



October 24, 2022

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

Re: Notice of Exempt Modification New Cingular Wireless PCS LLC ("AT&T") Site CT2200
284 New Canaan Avenue, Norwalk, CT 06850 (the "Property")
Latitude: 41.1361389 N Longitude: 73.4564167 W

Dear Ms. Bachman:

AT&T currently maintains (3) antennas at the 124'+- level and (3) antennas at the 134'+- level on the existing 140' flagpole tower ("Tower") at 284 New Canaan Avenue, Norwalk, CT. The property is owned by Indian Hill RE LLC, and the Tower is owned by AT&T. AT&T intends to modify its Facility by removing all (6) antennas & adding (3) TPA-65R-BU8DA-K antennas at the 124' level and adding (3) NNHHS4-65A-R5 antennas at the 134' level of the Tower. The height of AT&Ts existing and proposed antennas is 124' & 134' level on the Tower.

This modification may include B2, B5, B17, B14, B29, B30, B66 & n77 hardware that is 4G(LTE) and/or 5GNR capable through remote software configuration and either or both services may be turned on or off at various times.

The CT Siting Council approved the Tower in Docket 442 on May 29, 2014. No conditions will be violated by this modification, including total facility height, mounting restrictions and/or transparent casing size. The AT&T modification complies with the above-mentioned approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies ("R.C.S.A") §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A §16-50j-72(b)(2). In accordance with to R.C.S.A §16-50j-73, a copy of this letter is being sent the Hon. Harry Rilling, Mayor, City of Norwalk, Mr. Steven Kleppin, Director, Planning & Zoning, City of Norwalk, and Indian Hill RE LLC, the property owner.

The planned modification of the facility falls squarely within those activities explicitly provided for in R.C.S.A §16-50j-72(b)(2). Specifically:

1. The proposed modifications will not result in an increase in the height of the existing structure.

2. The proposed modifications will not require an extension of the site boundary.
3. The proposed modification 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 modified facility 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 foundation can support the proposed loading.

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

Sincerely,

Hollis M. Redding

Hollis M. Redding
SAI Communications, LLC
12 Industrial Way
Salem, NH 03079
Mobile: 860-834-6964
hredding@saigrp.com

Enclosures

Cc:

Hon. Harry Rilling, Mayor, City of Norwalk
Mr. Steven Kleppin, Director, Planning & Zoning, City of Norwalk
Indian Hill RE LLC, the property owner
Rachelle Bidon-Lewis, AT&T



C Squared Systems, LLC
65 Dartmouth Drive
Auburn, NH 03032
(603) 644-2800
support@csquaredsystems.com

Calculated Radio Frequency Emissions Report



CT2200

284 New Canaan Avenue, Norwalk, CT 06850

October 18, 2022

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed modification of AT&T antenna arrays to be mounted at 134' and 124' AGL on an existing monopole tower located at 284 New Canaan Avenue in Norwalk, CT. The coordinates of the tower are 41° 08' 10.10" N, 73° 27' 23.10" W.

AT&T is proposing the following:

- 1) Install six (6) multi-band antennas (two per sector) to support its commercial LTE network and the FirstNet National Public Safety Broadband Network ("NPSBN").

This report considers the planned antenna configuration for AT&T¹ to derive the resulting % MPE of its proposed installation.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm²). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment C of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment C contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

¹ As referenced to AT&T's Radio Frequency Design Sheet updated 08/22/2022.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{PowerDensity} = \left(\frac{EIRP}{\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor of 2.0

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final installations.

4. Antenna Inventory

Table 1 below outlines AT&T's proposed antenna configuration for the site. The associated data sheets and antenna patterns for these specific antenna models are included in Attachments C.

Operator	Sector / Call Sign	TX Freq (MHz)	Power at Antenna (Watts)	Ant Gain (dBi)	Power EIRP (Watts)	Antenna Model	Beam Width	Mech. Tilt	Length (ft)	Antenna Centerline Height (ft)			
AT&T	Alpha / 30°	739	160	15.6	5809	TPA65R-BU8D	73	0	8.0	124			
		850	160	16.4	6984		64						
		2100	240	18.3	16226		66						
		2300	160	18.2	10571		60						
		763	160	13.6	3665	NNHHS4-65A-R5	59				0	5.0	134
		1900	160	17.4	8793		60						
		3500	108	23.5	24178	AIR 6419	11				0	2.5	134
		3500	108	23.5	24178	AIR 6449	11				0	2.5	134
	Beta / 150°	739	160	15.6	5809	TPA65R-BU8D	73	0	8.0	124			
		850	160	16.4	6984		64						
		2100	240	18.3	16226		66						
		2300	160	18.2	10571		60						
		763	160	13.6	3665	NNHHS4-65A-R5	59				0	5.0	134
		1900	160	17.4	8793		60						
		3500	108	23.5	24178	AIR 6419	11				0	2.5	134
		3500	108	23.5	24178	AIR 6449	11				0	2.5	134
	Gamma / 270°	739	160	15.6	5809	TPA65R-BU8D	73	0	8.0	124			
		850	160	16.4	6984		64						
		2100	240	18.3	16226		66						
		2300	160	18.2	10571		60						
		763	160	13.6	3665	NNHHS4-65A-R5	59				0	5.0	134
		1900	160	17.4	8793		60						
		3500	108	23.5	24178	AIR 6419	11				0	2.5	134
		3500	108	23.5	24178	AIR 6449	11				0	2.5	134

Table 1: Proposed Antenna Inventory^{2 3}

² Antenna heights are in reference to the Hudson Design Group LLC. Construction Drawings, dated 08/04/2022.

³ Transmit power assumes 0 dB of cable loss.

5. Calculation Results

The calculated power density results are shown in Figure 1 below. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the site. In addition to the other worst-case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas was completed using a local maximum off beam antenna gain (within ± 5 degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.

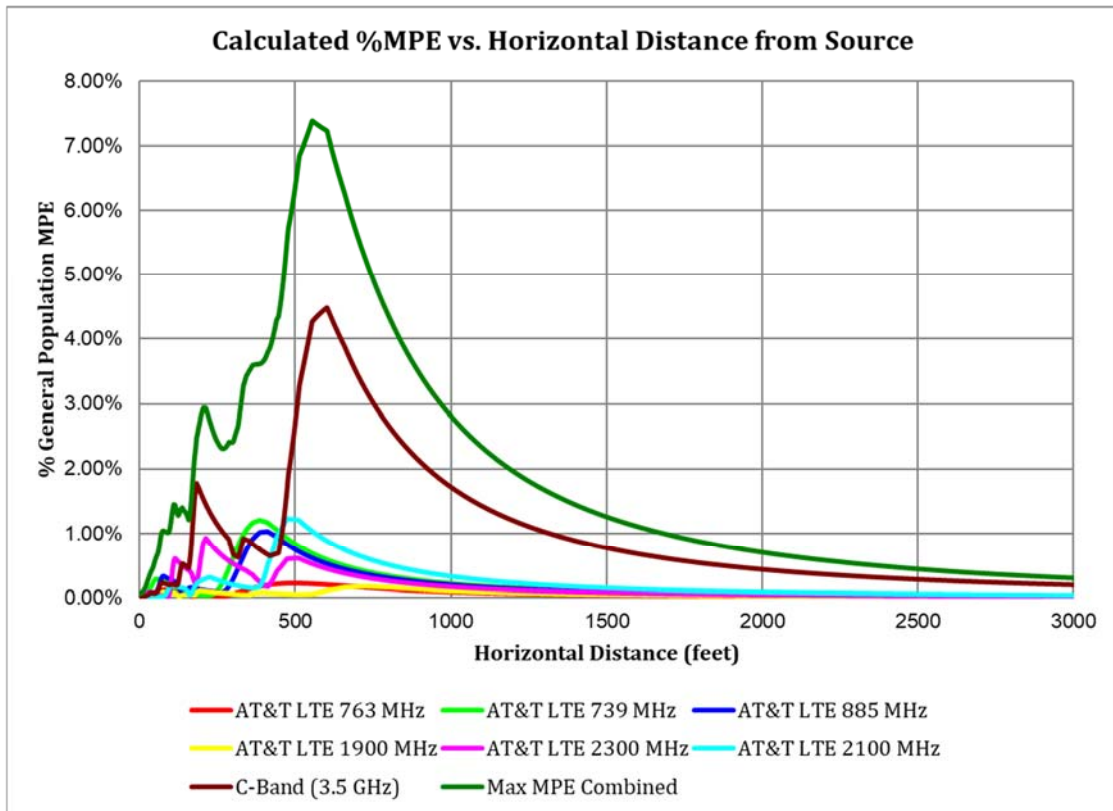


Figure 1: Graph of General Population % MPE vs. Distance

The highest percent of MPE (7.38% of the General Population limit) is calculated to occur at a horizontal distance of 555 feet from antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 1500 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 2 below lists percent of MPE values as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 555 feet from the site (reference Figure 1).

As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. In addition, a six-foot height offset was considered in this analysis to account for average human height. As a result, the predicted signal levels are significantly higher than the actual signal levels will be from the final configuration. The results presented in Figure 1 and Table 2 assume level ground elevation from the base of the tower out to the horizontal distances calculated.

Carrier	Number of Transmitters	Power out of Base Station Per Transmitter (Watts)	Antenna Height (Feet)	Distance to the Base of Antennas (Feet)	Power Density (mW/cm ²)	Limit (mW/cm ²)	% MPE
AT&T LTE 1900 MHz	1	160.0	134.0	555	0.000520	1.000	0.05%
AT&T LTE 2100 MHz	1	240.0	124.0	555	0.010314	1.000	1.03%
AT&T LTE 2300 MHz	1	160.0	124.0	555	0.005216	1.000	0.52%
AT&T LTE 739 MHz	1	160.0	124.0	555	0.003368	0.493	0.68%
AT&T LTE 763 MHz	1	160.0	134.0	555	0.001078	0.509	0.21%
AT&T LTE 885 MHz	1	160.0	124.0	555	0.003609	0.590	0.61%
C-Band (3.5 GHz)	2	108.5	134.0	555	0.042702	1.000	4.27%
Total							7.38%

Table 2: Maximum Percent of General Population Exposure Values

6. Conclusion

The above analysis verifies that RF exposure levels from the site with AT&T's proposed antenna configuration will be well below the maximum permissible levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the maximum cumulative percent of MPE in consideration of all transmitters is calculated to be **7.38% of the FCC limit (General Population/Uncontrolled)**. This maximum cumulative percent of MPE value is calculated to occur 555 feet away from the site.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

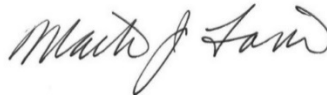


Report Prepared By:

Ram Acharya
RF Engineer 1
C Squared Systems, LLC

October 17, 2022

Date



Reviewed/Approved By:

Martin J. Lavin
Senior RF Engineer
C Squared Systems, LLC

October 18, 2022

Date

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2005, IEEE Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2002 (R2008), IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to Such Fields, 100 kHz-300 GHz IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure⁴				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure⁵				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 3: FCC Limits for Maximum Permissible Exposure

⁴ Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

⁵ General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

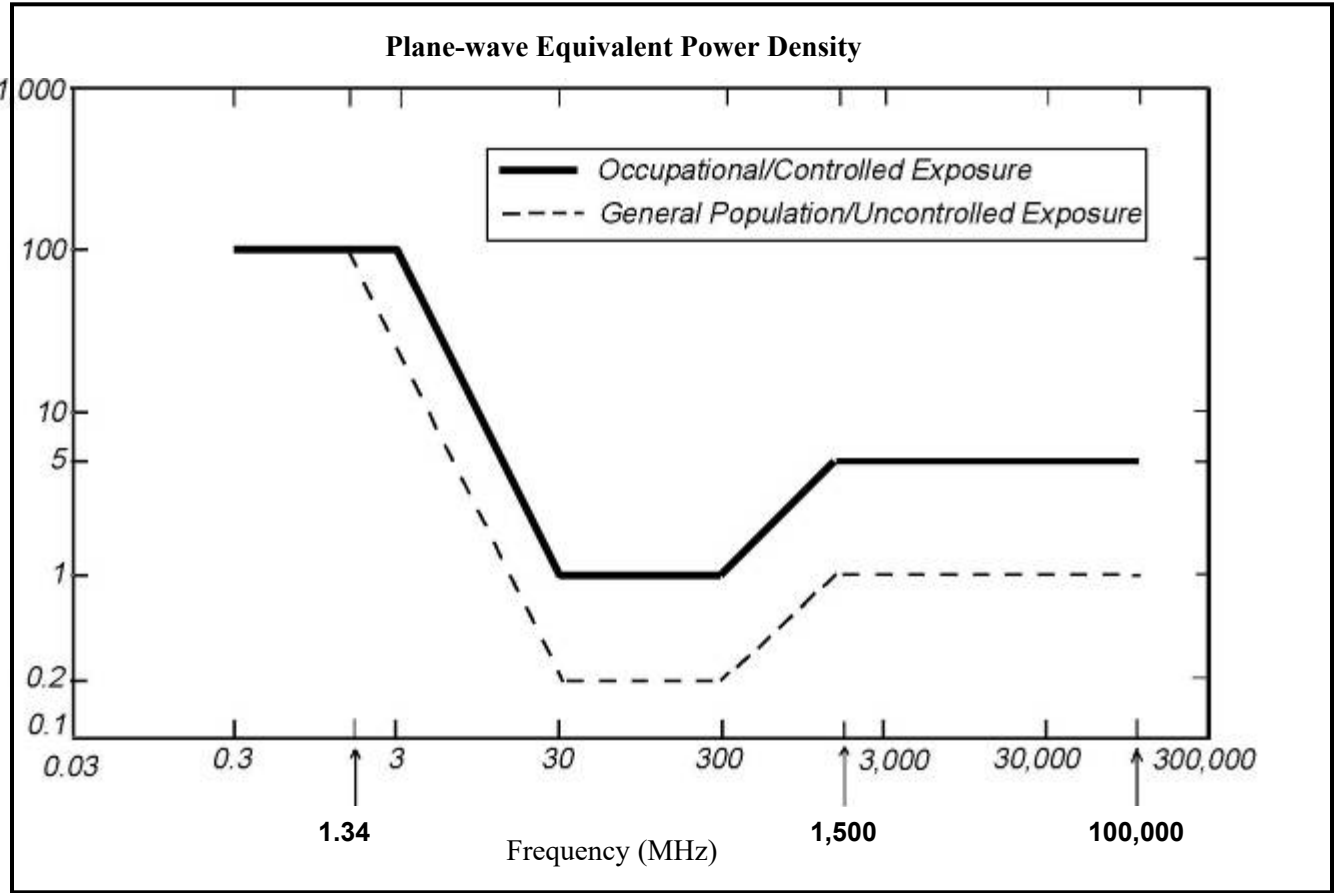
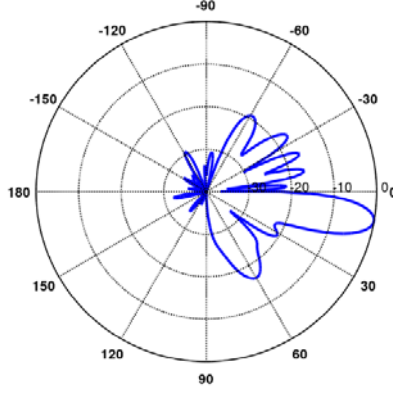
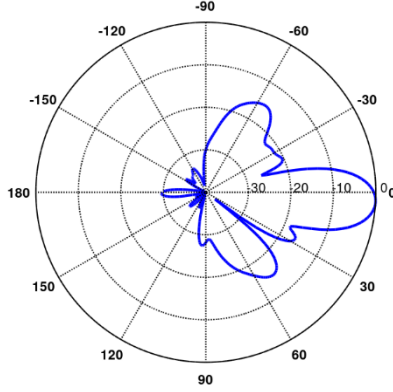
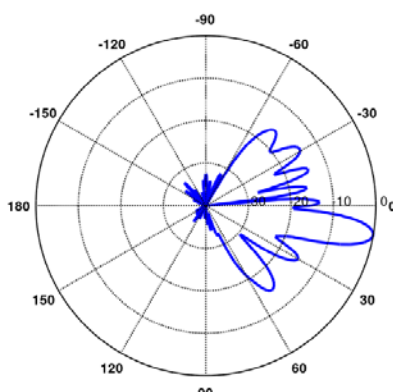
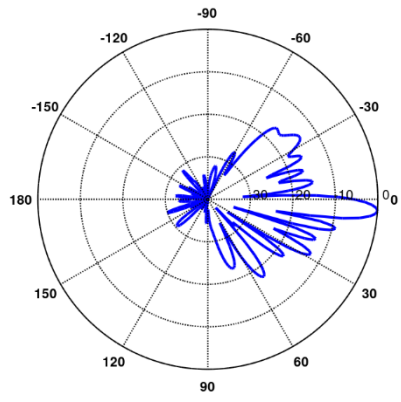
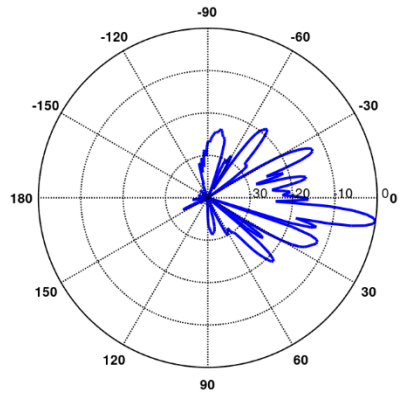
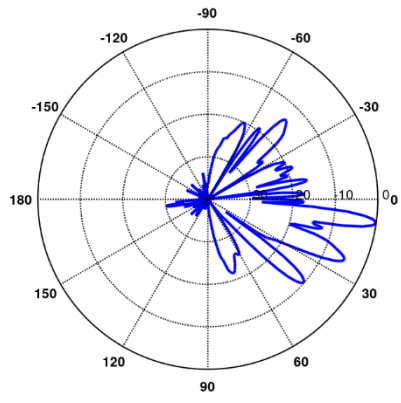


Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: AT&T Mobility Antenna Model Data Sheets and Electrical Patterns

<p>739 MHz</p> <p>Manufacturer: CCI Model #: TPA65R-BU8D Frequency Band: 698-806 MHz Gain: 15.6 dBi Vertical Beamwidth: 9.5° Horizontal Beamwidth: 73° Polarization: Dual Linear 45° Dimensions (L x W x D): 96.0" x 21.0" x 7.8"</p>	
<p>763 MHz</p> <p>Manufacturer: COMMSCOPE Model #: NNHHS4-65A-R5 Frequency Band: 1850-1990 Gain: 17.4 Vertical Beamwidth: 5.8 Horizontal Beamwidth: 60 Polarization: ±45 Dimensions (L x W x D): 59.0" x 19.6" x 7.76"</p>	
<p>885 MHz</p> <p>Manufacturer: CCI Model #: TPA65R-BU8D Frequency Band: 824-896 MHz Gain: 16.4 dBi Vertical Beamwidth: 7.9° Horizontal Beamwidth: 64° Polarization: Dual Linear 45° Dimensions (L x W x D): 96.0" x 21.0" x 7.8"</p>	

<p>1900 MHz</p> <p>Manufacturer: COMMSCOPE Model #: NNHHS4-65A-R5 Frequency Band: 1850-1990 Gain: 17.4 Vertical Beamwidth: 5.8 Horizontal Beamwidth: 60 Polarization: ± 45 Dimensions (L x W x D): 59.0" x 19.6" x 7.76"</p>	
<p>2100 MHz</p> <p>Manufacturer: CCI Model #: TPA65R-BU8D Frequency Band: 1920-2180 MHz Gain: 18.3 dBi Vertical Beamwidth: 4.8° Horizontal Beamwidth: 66° Polarization: Dual Linear 45° Dimensions (L x W x D): 96.0" x 21.0" x 7.8"</p>	
<p>2300 MHz</p> <p>Manufacturer: CCI Model #: TPA65R-BU8D Frequency Band: 2300-2400 MHz Gain: 18.2 dBi Vertical Beamwidth: 4.1° Horizontal Beamwidth: 60° Polarization: Dual Linear 45° Dimensions (L x W x D): 96.0" x 21.0" x 7.8"</p>	

PROJECT INFORMATION

SCOPE OF WORK: ITEMS TO BE MOUNTED ON THE EXISTING FLAGPOLE:

- NEW AT&T ANTENNAS: NNHHS4-65A-R5 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T ANTENNAS: TPA65R-BU8DA-K (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T TMAS: TMA192123B68-31 (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- NEW AT&T K SBT 782-11055 (TYP. OF 4 PER SECTOR, TOTAL OF 12).
- NEW AT&T 40"Ø FRP SHROUDS (TOTAL OF 2)

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:

- NEW AT&T RRUS: 4478 B14 (700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: 8863 N77 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: 4449 B5/B12 (700/850) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: 8843 B2/B66A (AWS) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T DIPLEXERS: DBC0062F3V52-1 (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- NEW AT&T COMPATIBLE TRIPLEXERS (TYP. OF 4 PER SECTOR, TOTAL OF 12).
- NEW AT&T SURGE ARRESTORS: TSXDC-4310FM (TYP. OF 24 PER SECTOR, TOTAL OF 72)
- ADD (1) 6648+ SCEDE CABLE.
- ADD (1) IDLe.
- ADD (1) INDOOR DC12.
- ADD (3) RECTIFIERS

ITEMS TO BE REMOVED:

- EXISTING AT&T ANTENNAS: OPA-65R-LCUU-H8 (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- EXISTING AT&T RRUS: 11 B12 (TYP. OF 1 PER SECTOR, TOTAL OF 3). (GROUND)
- EXISTING AT&T RRUS: 11 B5 (TYP. OF 1 PER SECTOR, TOTAL OF 3). (GROUND)
- EXISTING AT&T RRUS: 12 B12 (TYP. OF 2 PER SECTOR, TOTAL OF 6). (GROUND)
- EXISTING AT&T TMAS: TMABPD7823VG12A (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- EXISTING AT&T DIPLEXERS: DBC2055F1V1-2 (TYP. OF 8 PER SECTOR, TOTAL OF 24).
- EXISTING AT&T SURGE ARRESTORS: APTDC-BDFDM-DBW (TYP. OF 12 PER SECTOR, TOTAL OF 36)
- EXISTING (2) AT&T FRP SHROUDS.

