Coax	US DEPT OF HOMELAND SECURITY
72.0	1	Generic 6' Omni	Leg	-	OTHER
69.0	3	Alcatel-Lucent RRH2x50-08	Side Arm	(4) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
	3	Commscope DT465B-2XR			
	3	Alcatel-Lucent 800 MHz RRH			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	RFS APXVSP18-C-A20			
	3	Alcatel-Lucent RRH2x40 (700)			
65.0	3	Ericsson RRUS 32 (50.8 lbs)	Triangular Platform with Handrails	(2) 0.39" (10mm) Fiber Trunk (4) 0.78" (19.7mm) 8 AWG 6 (12) 1 1/4" Coax	AT&T MOBILITY
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4478 B14			
	1	Raycap DC6-48-60-18-8F			
	6	Powerwave Allgon TT19-08BP111-001			
	1	Andrew ABT-DFDM-ADB			
	1	Raycap DC6-48-60-18			
	4	CCI DMP65R-BU6DA			
	2	CCI DMP65R-BU4D			
	3	Powerwave Allgon 7770.00A			
63.0	1	Sinclair SV228-HF2SNM	Leg	(1) 7/8" Coax	US DEPT OF HOMELAND SECURITY
59.0	4	Generic 10' Dish w/ Radome	Platform with Handrails	-	OTHER
56.0	3	Ericsson RRUS 11 B2	-	(3) 1 5/8" (1.63"-41.3mm) Fiber	T-MOBILE
	3	Ericsson RRUS 11 B4			
48.0	3	Decibel 776QNB120EXM	Triangular Platform with Handrails	(3) 1/2" Coax (12) 7/8" Coax (2) 1 5/8" (1.63"-41.3mm) Fiber (6) 1 5/8" Coax	ALLTEL COMMUNICATIONS, LLC
46.0	3	Samsung MT6407-77A			
	2	RFS DB-C1-12C-24AB-OZ			
	6	Commscope JAHH-65B-R3B			
	3	Samsung B2/B66A RRH-BR049			
	3	Samsung B5/B13 RRH-BR04C			
	4	Antel LPA-80063/6CF			
	1	Commscope CHB726-01			
	3	Commscope CBC78T-DS-43-2X			

**Equipment to be Removed**

Elev. <sup>1</sup> (ft)	Qty	Equipment	Mount Type	Lines	Carrier
57.0	3	Ericsson Radio 4449 B12,B71	T-Arm	-	T-MOBILE
	3	RFS APXVAARR24_43-U-NA20			
	3	RFS APX16DWV-16DWVS-E-A20			



**Proposed Equipment**

Elev. <sup>1</sup> (ft)	Qty	Equipment	Mount Type	Lines	Carrier
56.0	3	Ericsson Radio 4449 B71 B85A	Sector Frame	-	T-MOBILE
	3	RFS APX16DWV-16DWVS-E-A20			
	3	RFS APXVAALL24 43-U-NA20			

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

**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Legs	44%	Pass
Diagonals	72%	Pass
Horizontals	29%	Pass

**Foundations**

Reaction Component	Analysis Reactions	% of Usage
Moment (Kip-Ft)	2,557.1	31%
Axial (Kips)	103.6	4%
Total Shear (Kips)	54.3	16%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.

**Deflection, Twist and Sway\***

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
63.0	Sinclair SV228-HF2SNM	US DEPT OF HOMELAND	0.266	1.546	0.598
59.0	Generic 10' Dish w/ Radome	Other	0.192	1.547	0.960
56.0	Ericsson Radio 4449 B71 B85A	T-MOBILE			
	RFS APX16DWV-16DWVS-E-A20				
	RFS APXVAALL24 43-U-NA20				

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



## Standard Conditions

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

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

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

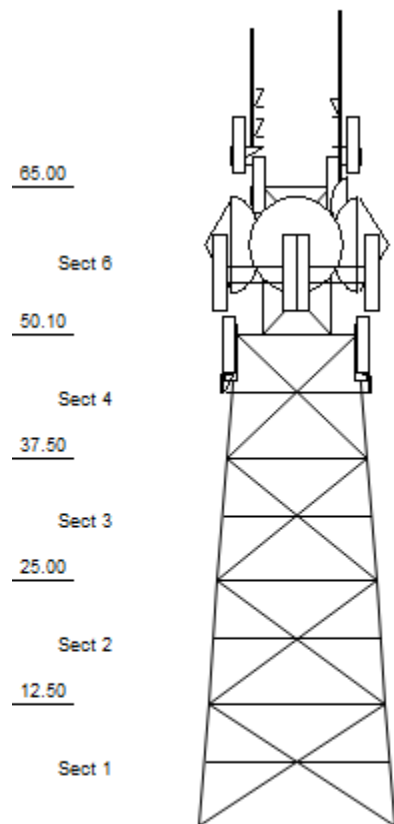
All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with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

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

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

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Loads: 114 mph no ice  
 40 mph w/ 1" radial ice  
 Site Class: D Ss: 0.17 S1: 0.05  
 60 mph Serviceability



Job Information			
Client : T-MOBILE			
Tower : 88009	Location : CORNWALL CT,	Base Width : 20.00 ft	
Code : ANSI/TIA-222-H	Topo Method: Method 2	Top Width : 7.00 ft	
Risk Cat : II	Topo Feature: Hill	Tower Ht : 65.00 ft	
	Exposure : B	Shape : Square	

Sections Properties				
Section	Leg Members		Diagonal Members	Horizontal Members
1 - 2	SAE 33 ksi	6X6X0.625	SAU 36 ksi 4X3X0.25	DAL 36 ksi 3X2.5X0.25
3	SAE 33 ksi	6X6X0.5	SAU 36 ksi 3.5X3X0.25	DAL 36 ksi 3.5X3X0.3125
4	SAE 33 ksi	6X6X0.5	SAE 36 ksi 3.5x3.5x0.25	DAL 36 ksi 3.5X3X0.3125
5	SAE 33 ksi	6X6X0.5		
6	SAE 33 ksi	6X6X0.5	SAU 36 ksi 3X2X0.25	DAL 36 ksi 2.5X2X0.25

Redundant Secondary Bracing						
Section	Sub Diag 1	Sub Horiz 1	Sub Diag 2	Sub Horiz 2	Sub Diag 3	Sub Horiz 3
1 - 2	-	S3X2.5X0.25	-	-	-	-
3	-	CC6 x 8.2	-	-	-	-
4	-	S2.5X2X0.25	-	-	-	-
5 - 6	-	-	-	-	-	-

Discrete Appurtenance			
Elev (ft)	Type	Qty	Description
75.00	Whip	1	Generic 12' Dipole
74.00	Whip	1	Generic 18' Omni
72.00	Whip	1	Generic 6' Omni
69.00	Straight Arm	6	Generic Flat Side Arm
69.00	Panel	3	Commscope DT465B-2XR
69.00	Panel	3	RFS APXVSP18-C-A20
69.00	Panel	3	Alcatel-Lucent TD-RRH8x20-25 w
69.00	Panel	3	Alcatel-Lucent 800 MHz RRH
69.00	Panel	3	Alcatel-Lucent RRH2x40 (700)
69.00	Panel	3	Alcatel-Lucent RRH2x50-08
65.00	Other	1	Fire Warden Cabin
65.00	Panel	4	CCI DMP65R-BU6DA
65.00	Panel	2	CCI DMP65R-BU4D
65.00	Panel	3	Powerwave Allgon 7770.00A
65.00	Panel	1	Raycap DC6-48-60-18
65.00	Panel	3	Ericsson RRUS 32 (50.8 lbs)
65.00	Panel	3	Ericsson RRUS 4478 B14
65.00	Panel	1	Raycap DC6-48-60-18-8F
65.00	Panel	6	Powerwave Allgon TT19-08BP111-
65.00	Panel	3	Ericsson RRUS 4449 B5, B12
65.00	Panel	1	Andrew ABT-DFDM-ADB
63.00	Dish	1	Sinclair SV228-HF2SNM
62.00	Other	1	Platform with Handrails
59.00	Dish	4	Generic 10' Dish w/ Radome
56.00	Mounting Frame	3	Site Pro TPF123XX
56.00	Panel	3	RFS APXVAALL24 43-U-NA20
56.00	Panel	3	RFS APX16DWV-16DWVS-E-A20
56.00	Panel	3	Ericsson RRUS 11 B2
56.00	Panel	3	Ericsson RRUS 11 B4
56.00	Panel	3	Ericsson Radio 4449 B71 B85A
50.00	Other	1	Platform w/ Handrails
48.00	Panel	3	Decibel 776QNB120EXM
46.00	Panel	4	Antel LPA-80063/6CF
46.00	Panel	6	Commscope JAHH-65B-R3B
46.00	Panel	3	Samsung MT6407-77A
46.00	Panel	2	RFS DB-C1-12C-24AB-0Z
46.00	Panel	3	Samsung B5/B13 RRH-BR04C
46.00	Panel	3	Commscope CBC78T-DS-43-2X
46.00	Panel	1	Commscope CHB726-01

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Job Information		
Client : T-MOBILE		
Tower : 88009	Location : CORNWALL CT,	Base Width : 20.00 ft
Code : ANSI/TIA-222-H	Topo Method: Method 2	Top Width : 7.00 ft
Risk Cat : II	Topo Feature: Hill	Tower Ht : 65.00 ft
	Exposure : B	Shape : Square

46.00	3	Samsung B2/B66A RRH-BR049
37.50	1	Access Platform

Linear Appurtenance			
---------------------	--	--	--

Elev (ft)			
From	To	Qty	Description
0.00	74.00	1	7/8" Coax
0.00	69.00	4	1 1/4" Hybriflex Cab
0.00	67.00	1	Waveguide
0.00	67.00	1	Climbing Ladder
0.00	65.00	12	1 1/4" Coax
0.00	65.00	4	0.78" (19.7mm) 8 AWG
0.00	65.00	2	0.39" (10mm) Fiber T
0.00	63.00	1	7/8" Coax
0.00	56.00	1	Waveguide
0.00	56.00	3	1 5/8" (1.63"-41.3mm
0.00	48.00	12	7/8" Coax
0.00	48.00	3	1/2" Coax
0.00	46.00	6	1 5/8" Coax
0.00	46.00	2	1 5/8" (1.63"-41.3mm

Global Base Foundation Design Loads			
-------------------------------------	--	--	--

Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	2,557.10	52.80	54.31
DL + WL + IL	598.38	117.64	12.39

Individual Base Foundation Design Loads		
---	--	--

Vertical (kip)	Uplift (kip)	Horizontal (kip)
103.62	80.42	22.84

Site Number: 88009

Code: ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Analysis Parameters

Location:	Litchfield County, CT	Height (ft):	65
Code:	ANSI/TIA-222-H	Base Elevation (ft):	0.00
Shape:	Square	Bottom Face Width (ft):	20.00
Tower Manufacturer:	CSEI	Top Face Width (ft):	7.00
Tower Type:	Self Support	Anchor Bolt Detail Type	c
Kd:	0.85		
Ke:	0.94		