ITEMS TO REMAIN:

- (3) RRU'S, (6) TMA'S, (24) COAX CABLES.

SITE ADDRESS: 284 NEW CANAAN AVENUE
NORWALK, CT 06850

LATITUDE: 41.1361389° N, 41° 8' 10.10" N

LONGITUDE: -73.4564167° W, -73° 27' 23.10" W

TYPE OF SITE: FLAGPOLE / INDOOR EQUIPMENT

STRUCTURE HEIGHT: 140'-0"±

RAD CENTER: 124'-0"±, 134'-0"±

CURRENT USE: TELECOMMUNICATIONS FACILITY

PROPOSED USE: TELECOMMUNICATIONS FACILITY

DRAWING INDEX

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



SITE NUMBER: CTL02200

SITE NAME: NORWALK CT NEW CANAAN AVE

FA CODE: 10113256

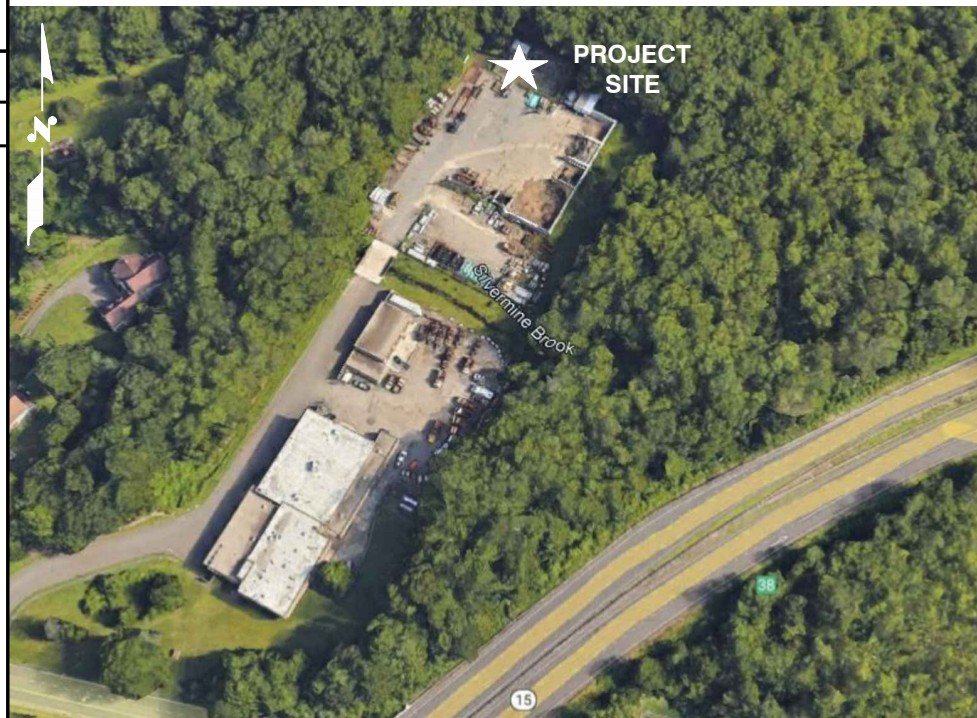
PACE ID: MRCTB056525, MRCTB055515, MRCTB055101, MRCTB055117, MRCTB054293, MRCTB055642

PROJECT: 5G NR RADIO, 5G NR 1SR CBAND, ANTENNA MODIFICATIONS, 4TX4RX SOFTWARE RETROFIT, 5G NR 1DR-1, LTE NEXT CARRIER, LTE 4C, CELL SITE RF MODIFICATIONS, 5G NR SOFTWARE UPGRADE 2022 UPGRADE

VICINITY MAP

DIRECTIONS TO SITE:

INTERSECTION OF MERRITT PKWY (RT. 15) AND RT.123 (NEW CANAAN AVENUE ON NORTH SIDE OF MERRITT. NATIONAL GUARD ARMORY RAW LAND SITE. MAIN GATE 3829, SITE GATE 2500, GENERATOR PADLOCK 2500, DOOR 3534.



GENERAL NOTES

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

72 HOURS



CALL TOLL FREE 1-800-922-4455
OR CALL 811

UNDERGROUND SERVICE ALERT

H2G HUDSON Design Group LLC
45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845
TEL: (978) 557-5553 FAX: (978) 336-5586

SAI
12 INDUSTRIAL WAY SALEM, NH 03079

SITE NUMBER: CTL02200
SITE NAME: NORWALK CT NEW CANAAN AVE

284 NEW CANAAN AVENUE
NORWALK, CT 06850
FAIRFIELD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP
1	08/04/22	ISSUED FOR CONSTRUCTION	HC	DPH	
A	07/25/22	ISSUED FOR REVIEW			

SCALE: AS SHOWN DESIGNED BY: HC DRAWN BY: JS



AT&T
TITLE SHEET
5G NR RADIO, 5G NR 1SR CBAND, ANTENNA MODIFICATIONS, 4TX4RX SOFTWARE RETROFIT, 5G NR 1DR-1, LTE NEXT CARRIER, LTE 4C, CELL SITE RF MODIFICATIONS, 5G NR SOFTWARE UPGRADE
SITE NUMBER: CTL02200 DRAWING NUMBER: T-1 REV: 1

GROUNDING NOTES

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

GENERAL NOTES

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

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

**BUILDING CODE: IBC 2015 WITH 2018 CT STATE BUILDING CODE AMENDMENTS
 ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE (NFPA 70-2017)**

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

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

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

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

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

ABBREVIATIONS

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

HGD HUDSON Design Group LLC
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 12 INDUSTRIAL WAY SALEM, NH 03079

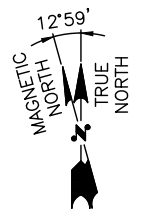
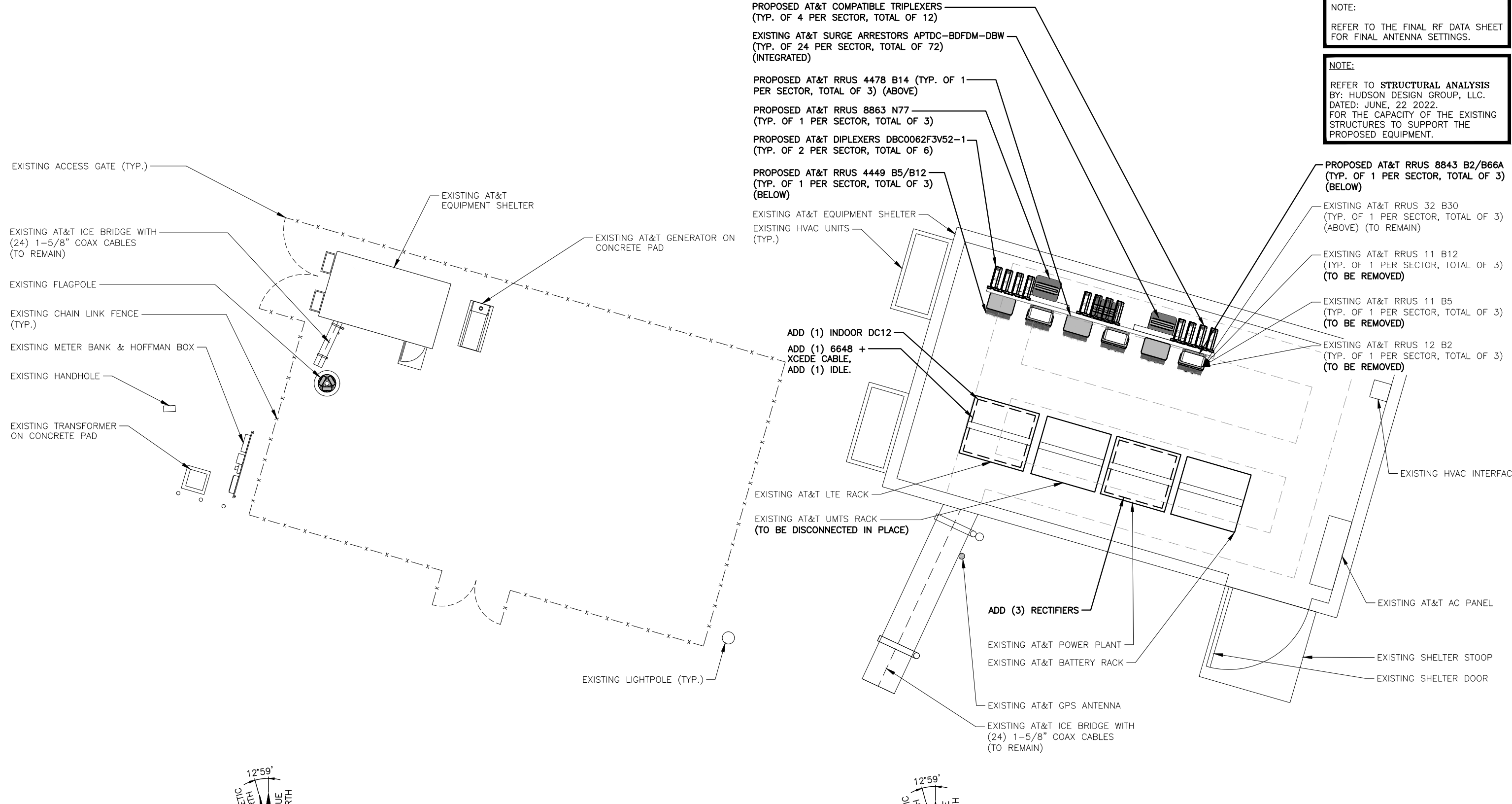
**SITE NUMBER: CTL02200
 SITE NAME: NORWALK CT NEW CANAAN AVE**
 284 NEW CANAAN AVENUE NORWALK, CT 06850 FAIRFIELD COUNTY

at&t
 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067

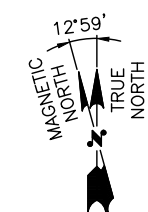
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A 07/25/22 ISSUED FOR REVIEW		BY: SXC		NO. 22178	
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SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: JS		
AT&T			GENERAL NOTES		
SITE NUMBER: CTL02200			DRAWING NUMBER: GN-1		
REV: 1			REV: 1		