### Ice & Wind Parameters

Exposure Category:	B	Design Windspeed Without Ice:	114 mph
Risk Category:	II	Design Windspeed With Ice:	40 mph
Topographic Factor Procedure:	Method 2	Operational Windspeed:	60 mph
Feature:	Hill	Design Ice Thickness:	1.00 in
Crest Height (H):	585 ft	HMSL:	1678.00 ft
Crest Length (L):	3106 ft		
Distance from Apex (x):	0 ft		
Upwind / Downwind	Upwind		

### Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	0.61		
$T_L$ (sec):	6	p:	1.3
$S_s$ :	0.173	$S_1$ :	0.054
$F_a$ :	1.600	$F_v$ :	2.400
$S_{ds}$ :	0.185	$S_{d1}$ :	0.086
		$C_s$ :	0.047
		$C_s$ , Max:	0.047
		$C_s$ , Min:	0.030

### Load Cases

1.2D + 1.0W Normal	114 mph Normal with No Ice
1.2D + 1.0W 45 deg	114 mph 45 degree with No Ice
0.9D + 1.0W Normal	114 mph Normal with No Ice (Reduced DL)
0.9D + 1.0W 45 deg	114 mph 45 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	40 mph Normal with 1.00 in Radial Ice
1.2D + 1.0Di + 1.0Wi 45 deg	40 mph 45 deg with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic Normal
1.2D + 1.0Ev + 1.0Eh 45 deg	Seismic 45 deg
0.9D - 1.0Ev + 1.0Eh Normal	Seismic (Reduced DL) Normal
0.9D - 1.0Ev + 1.0Eh 45 deg	Seismic (Reduced DL) 45 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 45 deg	Serviceability - 60 mph Wind 45 deg

Site Number: 88009

Code: ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Tower Loading

#### Discrete Appurtenance Properties 1.2D + 1.0W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
75.00	Generic 12' Dipole	1	40	4.5	12.0	3.0	3.0	1.00	1.00	0.0	0.0	40.82	156	48
74.00	Generic 18' Omni	1	55	5.4	18.0	3.0	3.0	1.00	1.00	0.0	0.0	40.71	187	66
72.00	Generic 6' Omni	1	25	1.8	6.0	3.0	3.0	1.00	1.00	0.0	0.0	40.49	61	30
69.00	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	40.14	70	190
69.00	Alcatel-Lucent	3	50	2.1	1.7	12.2	10.6	0.80	0.50	0.0	0.0	40.14	87	180
69.00	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	40.14	87	191
69.00	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	40.14	202	252
69.00	Generic Flat Side	6	188	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	40.14	864	1350
69.00	RFS APXVSP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	40.14	453	205
69.00	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	40.14	514	209
65.00	Andrew ABT-DFDM-	1	1	0.0	0.3	1.7	1.6	0.80	1.00	2.0	2.4	39.90	1	1
65.00	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.80	0.50	2.0	90.0	39.90	45	115
65.00	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	2.0	68.4	39.90	34	24
65.00	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.75	0.50	0.0	0.0	39.65	70	216
65.00	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.75	0.50	-4.0	294.7	39.13	74	256
65.00	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.50	2.0	219.1	39.90	110	183
65.00	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.75	1.00	0.0	0.0	39.65	96	36
65.00	Powerwave Allgon	3	27	5.6	4.6	11.0	4.9	0.80	0.65	2.0	587.9	39.90	294	97
65.00	CCI DMP65R-BU4D	2	68	8.3	4.0	20.7	7.7	0.75	0.72	0.0	0.0	39.65	301	163
65.00	CCI DMP65R-BU6DA	4	79	12.7	5.9	20.7	7.7	0.75	0.63	0.0	0.0	39.65	810	381
65.00	Fire Warden Cabin	1	2000	150.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	39.65	5056	2400
63.00	Sinclair SV228-	1	93	15.8	6.0	116.0	62.0	1.00	1.00	0.0	0.0	39.40	530	112
62.00	Platform with	1	2000	27.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	39.27	908	2400
59.00	Generic 10' Dish w/	4	400	67.8	10.0	120.0	0.0	1.00	1.00	0.0	0.0	38.85	8957	1920
56.00	Ericsson Radio 4449	3	75	1.6	1.3	13.2	10.5	0.80	0.50	0.0	0.0	38.42	65	270
56.00	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.50	-1.0	108.9	38.27	109	183
56.00	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.50	-1.0	108.9	38.27	109	183
56.00	RFS APX16DWV-	3	41	6.6	4.7	13.3	3.1	0.80	0.60	0.0	0.0	38.42	310	147
56.00	Site Pro TPF123XX	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	38.42	709	1080
56.00	RFS APXVAALL24	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.0	38.42	1000	442
50.00	Platform w/	1	5000	70.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	37.47	2230	6000
48.00	Decibel	3	117	22.2	6.0	37.0	9.5	0.80	0.59	0.0	0.0	37.13	992	421
46.00	Commscope	1	10	0.4	0.6	7.1	3.4	0.75	1.00	0.0	0.0	36.77	10	12
46.00	Commscope	3	21	0.6	0.8	6.9	6.4	0.75	0.50	0.0	0.0	36.77	19	75
46.00	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.75	0.50	0.0	0.0	36.77	66	253
46.00	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.75	0.50	0.0	0.0	36.77	66	304
46.00	RFS DB-C1-12C-	2	32	4.1	2.5	16.5	12.6	0.75	1.00	1.0	191.1	36.95	191	77
46.00	Samsung MT6407-	3	82	4.7	2.9	16.1	5.5	0.75	0.61	0.0	0.0	36.77	202	294
46.00	Commscope JAHH-	6	61	9.1	6.0	13.8	8.2	0.75	0.69	1.0	888.8	36.95	889	436
46.00	Antel LPA-80063/6CF	4	27	9.6	5.9	15.0	13.1	0.75	0.76	0.0	0.0	36.77	684	130
37.50	Access Platform	1	5000	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	35.06	1341	6000
<b>Totals</b>		<b>109</b>	<b>22775</b>	<b>1162.7</b>									<b>28958</b>	<b>27329</b>

#### Discrete Appurtenance Properties 0.9D + 1.0W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
75.00	Generic 12' Dipole	1	40	4.5	12.0	3.0	3.0	1.00	1.00	0.0	0.0	40.82	156	36
74.00	Generic 18' Omni	1	55	5.4	18.0	3.0	3.0	1.00	1.00	0.0	0.0	40.71	187	50
72.00	Generic 6' Omni	1	25	1.8	6.0	3.0	3.0	1.00	1.00	0.0	0.0	40.49	61	23
69.00	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	40.14	70	143
69.00	Alcatel-Lucent	3	50	2.1	1.7	12.2	10.6	0.80	0.50	0.0	0.0	40.14	87	135



Site Number: 88009

Code: ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Tower Loading

69.00	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	40.14	87	143
69.00	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	40.14	202	189
69.00	Generic Flat Side	6	188	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	40.14	864	1013
69.00	RFS APXVSP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	40.14	453	154
69.00	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	40.14	514	157
65.00	Andrew ABT-DFDM-	1	1	0.0	0.3	1.7	1.6	0.80	1.00	2.0	2.4	39.90	1	1
65.00	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.80	0.50	2.0	90.0	39.90	45	86
65.00	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	2.0	68.4	39.90	34	18
65.00	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.75	0.50	0.0	0.0	39.65	70	162
65.00	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.75	0.50	-4.0	294.7	39.13	74	192
65.00	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.50	2.0	219.1	39.90	110	137
65.00	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.75	1.00	0.0	0.0	39.65	96	27
65.00	Powerwave Allgon	3	27	5.6	4.6	11.0	4.9	0.80	0.65	2.0	587.9	39.90	294	73
65.00	CCI DMP65R-BU4D	2	68	8.3	4.0	20.7	7.7	0.75	0.72	0.0	0.0	39.65	301	122
65.00	CCI DMP65R-BU6DA	4	79	12.7	5.9	20.7	7.7	0.75	0.63	0.0	0.0	39.65	810	286
65.00	Fire Warden Cabin	1	2000	150.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	39.65	5056	1800
63.00	Sinclair SV228-	1	93	15.8	6.0	116.0	62.0	1.00	1.00	0.0	0.0	39.40	530	84
62.00	Platform with	1	2000	27.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	39.27	908	1800
59.00	Generic 10' Dish w/	4	400	67.8	10.0	120.0	0.0	1.00	1.00	0.0	0.0	38.85	8957	1440
56.00	Ericsson Radio 4449	3	75	1.6	1.3	13.2	10.5	0.80	0.50	0.0	0.0	38.42	65	203
56.00	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.50	-1.0	108.9	38.27	109	137
56.00	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.50	-1.0	108.9	38.27	109	137
56.00	RFS APX16DWV-	3	41	6.6	4.7	13.3	3.1	0.80	0.60	0.0	0.0	38.42	310	110
56.00	Site Pro TPF123XX	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	38.42	709	810
56.00	RFS APXVAALL24	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.0	38.42	1000	332
50.00	Platform w/	1	5000	70.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	37.47	2230	4500
48.00	Decibel	3	117	22.2	6.0	37.0	9.5	0.80	0.59	0.0	0.0	37.13	992	316
46.00	Commscope	1	10	0.4	0.6	7.1	3.4	0.75	1.00	0.0	0.0	36.77	10	9
46.00	Commscope	3	21	0.6	0.8	6.9	6.4	0.75	0.50	0.0	0.0	36.77	19	56
46.00	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.75	0.50	0.0	0.0	36.77	66	190
46.00	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.75	0.50	0.0	0.0	36.77	66	228
46.00	RFS DB-C1-12C-	2	32	4.1	2.5	16.5	12.6	0.75	1.00	1.0	191.1	36.95	191	58
46.00	Samsung MT6407-	3	82	4.7	2.9	16.1	5.5	0.75	0.61	0.0	0.0	36.77	202	220
46.00	Commscope JAHH-	6	61	9.1	6.0	13.8	8.2	0.75	0.69	1.0	888.8	36.95	889	327
46.00	Antel LPA-80063/6CF	4	27	9.6	5.9	15.0	13.1	0.75	0.76	0.0	0.0	36.77	684	97
37.50	Access Platform	1	5000	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	35.06	1341	4500
<b>Totals</b>		<b>109</b>	<b>22775</b>	<b>1162.7</b>									<b>28958</b>	<b>20497</b>

### Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
75.00	Generic 12' Dipole	1	138	9.8	12.0	3.0	3.0	1.00	1.00	0.0	0.0	5.03	42	146
74.00	Generic 18' Omni	1	155	10.1	18.0	3.0	3.0	1.00	1.00	0.0	0.0	5.01	43	166
72.00	Generic 6' Omni	1	59	2.7	6.0	3.0	3.0	1.00	1.00	0.0	0.0	4.98	11	64
69.00	Alcatel-Lucent	3	97	2.3	1.3	13.0	9.8	0.80	0.50	0.0	0.0	4.94	12	321
69.00	Alcatel-Lucent	3	104	2.9	1.7	12.2	10.6	0.80	0.50	0.0	0.0	4.94	14	342
69.00	Alcatel-Lucent 800	3	107	2.9	1.6	13.0	10.8	0.80	0.50	0.0	0.0	4.94	14	354
69.00	Alcatel-Lucent TD-	3	140	5.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	4.94	31	461
69.00	Generic Flat Side	6	286	8.6	0.0	0.0	0.0	1.00	0.67	0.0	0.0	4.94	145	1939
69.00	RFS APXVSP18-C-	3	184	10.1	6.0	11.8	7.0	0.80	0.69	0.0	0.0	4.94	70	586
69.00	Commscope	3	207	11.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	4.94	77	655
65.00	Andrew ABT-DFDM-	1	3	0.2	0.3	1.7	1.6	0.80	1.00	2.0	1.2	4.91	1	3
65.00	Powerwave Allgon	6	31	0.9	0.8	6.7	5.4	0.80	0.50	2.0	18.6	4.91	9	204
65.00	Raycap DC6-48-60-	1	59	1.7	2.0	9.7	9.7	0.80	1.00	2.0	11.7	4.91	6	63
65.00	Ericsson RRUS 4478	3	101	2.5	1.4	13.4	7.7	0.75	0.50	0.0	0.0	4.88	12	338

Site Number: 88009

Code:

ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Tower Loading

65.00	Ericsson RRUS 4449	3	118	2.7	1.5	13.2	9.4	0.75	0.50	-4.0	48.9	4.82	12	398
65.00	Ericsson RRUS 32	3	103	3.5	2.2	12.1	6.7	0.80	0.50	2.0	35.5	4.91	18	341
65.00	Raycap DC6-48-60-	1	92	4.8	2.3	16.7	5.5	0.75	1.00	0.0	0.0	4.88	15	98
65.00	Powerwave Allgon	3	111	7.1	4.6	11.0	4.9	0.80	0.65	2.0	92.9	4.91	46	349
65.00	CCI DMP65R-BU4D	2	201	9.8	4.0	20.7	7.7	0.75	0.72	0.0	0.0	4.88	44	429
65.00	CCI DMP65R-BU6DA	4	269	14.8	5.9	20.7	7.7	0.75	0.63	0.0	0.0	4.88	116	1140
65.00	Fire Warden Cabin	1	5078	573.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.88	2379	5478
63.00	Sinclair SV228-	1	445	48.7	6.0	116.0	62.0	1.00	1.00	0.0	0.0	4.85	201	464
62.00	Platform with	1	2954	45.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.83	186	3354
59.00	Generic 10' Dish w/	4	1834	70.7	10.0	120.0	0.0	1.00	1.00	0.0	0.0	4.78	1150	7655
56.00	Ericsson Radio 4449	3	119	2.3	1.3	13.2	10.5	0.80	0.50	0.0	0.0	4.73	11	403
56.00	Ericsson RRUS 11 B4	3	104	3.6	1.6	17.0	7.2	0.80	0.50	-1.0	17.3	4.71	17	342
56.00	Ericsson RRUS 11 B2	3	104	3.6	1.6	17.0	7.2	0.80	0.50	-1.0	17.3	4.71	17	342
56.00	RFS APX16DWV-	3	127	8.2	4.7	13.3	3.1	0.80	0.60	0.0	0.0	4.73	47	405
56.00	Site Pro TPF123XX	3	571	26.6	0.0	0.0	0.0	0.75	0.67	0.0	0.0	4.73	161	1893
56.00	RFS APXVAALL24	3	410	23.0	8.0	24.0	8.5	0.80	0.63	0.0	0.0	4.73	140	1303
50.00	Platform w/	1	13808	246.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.61	965	14808
48.00	Decibel	3	444	23.6	6.0	37.0	9.5	0.80	0.59	0.0	0.0	4.57	130	1401
46.00	Commscope	1	19	0.7	0.6	7.1	3.4	0.75	1.00	0.0	0.0	4.53	2	21
46.00	Commscope	3	37	0.9	0.8	6.9	6.4	0.75	0.50	0.0	0.0	4.53	4	122
46.00	Samsung B5/B13	3	112	2.5	1.3	15.0	8.1	0.75	0.50	0.0	0.0	4.53	11	377
46.00	Samsung B2/B66A	3	130	2.5	1.3	15.0	10.0	0.75	0.50	0.0	0.0	4.53	11	442
46.00	RFS DB-C1-12C-	2	124	5.0	2.5	16.5	12.6	0.75	1.00	1.0	29.2	4.55	29	260
46.00	Samsung MT6407-	3	155	5.8	2.9	16.1	5.5	0.75	0.61	0.0	0.0	4.53	31	515
46.00	Commscope JAHH-	6	207	11.1	6.0	13.8	8.2	0.75	0.69	1.0	133.5	4.55	133	1313
46.00	Antel LPA-80063/6CF	4	226	10.6	5.9	15.0	13.1	0.75	0.76	0.0	0.0	4.53	93	927
37.50	Access Platform	1	13810	155.1	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.32	569	14810
<b>Totals</b>		<b>109</b>	<b>60479</b>	<b>2094.1</b>									<b>7026</b>	<b>65034</b>

### Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
75.00	Generic 12' Dipole	1	40	4.5	12.0	3.0	3.0	1.00	1.00	0.0	0.0	11.31	43	40
74.00	Generic 18' Omni	1	55	5.4	18.0	3.0	3.0	1.00	1.00	0.0	0.0	11.28	52	55
72.00	Generic 6' Omni	1	25	1.8	6.0	3.0	3.0	1.00	1.00	0.0	0.0	11.22	17	25
69.00	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	11.12	19	159
69.00	Alcatel-Lucent	3	50	2.1	1.7	12.2	10.6	0.80	0.50	0.0	0.0	11.12	24	150
69.00	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	11.12	24	159
69.00	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	11.12	56	210
69.00	Generic Flat Side	6	188	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	11.12	239	1125
69.00	RFS APXVSP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	11.12	126	171
69.00	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	11.12	142	174
65.00	Andrew ABT-DFDM-	1	1	0.0	0.3	1.7	1.6	0.80	1.00	2.0	0.7	11.05	0	1
65.00	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.80	0.50	2.0	24.9	11.05	12	96
65.00	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.80	1.00	2.0	18.9	11.05	9	20
65.00	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.75	0.50	0.0	0.0	10.98	19	180
65.00	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.75	0.50	-4.0	81.6	10.84	20	213
65.00	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.80	0.50	2.0	60.7	11.05	30	152
65.00	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.75	1.00	0.0	0.0	10.98	27	30
65.00	Powerwave Allgon	3	27	5.6	4.6	11.0	4.9	0.80	0.65	2.0	162.8	11.05	81	81
65.00	CCI DMP65R-BU4D	2	68	8.3	4.0	20.7	7.7	0.75	0.72	0.0	0.0	10.98	83	136
65.00	CCI DMP65R-BU6DA	4	79	12.7	5.9	20.7	7.7	0.75	0.63	0.0	0.0	10.98	224	318
65.00	Fire Warden Cabin	1	2000	150.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.98	1401	2000
63.00	Sinclair SV228-	1	93	15.8	6.0	116.0	62.0	1.00	1.00	0.0	0.0	10.91	147	93
62.00	Platform with	1	2000	27.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.88	251	2000

Site Number: 88009

Code: ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Tower Loading

59.00	Generic 10' Dish w/	4	400	67.8	10.0	120.0	0.0	1.00	1.00	0.0	0.0	10.76	2481	1600
56.00	Ericsson Radio 4449	3	75	1.6	1.3	13.2	10.5	0.80	0.50	0.0	0.0	10.64	18	225
56.00	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.50	-1.0	30.2	10.60	30	152
56.00	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.50	-1.0	30.2	10.60	30	152
56.00	RFS APX16DWV-	3	41	6.6	4.7	13.3	3.1	0.80	0.60	0.0	0.0	10.64	86	122
56.00	Site Pro TPF123XX	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	10.64	196	900
56.00	RFS APXVAALL24	3	123	20.2	8.0	24.0	8.5	0.80	0.63	0.0	0.0	10.64	277	368
50.00	Platfrom w/	1	5000	70.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.38	618	5000
48.00	Decibel	3	117	22.2	6.0	37.0	9.5	0.80	0.59	0.0	0.0	10.29	275	351
46.00	Commscope	1	10	0.4	0.6	7.1	3.4	0.75	1.00	0.0	0.0	10.19	3	10
46.00	Commscope	3	21	0.6	0.8	6.9	6.4	0.75	0.50	0.0	0.0	10.19	5	62
46.00	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.75	0.50	0.0	0.0	10.19	18	211
46.00	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.75	0.50	0.0	0.0	10.19	18	253
46.00	RFS DB-C1-12C-	2	32	4.1	2.5	16.5	12.6	0.75	1.00	1.0	52.9	10.24	53	64
46.00	Samsung MT6407-	3	82	4.7	2.9	16.1	5.5	0.75	0.61	0.0	0.0	10.19	56	245
46.00	Commscope JAHH-	6	61	9.1	6.0	13.8	8.2	0.75	0.69	1.0	246.2	10.24	246	364
46.00	Antel LPA-80063/6CF	4	27	9.6	5.9	15.0	13.1	0.75	0.76	0.0	0.0	10.19	189	108
37.50	Access Platform	1	5000	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	9.71	372	5000
<b>Totals</b>		<b>109</b>	<b>22775</b>	<b>1162.7</b>									<b>8022</b>	<b>22775</b>

Site Number: 88009

Code:

ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

## Tower Loading

### Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	74.00	7/8" Coax	1	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	69.00	1 1/4" Hybriflex	4	1.54	1.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	67.00	Climbing Ladder	1	2.00	6.90	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	67.00	Waveguide	1	2.00	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	65.00	0.39" (10mm) Fiber	2	0.39	0.06	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	65.00	0.78" (19.7mm) 8	4	0.78	0.59	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	65.00	1 1/4" Coax	12	1.55	0.63	33	1	Block	0.00	N	1.00	1.00	0.00
0.00	63.00	7/8" Coax	1	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	56.00	1 5/8" (1.63")-	3	1.63	1.61	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	56.00	Waveguide	1	2.00	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	48.00	1/2" Coax	3	0.63	0.15	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	48.00	7/8" Coax	12	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	46.00	1 5/8" (1.63")-	2	1.63	1.61	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	46.00	1 5/8" Coax	6	1.98	0.82	67	1	Block	0.00	N	1.00	1.00	0.00

Site Number: 88009

Code:

ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Section Forces

#### LoadCase 1.2D + 1.0W Normal

#### 114 mph Normal with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>ai</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)
6	57.55	38.65	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	3529	0	2669	984	3653
5	50.05	37.48	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	407	0	286	0	69
4	43.75	36.35	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	4884	0	3032	1425	4457
3	31.25	33.55	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	5565	0	3330	1470	4800
2	18.75	33.68	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	5399	0	3384	1476	4860
1	6.25	34.25	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	5690	0	3677	1501	5178
														25475	0			23016

\*\* = Section Force Exceeds Solidity Ratio Criteria

#### LoadCase 1.2D + 1.0W 45 deg

#### 114 mph 45 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>ai</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)
6	57.55	38.65	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	3529	0	3203	984	4187
5	50.05	37.48	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	407	0	344	0	69
4	43.75	36.35	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	4884	0	3452	1425	4878
3	31.25	33.55	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	5565	0	3824	1470	5294
2	18.75	33.68	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	5399	0	3821	1476	5297
1	6.25	34.25	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	5690	0	4131	1501	5632
														25475	0			25356

\*\* = Section Force Exceeds Solidity Ratio Criteria

#### LoadCase 0.9D + 1.0W Normal

#### 114 mph Normal with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>ai</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)
6	57.55	38.65	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	2647	0	2669	984	3653
5	50.05	37.48	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	305	0	286	0	69
4	43.75	36.35	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	3663	0	3032	1425	4457
3	31.25	33.55	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	4174	0	3330	1470	4800
2	18.75	33.68	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	4049	0	3384	1476	4860
1	6.25	34.25	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	4268	0	3677	1501	5178
														19106	0			23016

\*\* = Section Force Exceeds Solidity Ratio Criteria

#### LoadCase 0.9D + 1.0W 45 deg

#### 114 mph 45 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>ai</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)
6	57.55	38.65	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	2647	0	3203	984	4187

Site Number: 88009

Code:

ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Section Forces

5	50.05	37.48	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	305	0	344	0	69	**
4	43.75	36.35	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	3663	0	3452	1425	4878	
3	31.25	33.55	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	4174	0	3824	1470	5294	
2	18.75	33.68	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	4049	0	3821	1476	5297	
1	6.25	34.25	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	4268	0	4131	1501	5632	
														19106	0			25356	

\*\* = Section Force Exceeds Solidity Ratio Criteria

#### LoadCase 1.2D + 1.0Di + 1.0Wi Normal

#### 40 mph Normal with 1.00 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor 1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>ai</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)	
6	57.55	4.76	30.064	19.914	19.91	0.435	2.19	1.00	1.00	1.3	49.98	109.49	19.91	7502	3973	443	274	717
5	50.05	4.61	4.279	1.809	1.809	1.000	2.10	1.00	1.00	1.3	6.09	12.79	1.81	642	235	50	0	9
4	43.75	4.48	32.213	17.162	17.16	0.279	2.66	1.00	1.00	1.3	49.37	131.56	17.16	10523	5638	500	498	999
3	31.25	4.13	39.046	17.743	17.74	0.284	2.65	1.00	1.00	1.2	56.79	150.39	17.74	11718	6153	528	498	1026
2	18.75	4.15	38.105	17.997	17.99	0.251	2.77	1.00	1.00	1.2	56.10	155.47	18.00	11248	5849	548	503	1051
1	6.25	4.22	40.268	16.833	16.83	0.231	2.85	1.00	1.00	1.0	57.10	162.66	16.83	10970	5280	583	485	1068
														52602	27127			4870

\*\* = Section Force Exceeds Solidity Ratio Criteria

#### LoadCase 1.2D + 1.0Di + 1.0Wi 45 deg

#### 40 mph 45 deg with 1.00 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor 1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>ai</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)	
6	57.55	4.76	30.064	19.914	19.91	0.435	2.19	1.20	1.20	1.3	59.97	131.39	19.91	7502	3973	531	274	805
5	50.05	4.61	4.279	1.809	1.809	1.000	2.10	1.20	1.20	1.3	7.31	15.34	1.81	642	235	60	0	9
4	43.75	4.48	32.213	17.162	17.16	0.279	2.66	1.20	1.20	1.3	59.25	157.87	17.16	10523	5638	601	498	1099
3	31.25	4.13	39.046	17.743	17.74	0.284	2.65	1.20	1.20	1.2	68.15	180.47	17.74	11718	6153	634	498	1132
2	18.75	4.15	38.105	17.997	17.99	0.251	2.77	1.19	1.19	1.2	66.66	184.73	18.00	11248	5849	651	503	1154
1	6.25	4.22	40.268	16.833	16.83	0.231	2.85	1.17	1.17	1.0	67.01	190.90	16.83	10970	5280	684	485	1170
														52602	27127			5368

\*\* = Section Force Exceeds Solidity Ratio Criteria

#### LoadCase 1.0D + 1.0W Service Normal

#### Serviceability - 60 mph Wind Normal

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>ai</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)	
6	57.55	10.71	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	2941	0	739	273	1012
5	50.05	10.38	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	339	0	79	0	19
4	43.75	10.07	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	4070	0	840	395	1235
3	31.25	9.29	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	4637	0	922	407	1330
2	18.75	9.33	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	4499	0	937	409	1346
1	6.25	9.49	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	4742	0	1019	416	1434
														21229	0			6376

\*\* = Section Force Exceeds Solidity Ratio Criteria

Site Number: 88009

Code: ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Section Forces

LoadCase 1.0D + 1.0W Service 45 deg

Serviceability - 60 mph Wind 45 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>ai</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)	
6	57.55	10.71	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	2941	0	887	273	1160	
5	50.05	10.38	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	339	0	95	0	19	**
4	43.75	10.07	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	4070	0	956	395	1351	
3	31.25	9.29	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	4637	0	1059	407	1466	
2	18.75	9.33	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	4499	0	1058	409	1467	
1	6.25	9.49	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	4742	0	1144	416	1560	
														21229	0			7024	

\*\* = Section Force Exceeds Solidity Ratio Criteria

Site Number: 88009

Code:

ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Equivalent Lateral Force Method

Spectral Response Acceleration for Short Period ( $S_s$ ):	0.17
Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.05
Long-Period Transition Period ( $T_L$ - Seconds):	6
Importance Factor ( $I_e$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.18
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.09
Seismic Response Coefficient ( $C_s$ ):	0.05
Upper Limit $C_s$ :	0.05
Lower Limit $C_s$ :	0.03
Period based on Rayleigh Method (sec):	0.61
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.05
Total Unfactored Dead Load:	44.00 k
Seismic Base Shear (E):	2.71 k

#### LoadCase 1.2D + 1.0Ev + 1.0Eh

#### Seismic

Section	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
6	57.55	2,941	211,012	0.094	253	3,637
5	50.05	339	21,017	0.009	25	420
4	43.75	4,070	218,743	0.097	263	5,035
3	31.25	4,637	174,784	0.078	210	5,736
2	18.75	4,499	98,958	0.044	119	5,565
1	6.25	4,742	32,747	0.015	39	5,865
Generic 12' Dipole	65.00	40	3,263	0.001	4	49
Generic 18' Omni	65.00	55	4,487	0.002	5	68
Generic 6' Omni	65.00	25	2,040	0.001	2	31
Alcatel-Lucent RRH2x50-08	65.00	159	12,947	0.006	16	196
Alcatel-Lucent RRH2x40 (700)	65.00	150	12,238	0.005	15	186
Alcatel-Lucent 800 MHz RRH	65.00	159	12,972	0.006	16	197
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	65.00	210	17,133	0.008	21	260
Generic Flat Side Arm	65.00	1,125	91,782	0.041	110	1,392
RFS APXVSP18-C-A20	65.00	171	13,951	0.006	17	212
Commscope DT465B-2XR	65.00	174	14,196	0.006	17	215
Andrew ABT-DFDM-ADB	65.00	1	90	0.000	0	1
Powerwave Allgon TT19-08BP111-001	65.00	96	7,832	0.003	9	119
Raycap DC6-48-60-18-8F	65.00	20	1,632	0.001	2	25
Ericsson RRUS 4478 B14	65.00	180	14,661	0.007	18	222
Ericsson RRUS 4449 B5, B12	65.00	213	17,377	0.008	21	263
Ericsson RRUS 32 (50.8 lbs)	65.00	152	12,433	0.006	15	189
Raycap DC6-48-60-18	65.00	30	2,448	0.001	3	37
Powerwave Allgon 7770.00A	65.00	81	6,608	0.003	8	100
CCI DMP65R-BU4D	65.00	136	11,079	0.005	13	168



Site Number: 88009

Code:

ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Equivalent Lateral Force Method

Item	Height (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
CCI DMP65R-BU6DA	65.00	318	25,911	0.012	31	393
Fire Warden Cabin	65.00	2,000	163,168	0.072	196	2,474
Sinclair SV228-HF2SNM	63.00	93	7,341	0.003	9	115
Platform with Handrails	62.00	2,000	155,238	0.069	186	2,474
Generic 10' Dish w/ Radome	59.00	1,600	117,862	0.052	142	1,979
Ericsson Radio 4449 B71 B85A	56.00	225	15,687	0.007	19	278
Ericsson RRUS 11 B4	56.00	152	10,604	0.005	13	188
Ericsson RRUS 11 B2	56.00	152	10,604	0.005	13	188
RFS APX16DWV-16DWVS-E-A20	56.00	122	8,513	0.004	10	151
Site Pro TPF123XX	56.00	900	62,748	0.028	75	1,113
RFS APXVAALL24 43-U-NA20	56.00	368	25,685	0.011	31	456
Platform w/ Handrails	50.00	5,000	309,336	0.137	372	6,185
Decibel 776QNB120EXM	48.00	351	20,800	0.009	25	434
Commscope CHB726-01	46.00	10	561	0.000	1	12
Commscope CBC78T-DS-43-2X	46.00	62	3,519	0.002	4	77
Samsung B5/B13 RRH-BR04C	46.00	211	11,950	0.005	14	261
Samsung B2/B66A RRH-BR049	46.00	253	14,346	0.006	17	313
RFS DB-C1-12C-24AB-0Z	46.00	64	3,626	0.002	4	79
Samsung MT6407-77A	46.00	245	13,870	0.006	17	303
Commscope JAHH-65B-R3B	46.00	364	20,602	0.009	25	450
Antel LPA-80063/6CF	46.00	108	6,119	0.003	7	134
Access Platform	37.50	5,000	228,397	0.101	274	6,185
<b>Total</b>		<b>44,004</b>	<b>2,252,916</b>	<b>1.000</b>	<b>2,706</b>	<b>54,428</b>