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

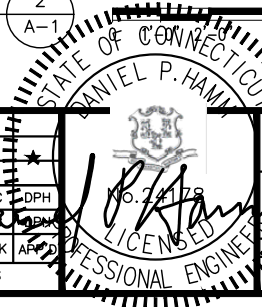
NOTE:
REFER TO **STRUCTURAL ANALYSIS** BY: HUDSON DESIGN GROUP, LLC. DATED: JUNE, 22 2022. FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



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



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



HG HUDSON Design Group LLC
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SAI
12 INDUSTRIAL WAY SALEM, NH 03079

SITE NUMBER: CTL02200
SITE NAME: NORWALK CT NEW CANAAN AVE
284 NEW CANAAN AVENUE NORWALK, CT 06850 FAIRFIELD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067

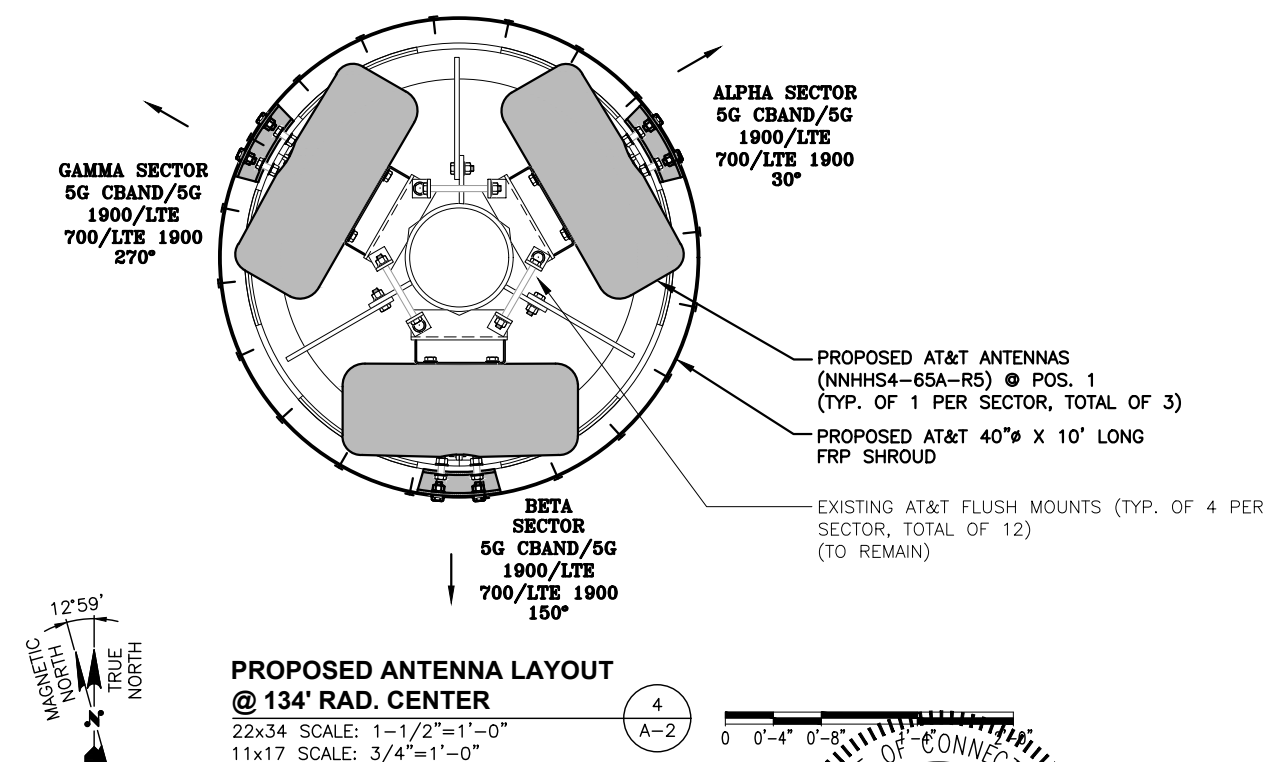
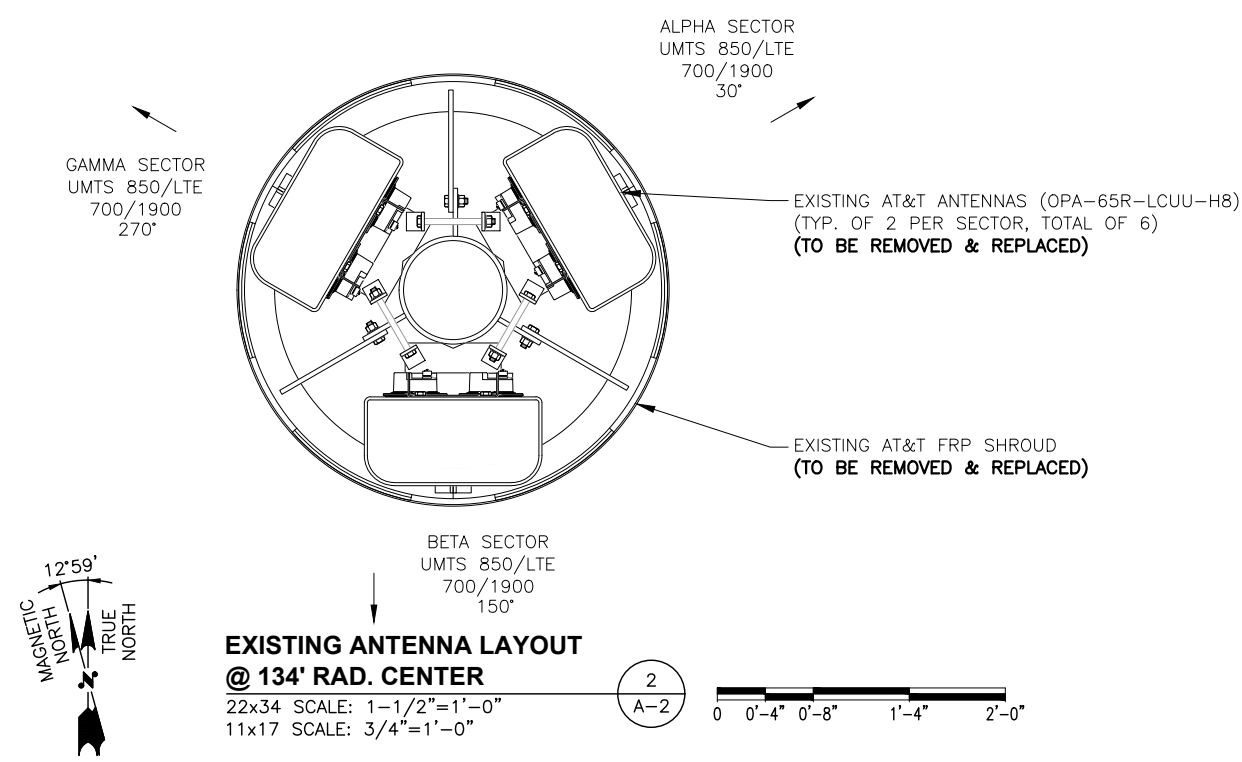
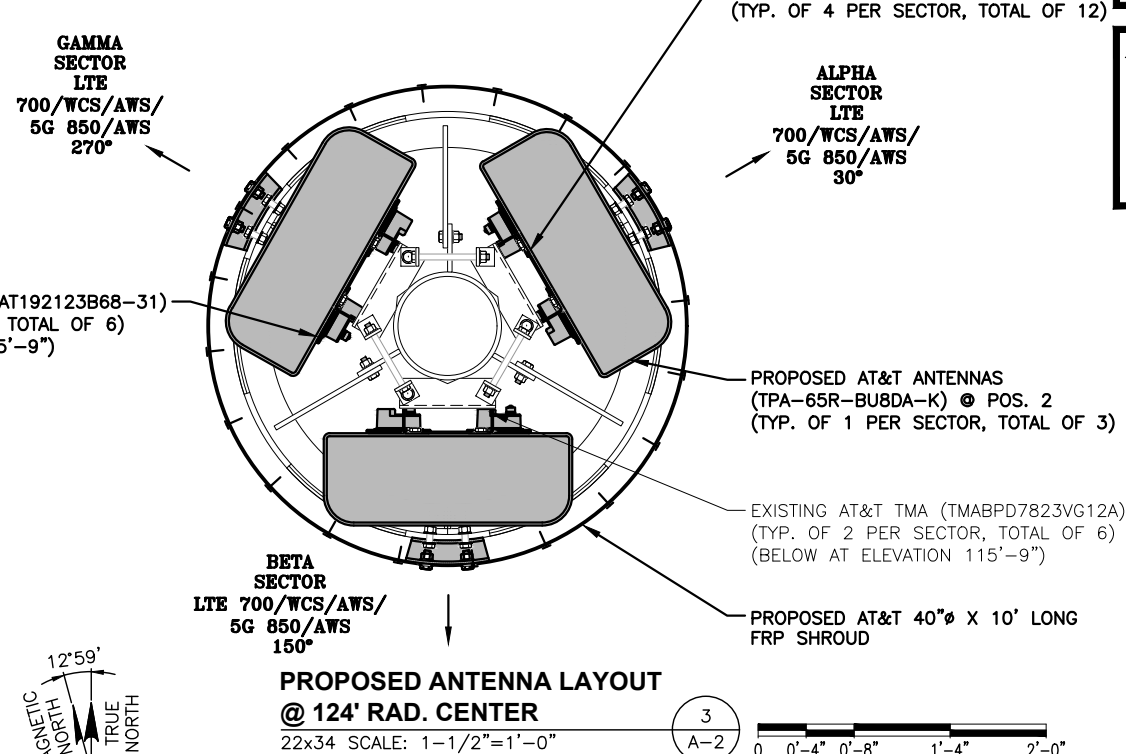
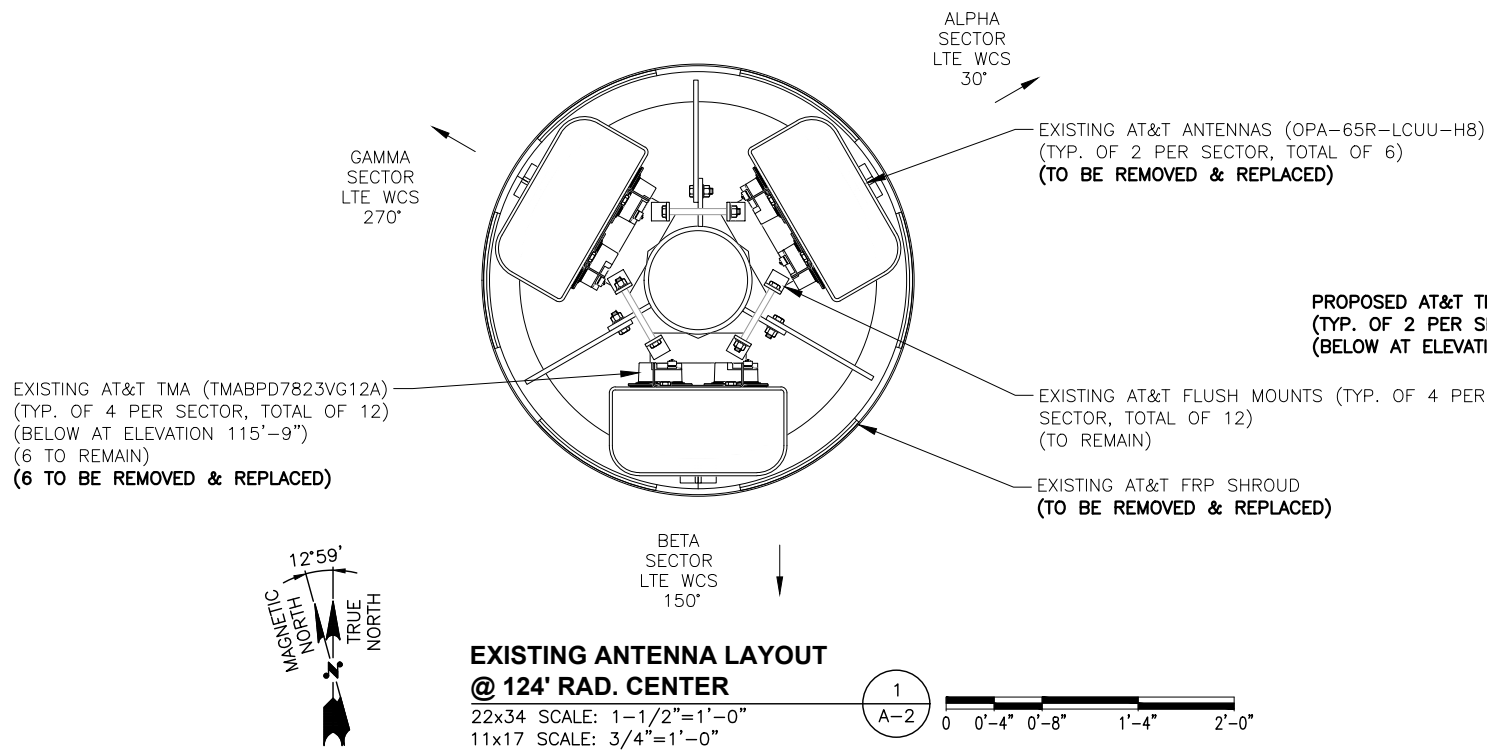
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A	07/25/22	ISSUED FOR REVIEW			