### LoadCase 0.9D - 1.0Ev + 1.0Eh

### Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
6	57.55	2,941	211,012	0.094	253	2,538
5	50.05	339	21,017	0.009	25	293
4	43.75	4,070	218,743	0.097	263	3,513
3	31.25	4,637	174,784	0.078	210	4,003
2	18.75	4,499	98,958	0.044	119	3,883
1	6.25	4,742	32,747	0.015	39	4,093
Generic 12' Dipole	65.00	40	3,263	0.001	4	35
Generic 18' Omni	65.00	55	4,487	0.002	5	47
Generic 6' Omni	65.00	25	2,040	0.001	2	22
Alcatel-Lucent RRH2x50-08	65.00	159	12,947	0.006	16	137
Alcatel-Lucent RRH2x40 (700)	65.00	150	12,238	0.005	15	129
Alcatel-Lucent 800 MHz RRH	65.00	159	12,972	0.006	16	137
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	65.00	210	17,133	0.008	21	181
Generic Flat Side Arm	65.00	1,125	91,782	0.041	110	971
RFS APXVSP18-C-A20	65.00	171	13,951	0.006	17	148
Commscope DT465B-2XR	65.00	174	14,196	0.006	17	150
Andrew ABT-DFDM-ADB	65.00	1	90	0.000	0	1
Powerwave Allgon TT19-08BP111-001	65.00	96	7,832	0.003	9	83
Raycap DC6-48-60-18-8F	65.00	20	1,632	0.001	2	17
Ericsson RRUS 4478 B14	65.00	180	14,661	0.007	18	155
Ericsson RRUS 4449 B5, B12	65.00	213	17,377	0.008	21	184
Ericsson RRUS 32 (50.8 lbs)	65.00	152	12,433	0.006	15	132
Raycap DC6-48-60-18	65.00	30	2,448	0.001	3	26
Powerwave Allgon 7770.00A	65.00	81	6,608	0.003	8	70
CCI DMP65R-BU4D	65.00	136	11,079	0.005	13	117
CCI DMP65R-BU6DA	65.00	318	25,911	0.012	31	274

Site Number: 88009

Code:

ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Equivalent Lateral Force Method

Fire Warden Cabin	65.00	2,000	163,168	0.072	196	1,726
Sinclair SV228-HF2SNM	63.00	93	7,341	0.003	9	80
Platform with Handrails	62.00	2,000	155,238	0.069	186	1,726
Generic 10' Dish w/ Radome	59.00	1,600	117,862	0.052	142	1,381
Ericsson Radio 4449 B71 B85A	56.00	225	15,687	0.007	19	194
Ericsson RRUS 11 B4	56.00	152	10,604	0.005	13	131
Ericsson RRUS 11 B2	56.00	152	10,604	0.005	13	131
RFS APX16DWV-16DWVS-E-A20	56.00	122	8,513	0.004	10	105
Site Pro TPF123XX	56.00	900	62,748	0.028	75	777
RFS APXVAALL24 43-U-NA20	56.00	368	25,685	0.011	31	318
Platform w/ Handrails	50.00	5,000	309,336	0.137	372	4,315
Decibel 776QNB120EXM	48.00	351	20,800	0.009	25	303
Commscope CHB726-01	46.00	10	561	0.000	1	9
Commscope CBC78T-DS-43-2X	46.00	62	3,519	0.002	4	54
Samsung B5/B13 RRH-BR04C	46.00	211	11,950	0.005	14	182
Samsung B2/B66A RRH-BR049	46.00	253	14,346	0.006	17	219
RFS DB-C1-12C-24AB-0Z	46.00	64	3,626	0.002	4	55
Samsung MT6407-77A	46.00	245	13,870	0.006	17	211
Commscope JAHH-65B-R3B	46.00	364	20,602	0.009	25	314
Antel LPA-80063/6CF	46.00	108	6,119	0.003	7	93
Access Platform	37.50	5,000	228,397	0.101	274	4,315
		44,004	2,252,916	1.000	2,706	37,979

Site Number: 88009

Code: ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Force/Stress Summary

Section: 1		1		Bot Elev (ft): 0.00				Height (ft): 12.500							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	SAE - 6X6X0.625	-92.38	1.2D + 1.0W 45 deg	12.57	50	50	50	63.9	33.0	207.00	0	0	0.00	0.00	44 Member Z
HORIZ	DAL - 3X2.5X0.25	-3.90	0.9D + 1.0W Normal	18.12	50	100	13	199.8	36.0	18.86	0	0	0.00	0.00	20 Member Y
DIAG	SAU - 4X3X0.25	-10.91	1.2D + 1.0W Normal	22.81	47	47	47	179.2	36.0	15.06	0	0	0.00	0.00	72 Member Z
<b>Max Tension Member</b>															
		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls		
LEG	SAE - 6X6X0.625	71.68	0.9D + 1.0W 45 deg	33	45	211.17	0	0	0.00	0.00		33	Member		
HORIZ	DAL - 3X2.5X0.25	5.08	1.2D + 1.0W Normal	36	58	85.21	0	0	0.00	0.00	0.00	5	Member		
DIAG	SAU - 4X3X0.25	9.46	1.2D + 1.0W Normal	36	58	54.76	0	0	0.00	0.00	0.00	17	Member		
<b>Max Splice Forces</b>															
		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type								
Top Tension		64.58	0.9D + 1.0W 45 deg	0.00	0	0									
Top Compression		86.51	1.2D + 1.0W 45 deg	0.00	0										
Bot Tension		82.46	0.9D + 1.0W 45 deg	0.00	0										
Bot Compression		104.67	1.2D + 1.0W 45 deg	0.00	0										

Section: 2		1		Bot Elev (ft): 12.50				Height (ft): 12.500							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	SAE - 6X6X0.625	-75.41	1.2D + 1.0W 45 deg	12.57	50	50	50	63.9	33.0	207.00	0	0	0.00	0.00	36 Member Z
HORIZ	DAL - 3X2.5X0.25	-2.53	0.9D + 1.0W Normal	16.25	50	50	17	106.7	36.0	60.78	0	0	0.00	0.00	4 Member Y
DIAG	SAU - 4X3X0.25	-11.52	1.2D + 1.0W Normal	21.27	47	47	47	169.0	36.0	16.93	0	0	0.00	0.00	68 Member Z
<b>Max Tension Member</b>															
		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls		
LEG	SAE - 6X6X0.625	55.96	0.9D + 1.0W 45 deg	33	45	211.17	0	0	0.00	0.00		26	Member		
HORIZ	DAL - 3X2.5X0.25	3.37	1.2D + 1.0W Normal	36	58	85.21	0	0	0.00	0.00	0.00	3	Member		
DIAG	SAU - 4X3X0.25	10.14	1.2D + 1.0W Normal	36	58	54.76	0	0	0.00	0.00	0.00	18	Member		
<b>Max Splice Forces</b>															
		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type								
Top Tension		47.25	0.9D + 1.0W 45 deg	0.00	0	0									
Top Compression		68.03	1.2D + 1.0W 45 deg	0.00	0										
Bot Tension		64.58	0.9D + 1.0W 45 deg	0.00	0										
Bot Compression		0.00		0.00	0										

Site Number: 88009

Code: ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Force/Stress Summary

Section: 3		1		Bot Elev (ft): 25.00				Height (ft): 12.500							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	SAE - 6X6X0.5	-54.60	1.2D + 1.0W 45 deg	12.57	50	50	50	63.9	33.0	167.41	0	0	0.00	0.00	32 Member Z
HORIZ	DAL - 3.5X3X0.3125	-3.68	1.2D + 1.0W Normal	14.37	50	100	17	136.1	36.0	59.82	0	0	0.00	0.00	6 Member Y
DIAG	SAU - 3.5X3X0.25	-11.85	1.2D + 1.0W Normal	19.78	47	47	47	163.4	36.0	16.73	0	0	0.00	0.00	70 Member Z
<b>Max Tension Member</b>															
LEG	SAE - 6X6X0.5	37.94	0.9D + 1.0W 45 deg	33	45	170.77	0	0	0.00	0.00	0.00	0.00		22 Member	
HORIZ	DAL - 3.5X3X0.3125	5.98	1.2D + 1.0W Normal	36	58	125.39	0	0	0.00	0.00	0.00	0.00		4 Member	
DIAG	SAU - 3.5X3X0.25	10.15	1.2D + 1.0W Normal	36	58	50.54	0	0	0.00	0.00	0.00	0.00		20 Member	
<b>Max Splice Forces</b>															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
Top Tension		28.41	0.9D + 1.0W 45 deg		0.00	0	0								
Top Compression		46.53	1.2D + 1.0W 45 deg		0.00	0									
Bot Tension		47.25	0.9D + 1.0W 45 deg		0.00	0									
Bot Compression		0.00			0.00	0									

Section: 4		1		Bot Elev (ft): 37.50				Height (ft): 12.500							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	SAE - 6X6X0.5	-33.05	1.2D + 1.0W 45 deg	12.57	50	50	50	63.9	33.0	167.41	0	0	0.00	0.00	19 Member Z
HORIZ	DAL - 3.5X3X0.3125	-7.82	1.2D + 1.0W 45 deg	12.50	100	100	17	136.4	36.0	59.56	0	0	0.00	0.00	13 Member X
DIAG	SAE - 3.5x3.5x0.25	-11.76	1.2D + 1.0W Normal	18.37	47	47	47	143.4	36.0	23.53	0	0	0.00	0.00	49 Member Z
<b>Max Tension Member</b>															
LEG	SAE - 6X6X0.5	20.54	1.2D + 1.0W 45 deg	33	45	170.77	0	0	0.00	0.00	0.00	0.00		12 Member	
HORIZ	DAL - 3.5X3X0.3125	2.10	1.2D + 1.0W Normal	36	58	125.39	0	0	0.00	0.00	0.00	0.00		1 Member	
DIAG	SAE - 3.5x3.5x0.25	9.44	1.2D + 1.0W Normal	36	58	54.76	0	0	0.00	0.00	0.00	0.00		17 Member	
<b>Max Splice Forces</b>															
		Pu (kip)	Load Case		phiRnt (kip)	Use %	Num Bolts	Bolt Type							
Top Tension		10.37	0.9D + 1.0W 45 deg		0.00	0	0								
Top Compression		26.65	1.2D + 1.0W 45 deg		0.00	0									
Bot Tension		28.41	0.9D + 1.0W 45 deg		0.00	0									
Bot Compression		0.00			0.00	0									

Site Number: 88009

Code: ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Force/Stress Summary

Section: 5		1		Bot Elev (ft): 50.00					Height (ft): 0.100						
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	SAE - 6X6X0.5	-5.71	1.2D + 1.0Di + 1.0Wi	0.39	50	50	50	2.0	33.0	189.73	0	0	0.00	0.00	3 Member Z
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	SAE - 6X6X0.5	23.38	1.2D + 1.0W 45 deg	33	45	170.77	0	0	0.00	0.00		13	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		23.35	0.9D + 1.0W 45 deg	0.00	0	0	
Top Compression		5.96	1.2D + 1.0Di + 1.0Wi	0.00	0		
Bot Tension		10.37	0.9D + 1.0W 45 deg	0.00	0		
Bot Compression		0.00		0.00	0		