SCALE: AS SHOWN DESIGNED BY: HC DRAWN BY: JS

AT&T	
COMPOUND & EQUIPMENT PLAN	
NO. 22-178	
5G NR SOFTWARE UPGRADE, 4TNRX SOFTWARE RETROFIT, 5G NR 15B-1, LTE NEXT CARRIER, LTE 4C, CELL SITE RF MODIFICATIONS, 5G NR SOFTWARE UPGRADE	
SITE NUMBER	DRAWING NUMBER
CTL02200	A-1
	1

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
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284 NEW CANAAN AVENUE NORWALK, CT 06850 FAIRFIELD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	08/04/22	ISSUED FOR CONSTRUCTION	HC	DPH	
A	07/25/22	ISSUED FOR REVIEW	HC	DPH	

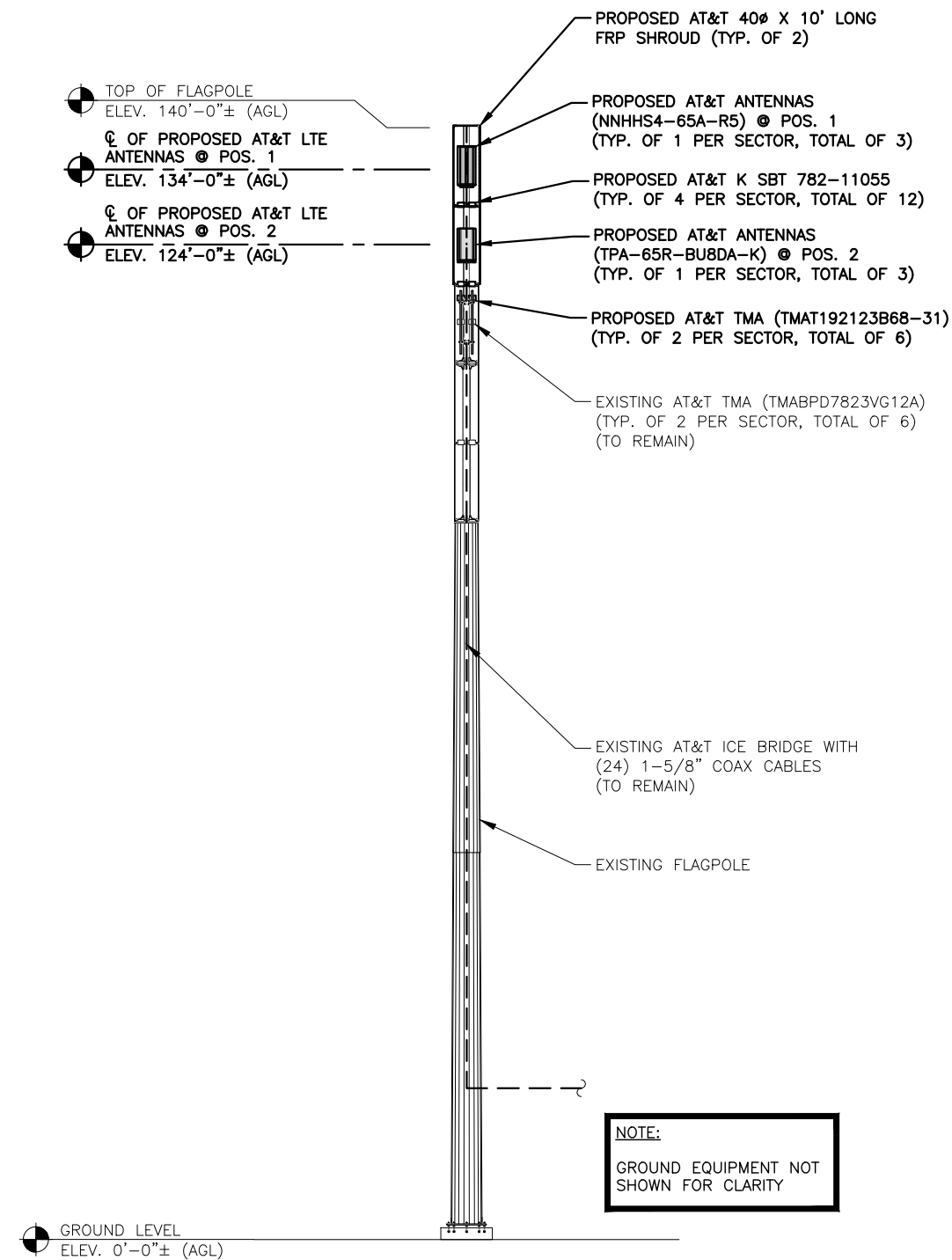
SCALE: AS SHOWN DESIGNED BY: HC DRAWN BY: JS



AT&T
ANTENNA LAYOUTS
5G NR CBAND, 5G NR TSB CBAND, ANTENNA MODIFICATIONS, 4TXRX SOFTWARE RETROFIT, 5G NR 100-1, LTE NEXT CARRIER, LTE 4G, CELL SITE RF MODIFICATIONS, 5G NR SOFTWARE UPGRADE
SITE NUMBER: CTL02200 DRAWING NUMBER: A-2 REV: 1

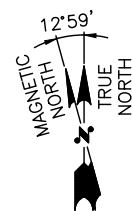
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NOTE:
REFER TO **STRUCTURAL ANALYSIS** BY: HUDSON DESIGN GROUP, LLC. DATED: JUNE, 22 2022. FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



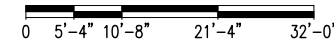
NOTE:
GROUND EQUIPMENT NOT SHOWN FOR CLARITY

GROUND LEVEL
ELEV. 0'-0"± (AGL)



ELEVATION
22x34 SCALE: 3/32"=1'-0"
11x17 SCALE: 3/64"=1'-0"

1
A-3



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NO.	DATE	REVISIONS	BY	CHK	APP
1	08/04/22	ISSUED FOR CONSTRUCTION	HC	DPH	
A	07/25/22	ISSUED FOR REVIEW			

SCALE: AS SHOWN DESIGNED BY: HC DRAWN BY: JS



AT&T
ELEVATION
5G NR BAND, 5G NR TSB CBAND, ANTENNA MODIFICATIONS, 4T4R4X SOFTWARE RETROFIT, 5G NR NR-1, LTE NEXT CARRIER, LTE 4G, CELL SITE RF MODIFICATIONS, 5G NR SOFTWARE UPGRADE
SITE NUMBER: CTL02200 DRAWING NUMBER: A-3 REV: 1

ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA Q HEIGHT	ANTENNA TIP HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	SURGE
A1	PROPOSED	5G CBAND/5G 1900/LTE 700/LTE 1900	NNHS4-65A-R5	59x19.6x7.8	134'-0"±	136'-7.5"±	30°	(E)(2) TMABPD7823VG12A	(P)(1)(G) 4478 B14 (700) (P)(1)(G) 8863 N77	18.1"x13.4"x8.3" 18.9"x14.4"x5.7"	(E)(4) 1-5/8 COAX	(P)(24) TSXDC-4310FM
A2	PROPOSED	LTE 700/WCS/AWS/ 5G 850/AWS	TPA-65R-BU8DA-K	104.3x28.7x16.9	124'-0"±	128'-4.2"±	30°	(P)(2) TMAT192123B68-31 (P)(2) DBC0062F3V52-1	(P)(1)(G) 4449 B5/B12 (850/700) (P)(1)(G) 8843 B2/B66A (AWS) (E)(1)(G) RRUS-32 B30 (WCS)	17.9"x13.2"x10.4" 14.9"x13.2"x10.9"	(E)(4) 1-5/8 COAX	
B1	PROPOSED	5G CBAND/5G 1900/LTE 700/LTE 1900	NNHS4-65A-R5	59x19.6x7.8	134'-0"±	136'-7.5"±	150°	(E)(2) TMABPD7823VG12A	(P)(1)(G) 4478 B14 (700) (P)(1)(G) 8863 N77	18.1"x13.4"x8.3" 18.9"x14.4"x5.7"	(E)(4) 1-5/8 COAX	(P)(24) TSXDC-4310FM
B2	PROPOSED	LTE 700/WCS/AWS/ 5G 850/AWS	TPA-65R-BU8DA-K	104.3x28.7x16.9	124'-0"±	128'-4.2"±	150°	(P)(2) TMAT192123B68-31 (P)(2) DBC0062F3V52-1	(P)(1)(G) 4449 B5/B12 (850/700) (P)(1)(G) 8843 B2/B66A (AWS) (E)(1)(G) RRUS-32 B30 (WCS)	17.9"x13.2"x10.4" 14.9"x13.2"x10.9"	(E)(4) 1-5/8 COAX	
C1	PROPOSED	5G CBAND/5G 1900/LTE 700/LTE 1900	NNHS4-65A-R5	59x19.6x7.8	134'-0"±	136'-7.5"±	270°	(E)(2) TMABPD7823VG12A	(P)(1)(G) 4478 B14 (700) (P)(1)(G) 8863 N77	18.1"x13.4"x8.3" 18.9"x14.4"x5.7"	(E)(4) 1-5/8 COAX	(P)(24) TSXDC-4310FM
C2	PROPOSED	LTE 700/WCS/AWS/ 5G 850/AWS	TPA-65R-BU8DA-K	104.3x28.7x16.9	124'-0"±	128'-4.2"±	270°	(P)(2) TMAT192123B68-31 (P)(2) DBC0062F3V52-1	(P)(1)(G) 4449 B5/B12 (850/700) (P)(1)(G) 8843 B2/B66A (AWS) (E)(1)(G) RRUS-32 B30 (WCS)	17.9"x13.2"x10.4" 14.9"x13.2"x10.9"	(E)(4) 1-5/8 COAX	

NOTE:
REFER TO THE FINAL RF DATA SHEET
FOR FINAL ANTENNA SETTINGS.

NOTE:
REFER TO STRUCTURAL ANALYSIS
BY: HUDSON DESIGN GROUP, LLC.
DATED: JUNE, 22 2022.
FOR THE CAPACITY OF THE EXISTING
STRUCTURES TO SUPPORT THE
PROPOSED EQUIPMENT.

FINAL ANTENNA SCHEDULE 1
SCALE: N.T.S. A-4

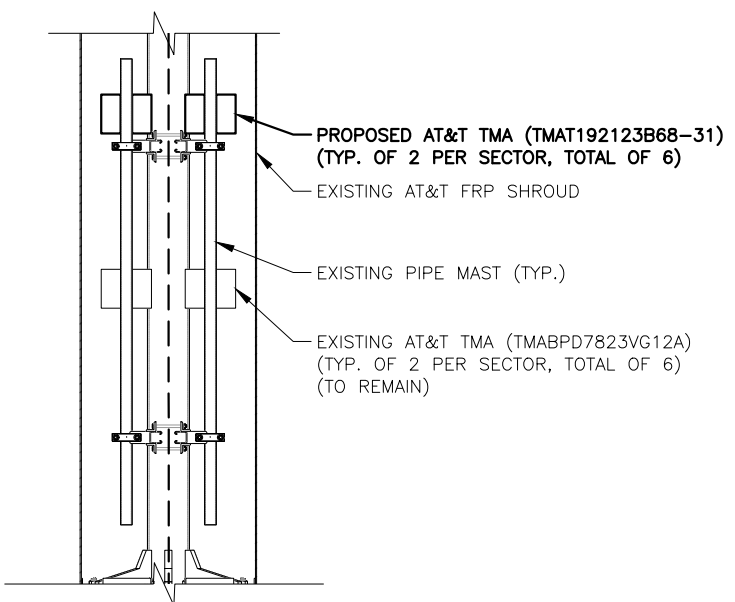
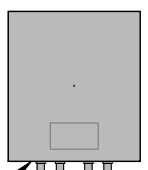
RRU CHART		
QUANTITY	MODEL	SIZE (L x W x D)
P(3)	4449 B5/B12 (700)	17.9"x13.2"x10.4"
P(3)	8843 B2/B66A (AWS)	14.9"x13.2"x10.9"
P(3)	4478 B14 (700)	18.1"x13.4"x8.3"
P(3)	8863 N77	18.9"x14.4"x5.7"
E(3)	RRUS-32 B30 (WCS)	27.2"x12.1"x7.0"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

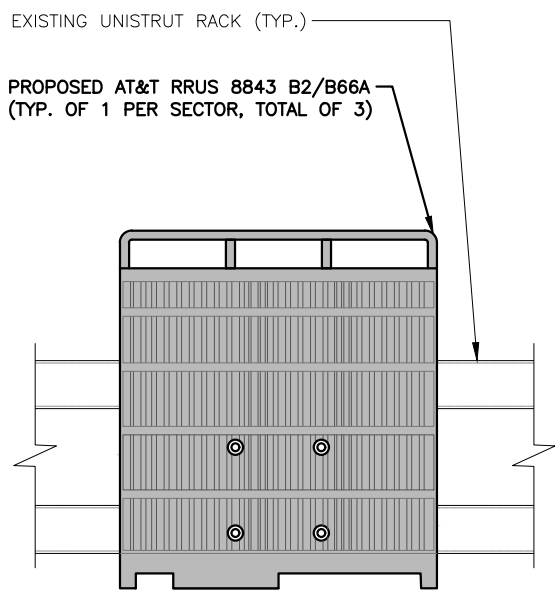
NOTE:
SEE RFDS FOR RRR
FREQUENCY AND
MODEL NUMBER

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

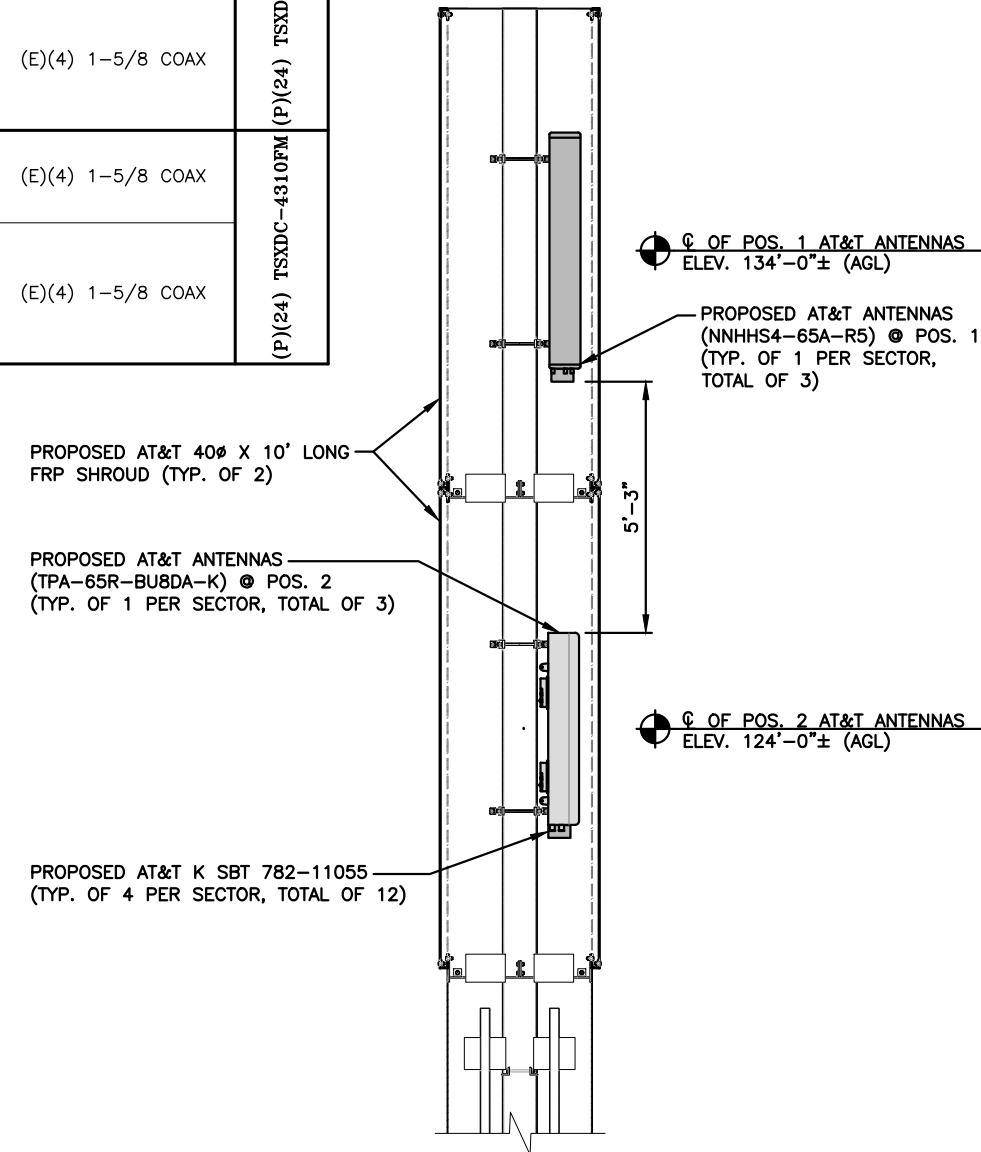
NOTE:
MOUNT PER MANUFACTURER'S
SPECIFICATIONS.



PROPOSED TMA MOUNTING DETAIL 3
22x34 SCALE: 1"=1'-0" A-4
11x17 SCALE: 1/2"=1'-0" 0 0'-6" 1'-0" 2'-0" 3'-0"



PROPOSED RADIO MOUNTING DETAIL 4
22x34 SCALE: 1"=1'-0" A-4
11x17 SCALE: 1/2"=1'-0" 0 0'-6" 1'-0" 2'-0" 3'-0"



PROPOSED ANTENNA MOUNTING DETAIL 5
22x34 SCALE: 1/2"=1'-0" A-4
11x17 SCALE: 1/4"=1'-0" 0 1'-0" 2'-0" 4'-0" 6'-0"

STRUCTURAL NOTES:

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

MASSACHUSETTS AMENDMENTS TO THE IBC (REFERENCE 780 CMR):

107.6 CONSTRUCTION CONTROL.
107.6.1 GENERAL. THIS SECTION SHALL APPLY TO THE CONSTRUCTION CONTROLS, PROFESSIONAL SERVICES AND CONTRACTOR SERVICES REQUIRED FOR BUILDINGS AND STRUCTURES NEEDING REGISTERED DESIGN PROFESSIONAL SERVICES.
107.6.1.1 SPECIALIZED STRUCTURES. TELECOMMUNICATION TOWERS, WIND TURBINE TOWERS, AND SIMILAR STRUCTURES ARE ENGINEERED STRUCTURES AND SHALL BE SUBJECT TO THE REQUIREMENTS OF SECTION 107.6.
107.6.2.2 CONSTRUCTION. THE REGISTERED DESIGN PROFESSIONALS WHO ARE RESPONSIBLE FOR THE DESIGN, PLANS, CALCULATIONS, AND SPECIFICATIONS, THEIR DESIGNEE OR THE REGISTERED DESIGN PROFESSIONALS WHO HAVE BEEN RETAINED FOR CONSTRUCTION PHASE SERVICES, SHALL PERFORM THE FOLLOWING TASKS:

- REVIEW, FOR CONFORMANCE TO 780 CMR AND THE DESIGN CONCEPT, SHOP DRAWINGS, SAMPLES AND OTHER SUBMITTALS BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS.
- PERFORM THE DUTIES FOR REGISTERED DESIGN PROFESSIONALS IN 780 CMR 17.00 SPECIAL INSPECTIONS AND TESTS.
- BE PRESENT AT INTERVALS APPROPRIATE TO THE STAGE OF CONSTRUCTION TO BECOME GENERALLY FAMILIAR WITH THE PROGRESS AND QUALITY OF THE WORK AND TO DETERMINE IF THE WORK IS BEING PERFORMED IN A MANNER CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND 780 CMR.