Section: 6		1		Bot Elev (ft): 50.10					Height (ft): 14.900						
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	SAE - 6X6X0.5	-31.46	1.2D + 1.0W 45 deg	7.45	100	100	100	75.8	33.0	158.36	0	0	0.00	0.00	19 Member Z
HORIZ	DAL - 2.5X2X0.25	-9.91	1.2D + 1.0W 45 deg	7.000	100	100	50	133.7	36.0	34.09	0	0	0.00	0.00	29 Member Y
DIAG	SAU - 3X2X0.25	-8.29	1.2D + 1.0W Normal	10.22	50	50	50	136.0	36.0	18.40	0	0	0.00	0.00	45 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	SAE - 6X6X0.5	5.32	0.9D + 1.0W 45 deg	33	45	170.77	0	0	0.00	0.00		3	Member
HORIZ	DAL - 2.5X2X0.25	1.72	1.2D + 1.0W Normal	36	58	69.01	0	0	0.00	0.00	0.00	2	Member
DIAG	SAU - 3X2X0.25	18.39	1.2D + 1.0W 45 deg	36	58	38.56	0	0	0.00	0.00	0.00	47	Member

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		0.00		0.00	0	0	
Top Compression		6.10	1.2D + 1.0Di + 1.0Wi	0.00	0		
Bot Tension		23.35	0.9D + 1.0W 45 deg	0.00	0		
Bot Compression		0.00		0.00	0		

Site Number: 88009

Code:

ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
1.2D + 1.0W Normal	14.14	00.00	45	1	-7.97	75.26	-14.89	
	14.14	00.00	135	1a	5.02	-48.19	-11.90	
	14.14	00.00	225	1b	-5.87	-48.39	-11.18	
	14.14	00.00	315	1c	8.82	74.12	-14.01	
1.2D + 1.0W 45 deg	14.14	00.00	45	1	-15.53	103.62	-16.74	
	14.14	00.00	135	1a	-6.59	13.81	-3.54	
	14.14	00.00	225	1b	-13.77	-77.19	-12.73	
	14.14	00.00	315	1c	-2.51	12.56	-5.40	
0.9D + 1.0W Normal	14.14	00.00	45	1	-7.61	71.90	-14.50	
	14.14	00.00	135	1a	5.40	-51.59	-12.28	
	14.14	00.00	225	1b	-6.24	-51.65	-11.54	
	14.14	00.00	315	1c	8.45	70.95	-13.65	
0.9D + 1.0W 45 deg	14.14	00.00	45	1	-15.17	100.24	-16.35	
	14.14	00.00	135	1a	-6.21	10.35	-3.92	
	14.14	00.00	225	1b	-14.14	-80.42	-13.09	
	14.14	00.00	315	1c	-2.88	9.44	-5.04	
1.2D + 1.0Di + 1.0Wi Normal	14.14	00.00	45	1	-2.65	44.02	-4.41	
	14.14	00.00	135	1a	0.20	16.57	-1.72	
	14.14	00.00	225	1b	-0.41	15.08	-1.74	
	14.14	00.00	315	1c	2.86	41.97	-4.02	
1.2D + 1.0Di + 1.0Wi 45 deg	14.14	00.00	45	1	-4.37	50.60	-4.84	
	14.14	00.00	135	1a	-2.46	31.06	0.22	
	14.14	00.00	225	1b	-2.19	8.43	-2.11	
	14.14	00.00	315	1c	0.26	27.55	-2.02	
1.2D + 1.0Ev + 1.0Eh Normal M1	14.14	00.00	45	1	-1.92	16.36	-2.20	
	14.14	00.00	135	1a	-1.13	9.39	0.86	
	14.14	00.00	225	1b	1.13	9.39	0.86	
	14.14	00.00	315	1c	1.92	16.36	-2.20	
1.2D + 1.0Ev + 1.0Eh 45 deg M1	14.14	00.00	45	1	-2.28	17.80	-2.29	
	14.14	00.00	135	1a	-1.72	12.87	1.34	
	14.14	00.00	225	1b	0.77	7.95	0.78	
	14.14	00.00	315	1c	1.33	12.87	-1.73	
0.9D - 1.0Ev + 1.0Eh Normal M1	14.14	00.00	45	1	-1.46	12.46	-1.74	
	14.14	00.00	135	1a	-0.67	5.50	0.40	
	14.14	00.00	225	1b	0.67	5.50	0.40	
	14.14	00.00	315	1c	1.46	12.46	-1.74	
0.9D - 1.0Ev + 1.0Eh 45 deg M1	14.14	00.00	45	1	-1.82	13.91	-1.82	
	14.14	00.00	135	1a	-1.26	8.98	0.87	
	14.14	00.00	225	1b	0.31	4.06	0.32	
	14.14	00.00	315	1c	0.87	8.98	-1.27	
1.0D + 1.0W Service Normal	14.14	00.00	45	1	-2.99	28.21	-5.00	
	14.14	00.00	135	1a	0.52	-5.66	-2.47	
	14.14	00.00	225	1b	-0.80	-6.03	-2.26	
	14.14	00.00	315	1c	3.27	27.48	-4.67	
1.0D + 1.0W Service 45 deg	14.14	00.00	45	1	-5.08	36.07	-5.52	
	14.14	00.00	135	1a	-2.70	11.51	-0.16	
	14.14	00.00	225	1b	-2.99	-14.01	-2.68	
	14.14	00.00	315	1c	0.14	10.44	-2.27	

Site Number: 88009

Code: ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

Max Uplift:	80.42 (kip)	Moment Ice:	598.38 (kip-ft)	Moment:	2,557.10 (kip-ft)	1.2D + 1.0W 45 deg
Max Down:	103.62(kip)	Total Down Ice:	117.64 (kip)	Total Down:	52.80 (kip)	
Max Shear:	22.84 (kip)	Total Shear Ice:	12.39 (kip)	Total Shear:	54.31 (kip)	

Site Number: 88009

Code:

ANSI/TIA-222-H

© 2007 - 2021 by ATC IP LLC. All rights reserved.

Site Name: CORNWALL CT, CT

Engineering Number: 13681679\_C3\_02

5/28/2021 12:48:15 PM

Customer: T-MOBILE

### Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
114 mph Normal with No Ice	37.50	0.034	1.6375	0.8769	1.7991
114 mph Normal with No Ice	50.00	0.051	2.2742	2.9122	3.6949
114 mph Normal with No Ice	57.55	0.432	2.4564	2.5151	3.5157
114 mph Normal with No Ice	65.00	0.688	2.4279	1.8934	3.0715
114 mph 45 degree with No Ice	37.50	0.035	1.8595	1.0706	2.1155
114 mph 45 degree with No Ice	50.00	0.053	2.5949	3.4973	4.3549
114 mph 45 degree with No Ice	57.55	0.486	2.6876	2.9530	3.9930
114 mph 45 degree with No Ice	65.00	0.747	2.6763	1.9869	3.2725
114 mph Normal with No Ice (Reduced DL)	37.50	0.034	1.6067	0.8165	1.7252
114 mph Normal with No Ice (Reduced DL)	50.00	0.051	2.1995	2.6867	3.4722
114 mph Normal with No Ice (Reduced DL)	57.55	0.427	2.3727	2.4619	3.4192
114 mph Normal with No Ice (Reduced DL)	65.00	0.681	2.3463	1.8755	3.0038
114 mph 45 deg with No Ice (Reduced DL)	37.50	0.035	1.8320	1.0100	2.0529
114 mph 45 deg with No Ice (Reduced DL)	50.00	0.053	2.5398	3.2690	4.1396
114 mph 45 deg with No Ice (Reduced DL)	57.55	0.479	2.6314	2.8722	3.8954
114 mph 45 deg with No Ice (Reduced DL)	65.00	0.738	2.6205	1.9586	3.2107
40 mph Normal with 1.00 in Radial Ice	37.50	0.009	0.8948	0.6731	1.1179
40 mph Normal with 1.00 in Radial Ice	50.00	0.012	1.2756	2.4149	2.7311
40 mph Normal with 1.00 in Radial Ice	57.55	0.148	1.3215	1.0332	1.6775
40 mph Normal with 1.00 in Radial Ice	65.00	0.206	1.3177	0.5143	1.3794
40 mph 45 deg with 1.00 in Radial Ice	37.50	0.010	1.0309	0.7319	1.2631
40 mph 45 deg with 1.00 in Radial Ice	50.00	0.013	1.4572	2.6010	2.9814
40 mph 45 deg with 1.00 in Radial Ice	57.55	0.183	1.4866	1.3142	1.9842
40 mph 45 deg with 1.00 in Radial Ice	65.00	0.256	1.4868	0.7548	1.6051
Seismic Normal M1	37.50	0.002	-0.0076	0.2471	0.2472
Seismic Normal M1	50.00	0.003	0.0017	0.9192	0.9192
Seismic Normal M1	57.55	0.015	0.0053	0.2484	0.2485
Seismic Normal M1	65.00	0.027	0.0049	0.1400	0.1400
Seismic 45 deg M1	37.50	0.002	0.0075	0.2602	0.2603
Seismic 45 deg M1	50.00	0.003	0.0011	0.9613	0.9613
Seismic 45 deg M1	57.55	0.016	0.0032	0.3055	0.3055
Seismic 45 deg M1	65.00	0.029	0.0031	0.1638	0.1638
Seismic (Reduced DL) Normal M1	37.50	0.002	-0.0069	0.1795	0.1796
Seismic (Reduced DL) Normal M1	50.00	0.003	0.0007	0.6642	0.6642
Seismic (Reduced DL) Normal M1	57.55	0.015	0.0028	0.2008	0.2008
Seismic (Reduced DL) Normal M1	65.00	0.027	0.0025	0.1200	0.1200
Seismic (Reduced DL) 45 deg M1	37.50	0.002	0.0068	0.1924	0.1925
Seismic (Reduced DL) 45 deg M1	50.00	0.003	0.0003	0.7056	0.7056
Seismic (Reduced DL) 45 deg M1	57.55	0.016	0.0017	0.2535	0.2535
Seismic (Reduced DL) 45 deg M1	65.00	0.029	0.0016	0.1383	0.1383
Serviceability - 60 mph Wind Normal	37.50	0.009	0.8984	0.3768	0.9505
Serviceability - 60 mph Wind Normal	50.00	0.014	1.2385	1.2535	1.7621
Serviceability - 60 mph Wind Normal	57.55	0.156	1.2842	0.7874	1.5064
Serviceability - 60 mph Wind Normal	65.00	0.223	1.2811	0.5385	1.3727
Serviceability - 60 mph Wind 45 deg	37.50	0.010	1.0932	0.4388	1.1596
Serviceability - 60 mph Wind 45 deg	50.00	0.015	1.5077	1.4378	2.0834
Serviceability - 60 mph Wind 45 deg	57.55	0.192	1.5467	0.9597	1.8202
Serviceability - 60 mph Wind 45 deg	65.00	0.266	1.5458	0.5984	1.6327

### Maximum Reactions Summary

Anchor Group	Vertical (kip)				Horizontal (kip)		Moment (kip-ft)	
	DL+WL	DL+WL+IL	UpLift	Shear	DL+WL	DL+WL+IL	DL+WL	DL+WL+IL
Base	52.80	117.64	103.62	22.84	54.31	12.39	2557.10	598.38



**Site Number:** 88009

**Site Name:** CORNWALL CT, CT

**Customer:** T-MOBILE

**Code:**

**ANSI/TIA-222-H**

**Engineering Number:** 13681679\_C3\_02

© 2007 - 2021 by ATC IP LLC. All rights reserved.