THE PERMIT APPLICATION SHALL NOT BE DEEMED COMPLETED UNTIL ALL OF THE CONSTRUCTION DOCUMENTS REQUIRED BY 780 CMR HAVE BEEN SUBMITTED. DOCUMENTATION INDICATING THAT WORK COMPLIES WITH THE PLANS AND SPECIFICATIONS SHALL BE PROVIDED AT THE COMPLETION OF EACH PHASE WHEN REQUIRED BY THE BUILDING OFFICIAL. UPON COMPLETION OF THE WORK, THE REGISTERED DESIGN PROFESSIONAL SHALL FILE A FINAL DOCUMENT TO THE BUILDING OFFICIAL INDICATING THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND 780 CMR. FORMS FOR CONSTRUCTION CONTROL WHEN REQUIRED BY THE BUILDING OFFICIAL SHALL BE THOSE FOUND AT <http://www.mass.gov/ocabr/government/oca-agencies/dpl-ip/oppl/>.

107.6.2.3 SPECIAL INSPECTIONS AND TESTS. SPECIAL INSPECTIONS AND TESTS SHALL BE PROVIDED IN ACCORDANCE WITH 780 CMR 17.00 SPECIAL INSPECTIONS AND TESTS.

170.6.2.4 NON STRUCTURAL SYSTEM TEST AND INSPECTION. TESTS AND INSPECTIONS OF NON-STRUCTURAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE ENGINEERING PRACTICE STANDARDS, REFERENCED STANDARDS LISTED IN 780 CMR 35.00: REFERENCED STANDARDS, OR AS OTHERWISE SPECIFIED IN 780 CMR.

107.6.3 CONSTRUCTION CONTRACTOR SERVICES. THE ACTUAL CONSTRUCTION OF THE WORK SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AS IDENTIFIED ON THE APPROVED PERMIT AND SHALL INVOLVE THE FOLLOWING:

- EXECUTION OF ALL WORK IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
- EXECUTION AND CONTROL OF ALL METHODS OF CONSTRUCTION IN A SAFE AND SATISFACTORY MANNER IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL STATUTES AND REGULATIONS.
- UPON COMPLETION OF THE CONSTRUCTION, CERTIFICATION IN WRITING TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE THAT, TO THE BEST OF THE CONTRACTOR'S KNOWLEDGE AND BELIEF, CONSTRUCTION HAS BEEN DONE IN SUBSTANTIAL ACCORD WITH SECTION 107.6 AND WITH ALL PERTINENT DEVIATIONS SPECIFICALLY NOTED. THE BUILDING OFFICIAL MAY REQUIRE A COPY OF THIS CERTIFICATION.

107.6.4 PROJECT REPRESENTATION. A PROJECT REPRESENTATIVE MAY BE REQUIRED BY THE BUILDING OFFICIAL. THIS REPRESENTATIVE SHALL KEEP DAILY RECORDS AND SUBMIT REPORTS AS MAY BE REQUIRED BY THE BUILDING OFFICIAL. THIS PROJECT REPRESENTATION REQUIREMENT SHALL BE DETERMINED PRIOR TO THE ISSUANCE OF THE PERMIT AND MAY BE A PREREQUISITE FOR PERMIT ISSUANCE. REFUSAL BY THE APPLICANT TO PROVIDE SUCH SERVICE IF REQUIRED BY THE BUILDING OFFICIAL SHALL RESULT IN THE DENIAL OF THE PERMIT. ALL FEES AND COSTS RELATED TO THE PERFORMANCE OF PROJECT REPRESENTATION SHALL BE BORNE BY THE OWNER. WHEN APPLICATIONS FOR UNUSUAL DESIGNS OR MAGNITUDE OF CONSTRUCTION ARE FILED, OR WHERE REFERENCE STANDARDS REQUIRE SPECIAL ARCHITECTURAL OR ENGINEERING INSPECTIONS, THE BUILDING OFFICIAL MAY REQUIRE THAT THE PROJECT REPRESENTATIVE BE A REGISTERED DESIGN PROFESSIONAL IN ADDITION TO THOSE REGISTERED DESIGN PROFESSIONALS REQUIRED ELSEWHERE IN ACCORDANCE WITH SECTION 107.6.

107.6.5 BUILDING OFFICIAL RESPONSIBILITY. NOTHING CONTAINED IN SECTION 107.6 SHALL HAVE THE EFFECT OF WAIVING OR LIMITING THE BUILDING OFFICIAL'S AUTHORITY TO ENFORCE 780 CMR WITH RESPECT TO EXAMINATION OF THE CONTRACT DOCUMENTS, INCLUDING PLANS, COMPUTATIONS AND SPECIFICATIONS, AND FIELD INSPECTIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

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

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

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

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

REQUIRED INSPECTIONS AND SITE REVIEW DOCUMENT AS A CONDITION OF THE BUILDING PERMIT THE FOLLOWING INSPECTIONS AND SITE REVIEWS IDENTIFIED BY THE BUILDING OFFICIAL ARE REQUIRED FOR WORK PER THE 9TH EDITION OF THE MASSACHUSETTS STATE BUILDING CODE, 780 CMR, SECTION 110 AND CHAPTER 17

REQUIRED SITE REVIEW AND DOCUMENTATION FOR PORTIONS OR PHASES CONSTRUCTION 1,6,7 (TO BE PERFORMED BY THE APPROPRIATE REGISTERED DESIGN PROFESSIONAL OR HIS/HER DESIGNEE OR M.G.L.C 112 881R CONTRACTOR)

SITE REVIEW AND DOCUMENTATION	X	SITE REVIEW AND DOCUMENTATION	X
SOIL CONDITION/ANALYSIS/REPORT		ENERGY EFFICIENCY REQUIREMENTS	
FOOTING AND FOUNDATION (INCLUDING REINFORCEMENT AND FOUNDATION ATTACHMENT)		FIRE ALARM INSTALLATION ²	
CONCRETE FLOOR AND UNDER FLOOR		FIRE SUPPRESSION INSTALLATION ³	
LOWEST FLOOR FLOOD ELEVATION		FIELD REPORTS ⁵	
STRUCTURAL FRAME - WALL/FLOOR/ROOF	X	CARBON MONOXIDE DETECTION SYSTEM ⁴	
LATH AND PLASTER/GYPSUM		SEISMIC REINFORCEMENT	
FIRE RESISTANT WALL/PARTITIONS FRAMING		SMOKE CONTROL SYSTEMS	
FIRE RESISTANT WALL/PARTITIONS FINISH ATTACHMENTS		SMOKE AND HEAT VENTS	
ABOVE CEILING INSPECTION		ACCESSIBILITY (521 CMR)	
FIRE BLOCKING/STOPPING SYSTEM		OTHER:	
EMERGENCY LIGHTING/EXIT SIGNAGE		SPECIAL INSPECTIONS (SECTION 1704):	X
MEANS OF EGRESS COMPONENTS			
ROOFING, COPING/SYSTEM			
VENTING SYSTEMS (KITCHEN, CHEMICAL, FUME)			
MECHANICAL SYSTEMS			

NOTES:

- ALL CONNECTIONS TO BE SHOP WELDED & FIELD BOLTED USING 3/4"Ø A325-X BOLTS, UNLESS OTHERWISE NOTIFIED.
- SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED BEFORE ORDERING MATERIAL.
- SHOP DRAWING ENGINEER REVIEW & APPROVAL REQUIRED PRIOR TO STEEL FABRICATION.
- VERIFICATION OF EXISTING ROOF CONSTRUCTION IS REQUIRED PRIOR TO THE INSTALLATION OF THE ROOF PLATFORM. ENGINEER OF RECORD IS TO APPROVE EXISTING CONDITIONS IN ORDER TO MOVE FORWARD.
- CENTERLINE OF PROPOSED STEEL PLATFORM SUPPORT COLUMNS TO BE CENTRALLY LOCATED OVER THE EXISTING BUILDING COLUMNS.
- EXISTING BRICK MASONRY COLUMNS/BEARING TO BE REPAIRED/REPLACED AT ALL PROPOSED PLATFORM SUPPORT POINTS. ENGINEER OF RECORD TO REVIEW AND APPROVE.

NOTES:

- REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
- PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
- PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
- HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
- ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
- AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

SPECIAL INSPECTION CHECKLIST

BEFORE CONSTRUCTION

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	ENGINEER OF RECORD APPROVED SHOP DRAWINGS ¹
REQUIRED	MATERIAL SPECIFICATIONS REPORT ²
N/A	FABRICATOR NDE INSPECTION
REQUIRED	PACKING SLIPS ³

ADDITIONAL TESTING AND INSPECTIONS:

DURING CONSTRUCTION

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS ⁴
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION ⁵
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT

ADDITIONAL TESTING AND INSPECTIONS:

AFTER CONSTRUCTION

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS ⁶
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS

- IT IS THE RESPONSIBILITY OF THE PERMIT APPLICANT TO NOTIFY THE BUILDING OFFICIAL OF REQUIRED INSPECTIONS (X). INSPECTION OF 780 CMR FIRE PROTECTION SYSTEMS MAY BE WITNESSED BY THE FIRE OFFICIAL AND INSTALLATION PERMITS ARE REQUIRED FROM THE FIRE DEPARTMENT PER 527 CMR.
- INCLUDE NFPA 72 TEST AND ACCEPTANCE DOCUMENTATION
- INCLUDE APPLICABLE NFPA 13, 13R, 13D, 14, 15, 17, 20, 241, ETC. - TEST AND ACCEPTANCE DOCUMENTATION
- INCLUDE NFPA 720 RECORD OF COMPLETION AND INSPECTION AND TEST FORM
- INCLUDE FIELD REPORTS AND RELATED DOCUMENTATION
- WORK SHALL NOT PROCEED, OR BE CONCEALED, UNTIL THE REQUIRED INSPECTION HAS BEEN APPROVED BY THE BUILDING OFFICIAL, AND NOTHING WITHIN CONSTRUCTION CONTROL SHALL HAVE THE EFFECT OF WAIVING OR LIMITING THE BUILDING OFFICIAL'S AUTHORITY TO ENFORCE THIS CODE WITH RESPECT TO EXAMINATION OF THE CONTRACT DOCUMENTS, INCLUDING PLANS, COMPUTATIONS AND SPECIFICATIONS, AND FIELD INSPECTIONS.
- ROUGH AND/OR FINISH INSPECTIONS OF ELECTRICAL, PLUMBING, OR SHEET METAL SHALL BE INSPECTED PRIOR TO ROUGH AND FINISH INSPECTIONS BY THE BUILDING OFFICIAL.