5/28/2021 12:48:15 PM

**Site Name:** Cornwall, CT  
**Site Number:** 88009  
**Tower Type:** SST w/4 Legs  
**Design Loads (Factored) - Analysis per TIA-222-H Standards**

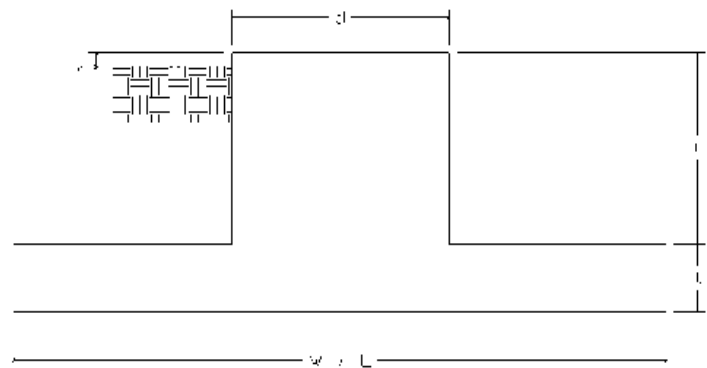
## Monolithic Mat & Pier Foundation Analysis

Foundation Analysis Parameters		
Design / Analysis / Mapping:	Mapping	-
Compression/Leg:	103.6	k
Uplift/Leg:	80.4	k
Total Shear:	54.3	k
Moment:	2,557.1	k-ft
Tower + Appurtenance Weight:	44.0	k
Depth to Base of Foundation (l + t - h):	4.92	ft
Diameter of Pier (d):	4	ft
Length of Pier (l):	2.5	ft
Height of Pier above Ground (h):	0.5	ft
Width of Pad (W):	30	ft
Length of Pad (L):	30	ft
Thickness of Pad (t):	2.92	ft
Tower Leg Center to Center:	20	ft
Number of Tower Legs:	4	-
Tower Center from Mat Center:	0	ft
Depth Below Ground Surface to Water Table:	99	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Soil Above Water Table:	125	pcf
Unit Weight of Water:	62.4	pcf
Unit Weight of Soil Below Water Table:	62.6	pcf
Friction Angle of Uplift:	35	°
Coefficient of Shear Friction:	0.5	-
Ultimate Compressive Bearing Pressure:	40,000	psf
Ultimate Passive Pressure on Pad Face:	1,914	psf
$f_{\text{Soil and Concrete Weight}}$ :	0.9	-
$f_{\text{Soil}}$ :	0.75	-

Overturning Moment Usage		
Design OTM:	2851.5	k-ft
OTM Resistance:	9304.9	k-ft
Design OTM / OTM Resistance:	31%	Pass

Soil Bearing Pressure Usage		
Net Bearing Pressure:	1088	psf
Factored Nominal Bearing Pressure:	30000	psf
Factored Nominal (Net) Bearing Pressure:	4%	Pass
Load Direction Controlling Design Bearing Pressure:	<i>Diagonal to Pad Edge</i>	

Sliding Factor of Safety		
Ultimate Friction Resistance:	331.1	k
Ultimate Passive Pressure Resistance:	125.7	k
Total Factored Sliding Resistance:	342.6	k
Sliding Design / Sliding Resistance:	16%	Pass



<b>RAN Template:</b> 67D07C 6102 MUAC	<b>A&amp;L Template:</b> 67D07C_1QP+10P
--	--

### Section 1 - Site Information

<b>Site ID:</b> CTNH545A	<b>Site Name:</b> CTNH545A	<b>Latitude:</b> 41.82130000
<b>Status:</b> Draft	<b>Site Class:</b> Self Support Tower	<b>Longitude:</b> -73.29644000
<b>Version:</b> 3	<b>Site Type:</b> Structure Non Building	<b>Address:</b> 36 Mohawk Mountain Road
<b>Project Type:</b> L600	<b>Plan Year:</b>	<b>City, State:</b> Cornwall Bridge, CT
<b>Approved:</b> Not Approved	<b>Market:</b> CONNECTICUT CT	<b>Region:</b> NORTHEAST
<b>Approved By:</b> Not Approved	<b>Vendor:</b> Ericsson	
<b>Last Modified:</b> 4/6/2021 1:42:03 PM	<b>Landlord:</b> ATC	
<b>Last Modified By:</b> Justin.Darrow@sprint.com		

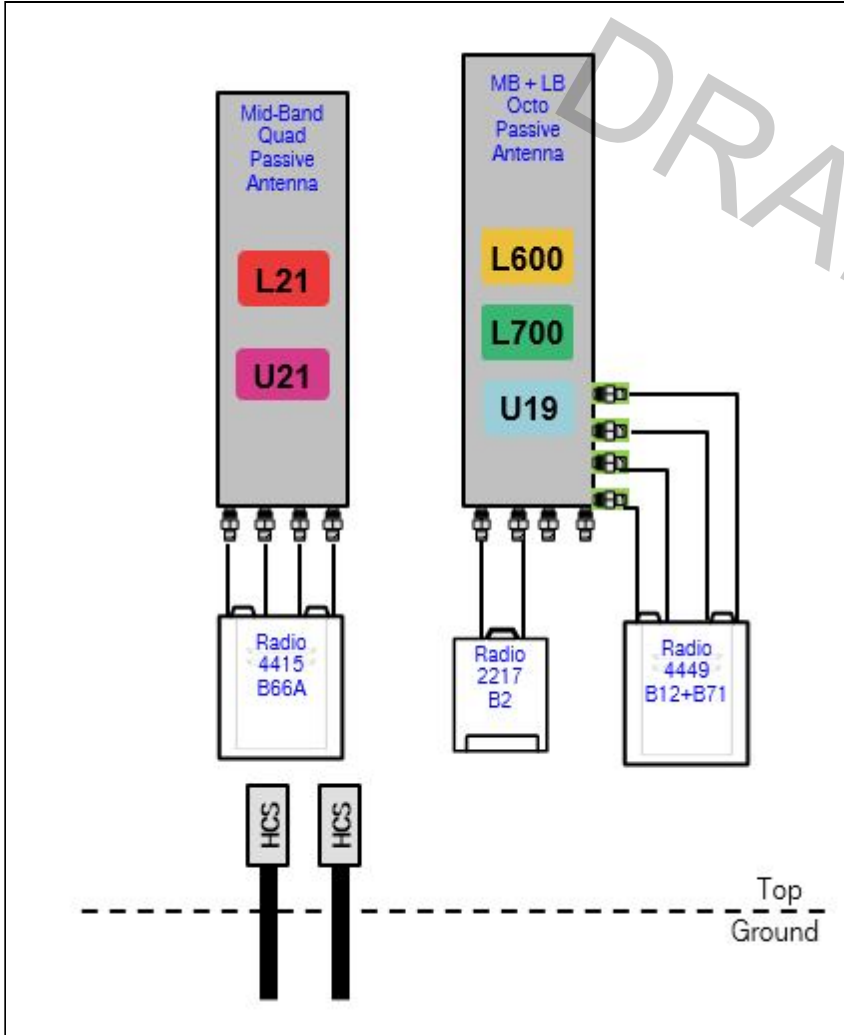
<b>RAN Template:</b> 67D07C 6102 MUAC		<b>AL Template:</b> 67D07C_1QP+10P		
<b>Sector Count:</b> 3	<b>Antenna Count:</b> 6	<b>Coax Line Count:</b> 0	<b>TMA Count:</b> 0	<b>RRU Count:</b> 9

### Section 2 - Existing Template Images

----- This section is intentionally blank. -----

Section 3 - Proposed Template Images

67D07C.JPG



Notes:

Section 4 - Siteplan Images

----- This section is intentionally blank. -----

DRAFT

<b>RAN Template:</b> 67D07C 6102 MUAC	<b>A&amp;L Template:</b> 67D07C_1QP+10P
--	--

Section 5 - RAN Equipment

**Existing RAN Equipment**

Template: 707C Tower

Enclosure	1	2
Enclosure Type	RBS 6102 MU AC	Purcell SFX17 2824
Baseband	BB 6630 L2100 L700 DUW30 U1900	
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG* (x 3)	

**Proposed RAN Equipment**

Template: 67D07C 6102 MUAC

Enclosure	1	2
Enclosure Type	RBS 6102 MU AC	Purcell SFX17 2824
Baseband	BB 6630 L2100 DUW30 U1900 BB 6648 L700 L600 N600	
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG* (x 3)	

**RAN Scope of Work:**

Current service is 200 Amp

<b>RAN Template:</b> 67D07C 6102 MUAC	<b>A&amp;L Template:</b> 67D07C_1QP+1OP
--	--

Section 6 - A&L Equipment

Existing Template: 707C\_Tower\_1QP\_1DP  
Proposed Template: 67D07C\_1QP+1OP

Sector 1 (Existing) view from behind

<b>Coverage Type</b>	A - Outdoor Macro		
<b>Antenna</b>	<b>1</b>	<b>2</b>	
<b>Antenna Model</b>	RFS - APX16DWV-16DWV-S-E-A20 (Quad)	Andrew - LNX-6515DS-A1M (Dual)	
<b>Azimuth</b>	30	30	
<b>M. Tilt</b>	0	0	
<b>Height</b>	56	56	
<b>Ports</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>
<b>Active Tech.</b>	U1900	L2100	L700
<b>Dark Tech.</b>			
<b>Restricted Tech.</b>			
<b>Decomm. Tech.</b>			
<b>E. Tilt</b>	2	2	2
<b>Cables</b>	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)
<b>TMA's</b>			
<b>Diplexers / Combiners</b>			
<b>Radio</b>	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	RRUS11 B12 (At Antenna)
<b>Sector Equipment</b>			

Unconnected Equipment:

Scope of Work:

<b>RAN Template:</b> 67D07C 6102 MUAC	<b>A&amp;L Template:</b> 67D07C_1QP+10P
--	--

Sector 1 (Proposed) view from behind						
<b>Coverage Type</b>	A - Outdoor Macro					
<b>Antenna</b>	1			2		
<b>Antenna Model</b>	RFS - APX16DWV-16DWV-S-E-A20 (Quad)			RFS - APXVAALL24_43-U-NA20 (Octo)		
<b>Azimuth</b>	30			30		
<b>M. Tilt</b>	0			0		
<b>Height</b>	56			56		
<b>Ports</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>P4</b>	<b>P5</b>	<b>P6</b>
<b>Active Tech.</b>	U1900	L2100	L700 L600 N600	L700 L600 N600		
<b>Dark Tech.</b>						
<b>Restricted Tech.</b>						
<b>Decomm. Tech.</b>						
<b>E. Tilt</b>	2	2	2			
<b>Cables</b>	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	SHARED Coax Jumper (x2)		
<b>TMA's</b>						
<b>Diplexers / Combiners</b>						
<b>Radio</b>	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)		
<b>Sector Equipment</b>						
<b>Unconnected Equipment:</b>						
<b>Scope of Work:</b>						

\*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.



<b>RAN Template:</b> 67D07C 6102 MUAC	<b>A&amp;L Template:</b> 67D07C_1QP+10P
--	--

Sector 2 (Existing) view from behind			
<b>Coverage Type</b>	A - Outdoor Macro		
<b>Antenna</b>	1		2
<b>Antenna Model</b>	RFS - APX16DWV-16DWV-S-E-A20 (Quad)	Andrew - LNX-6515DS-A1M (Dual)	
<b>Azimuth</b>	150	150	
<b>M. Tilt</b>	0	0	
<b>Height</b>	56	56	
<b>Ports</b>	P1	P2	P3
<b>Active Tech.</b>	U1900	L2100	L700
<b>Dark Tech.</b>			
<b>Restricted Tech.</b>			
<b>Decomm. Tech.</b>			
<b>E. Tilt</b>	2	2	2
<b>Cables</b>	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)
<b>TMA's</b>			
<b>Diplexers / Combiners</b>			
<b>Radio</b>	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	RRUS11 B12 (At Antenna)
<b>Sector Equipment</b>			
<b>Unconnected Equipment:</b>			
<b>Scope of Work:</b>			

<b>RAN Template:</b> 67D07C 6102 MUAC	<b>A&amp;L Template:</b> 67D07C_1QP+10P
--	--

**Sector 2 (Proposed) view from behind**

<b>Coverage Type</b>	A - Outdoor Macro					
<b>Antenna</b>	1			2		
<b>Antenna Model</b>	RFS - APX16DWV-16DWV-S-E-A20 (Quad)			RFS - APXVAALL24_43-U-NA20 (Octo)		
<b>Azimuth</b>	150			150		
<b>M. Tilt</b>	0			0		
<b>Height</b>	56			56		
<b>Ports</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>P4</b>	<b>P5</b>	<b>P6</b>
<b>Active Tech.</b>	U1900	L2100	L700 L600 N600	L700 L600 N600		
<b>Dark Tech.</b>						
<b>Restricted Tech.</b>						
<b>Decomm. Tech.</b>						
<b>E. Tilt</b>	2	2	2			
<b>Cables</b>	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	SHARED Coax Jumper (x2)		
<b>TMA's</b>						
<b>Diplexers / Combiners</b>						
<b>Radio</b>	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)		
<b>Sector Equipment</b>						

**Unconnected Equipment:**

**Scope of Work:**

\*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

<b>RAN Template:</b> 67D07C 6102 MUAC	<b>A&amp;L Template:</b> 67D07C_1QP+10P
--	--

Sector 3 (Existing) view from behind			
<b>Coverage Type</b>	A - Outdoor Macro		
<b>Antenna</b>	1		2
<b>Antenna Model</b>	RFS - APX16DWV-16DWV-S-E-A20 (Quad)	Andrew - LNX-6515DS-A1M (Dual)	
<b>Azimuth</b>	270	270	
<b>M. Tilt</b>	0	0	
<b>Height</b>	56	56	
<b>Ports</b>	P1	P2	P3
<b>Active Tech.</b>	U1900	L2100	L700
<b>Dark Tech.</b>			
<b>Restricted Tech.</b>			
<b>Decomm. Tech.</b>			
<b>E. Tilt</b>	2	2	2
<b>Cables</b>	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)
<b>TMA's</b>			
<b>Diplexers / Combiners</b>			
<b>Radio</b>	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	RRUS11 B12 (At Antenna)
<b>Sector Equipment</b>			
<b>Unconnected Equipment:</b>			
<b>Scope of Work:</b>			

<b>RAN Template:</b> 67D07C 6102 MUAC	<b>A&amp;L Template:</b> 67D07C_1QP+10P
--	--

Sector 3 (Proposed) view from behind						
<b>Coverage Type</b>	A - Outdoor Macro					
<b>Antenna</b>	1			2		
<b>Antenna Model</b>	RFS - APX16DWV-16DWV-S-E-A20 (Quad)			RFS - APXVAALL24_43-U-NA20 (Octo)		
<b>Azimuth</b>	270			270		
<b>M. Tilt</b>	0			0		
<b>Height</b>	56			56		
<b>Ports</b>	<b>P1</b>	<b>P2</b>	<b>P3</b>	<b>P4</b>	<b>P5</b>	<b>P6</b>
<b>Active Tech.</b>	U1900	L2100	L700 L600 N600	L700 L600 N600		
<b>Dark Tech.</b>						
<b>Restricted Tech.</b>						
<b>Decomm. Tech.</b>						
<b>E. Tilt</b>	2	2	2			
<b>Cables</b>	Coax Jumper (x2)	Coax Jumper (x2)	Coax Jumper (x2)	SHARED Coax Jumper (x2)		
<b>TMA's</b>						
<b>Diplexers / Combiners</b>						
<b>Radio</b>	RRUS11 B2 (At Antenna)	RRUS11 B4 (At Antenna)	Radio 4449 B71+B85 (At Antenna)	SHARED Radio 4449 B71+B85 (At Antenna)		
<b>Sector Equipment</b>						
<b>Unconnected Equipment:</b>						
<b>Scope of Work:</b>						

\*A dashed border indicates shared equipment. Any connected equipment is denoted with the SHARED keyword.

<b>RAN Template:</b> 67D07C 6102 MUAC	<b>A&amp;L Template:</b> 67D07C_1QP+10P
--	--

**Section 7 - Power Systems Equipment**

**Existing Power Systems Equipment**

----- This section is intentionally blank. -----

**Proposed Power Systems Equipment**

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

T-Mobile Existing Facility

Site ID: CTNH545A

36 Mohawk Mountain Road  
Cornwall, Connecticut 06759

**June 17, 2021**

**EBI Project Number: 6221003035**

<b>Site Compliance Summary</b>	
Compliance Status:	<b>COMPLIANT</b>
Site total MPE% of FCC general population allowable limit:	<b>75.52%</b>

June 17, 2021

T-Mobile

Attn: Jason Overbey, RF Manager  
35 Griffin Road South  
Bloomfield, Connecticut 06002

Emissions Analysis for Site: CTNH545A

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **36 Mohawk Mountain Road in Cornwall, Connecticut** for the purpose of determining whether the emissions from the Proposed T-Mobile Antenna Installation located on this property are within specified federal limits.

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

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

General population/uncontrolled exposure limits apply to situations in which the general population 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 population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately  $400 \mu\text{W}/\text{cm}^2$  and  $467 \mu\text{W}/\text{cm}^2$ , respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is  $1000 \mu\text{W}/\text{cm}^2$ . Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

## **CALCULATIONS**

Calculations were done for the proposed T-Mobile Wireless antenna facility located at 36 Mohawk Mountain Road in Cornwall, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower.

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

- 1) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 1 NR channel (600 MHz Band) was considered for each sector of the proposed installation. This Channel has a transmit power of 80 Watts.
- 3) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 4) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 5) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated



- value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 7) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
  - 8) The antennas used in this modeling are the RFS APX16DWV-I6DWV-S-E-A20 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s) in Sector A, the RFS APX16DWV-I6DWV-S-E-A20 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s) in Sector B, the RFS APX16DWV-I6DWV-S-E-A20 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAALL24\_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
  - 9) The antenna mounting height centerline of the proposed antennas is 56 feet above ground level (AGL).
  - 10) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
  - 11) All calculations were done with respect to uncontrolled / general population threshold limits.

## T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APX16DWV-16DWV-S-E-A20	Make / Model:	RFS APX16DWV-16DWV-S-E-A20	Make / Model:	RFS APX16DWV-16DWV-S-E-A20
Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz
Gain:	15.9 dBd / 15.9 dBd	Gain:	15.9 dBd / 15.9 dBd	Gain:	15.9 dBd / 15.9 dBd
Height (AGL):	56 feet	Height (AGL):	56 feet	Height (AGL):	56 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	180 Watts	Total TX Power (W):	180 Watts	Total TX Power (W):	180 Watts
ERP (W):	7,002.81	ERP (W):	7,002.81	ERP (W):	7,002.81
Antenna A1 MPE %:	10.07%	Antenna B1 MPE %:	10.07%	Antenna C1 MPE %:	10.07%
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	RFS APXVAALL24_43-U-NA20	Make / Model:	RFS APXVAALL24_43-U-NA20	Make / Model:	RFS APXVAALL24_43-U-NA20
Frequency Bands:	600 MHz / 600 MHz / 700 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd
Height (AGL):	56 feet	Height (AGL):	56 feet	Height (AGL):	56 feet
Channel Count:	5	Channel Count:	5	Channel Count:	5
Total TX Power (W):	200 Watts	Total TX Power (W):	200 Watts	Total TX Power (W):	200 Watts
ERP (W):	4,151.83	ERP (W):	4,151.83	ERP (W):	4,151.83
Antenna A2 MPE %:	14.21%	Antenna B2 MPE %:	14.21%	Antenna C2 MPE %:	14.21%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	24.28%
AT&T	18.47%
Verizon	14.8%
Sprint	16.83%
Dept Homeland Security - ICE	1.14%
<b>Site Total MPE % :</b>	<b>75.52%</b>

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	24.28%
T-Mobile Sector B Total:	24.28%
T-Mobile Sector C Total:	24.28%
Site Total MPE % :	75.52%

T-Mobile Maximum MPE Power Values (Sector A)							
T-Mobile Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ( $\mu\text{W}/\text{cm}^2$ )	Frequency (MHz)	Allowable MPE ( $\mu\text{W}/\text{cm}^2$ )	Calculated % MPE
T-Mobile 1900 MHz UMTS	2	1167.14	56.0	33.57	1900 MHz UMTS	1000	3.36%
T-Mobile 2100 MHz LTE	2	2334.27	56.0	67.14	2100 MHz LTE	1000	6.71%
T-Mobile 600 MHz LTE	2	591.73	56.0	17.02	600 MHz LTE	400	4.25%
T-Mobile 600 MHz NR	1	1577.94	56.0	22.69	600 MHz NR	400	5.67%
T-Mobile 700 MHz LTE	2	695.22	56.0	20.00	700 MHz LTE	467	4.28%
						<b>Total:</b>	<b>24.28%</b>

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

## Summary

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

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

T-Mobile Sector	Power Density Value (%)
Sector A:	24.28%
Sector B:	24.28%
Sector C:	24.28%
T-Mobile Maximum MPE % (Sector A):	24.28%
Site Total:	75.52%
Site Compliance Status:	<b>COMPLIANT</b>

The anticipated composite MPE value for this site assuming all carriers present is **75.52%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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