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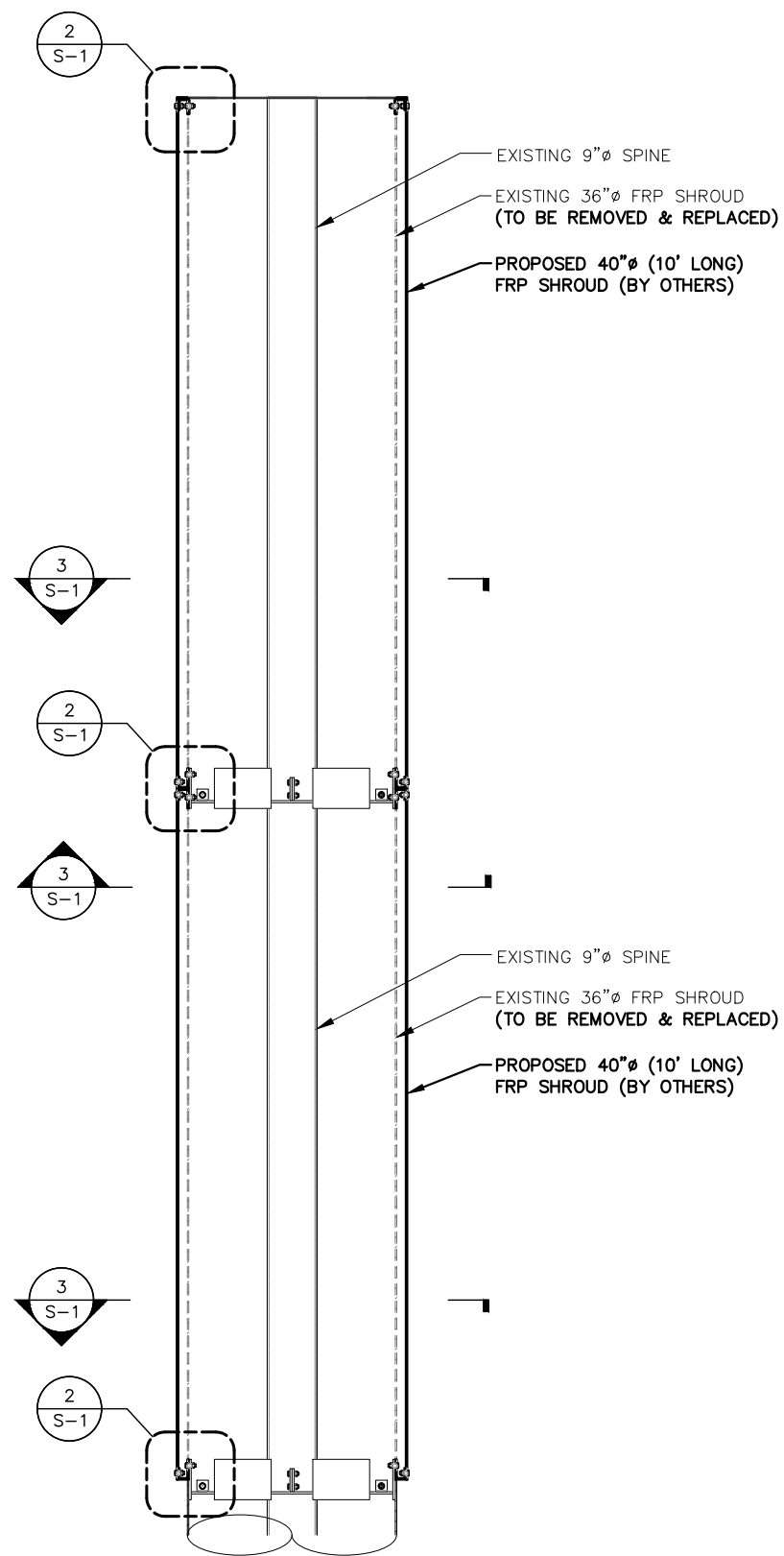
SITE NUMBER: CTL02200
SITE NAME: NORWALK CT NEW CANAAN AVE
 284 NEW CANAAN AVENUE NORWALK, CT 06850 FAIRFIELD COUNTY

at&t
 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067

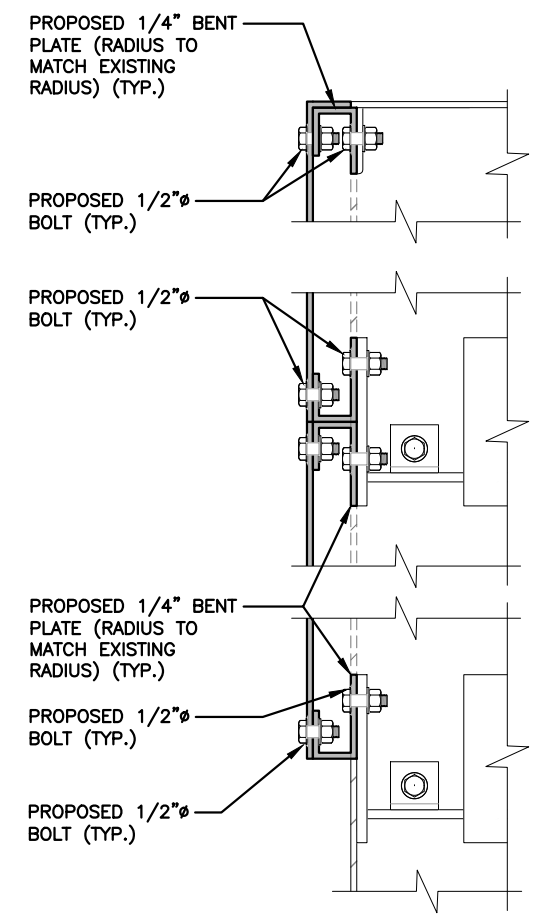
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A	07/25/22	ISSUED FOR REVIEW	HC	DPH
NO.	DATE	REVISIONS	BY	CHK
SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: JS	



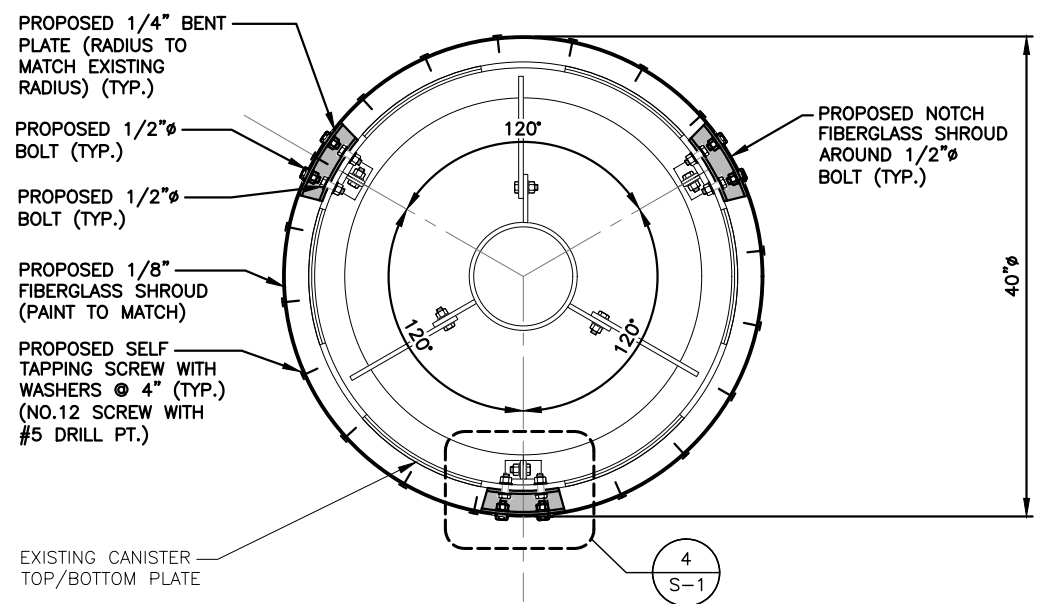
AT&T
STRUCTURAL NOTES
 56 NR 15R CBAND, ANTENNA MODIFICATIONS, 4TKR4X SOFTWARE RETROFIT, 56 NR 15R-1, LTE NEXT CARRIER, LTE 4G, CELL SITE RF MODIFICATIONS, 56 NR SOFTWARE UPGRADE
 SITE NUMBER: CTL02200 DRAWING NUMBER: SN-1 REV: 1



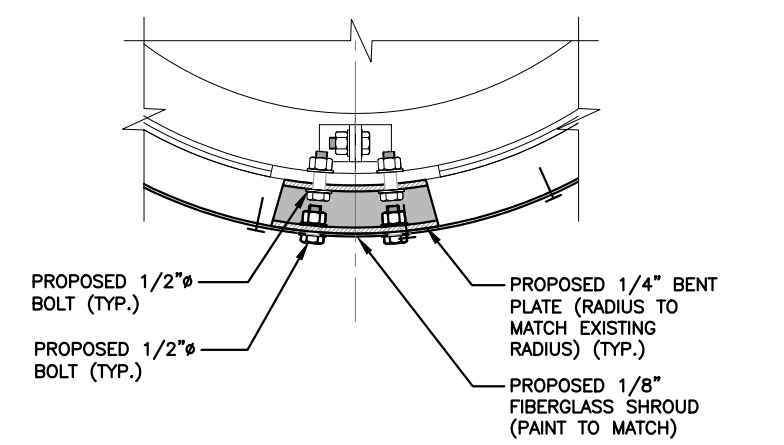
PROPOSED FRP SHROUD MOUNTING DETAIL
 22x34 SCALE: 3/4"=1'-0"
 11x17 SCALE: 3/8"=1'-0"



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



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



CONNECTION DETAIL
 22x34 SCALE: 3/4"=1'-0"
 11x17 SCALE: 3/8"=1'-0"

NOTE:
 REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
 REFER TO **STRUCTURAL ANALYSIS** BY: HUDSON DESIGN GROUP, LLC. DATED: JUNE, 22 2022. FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

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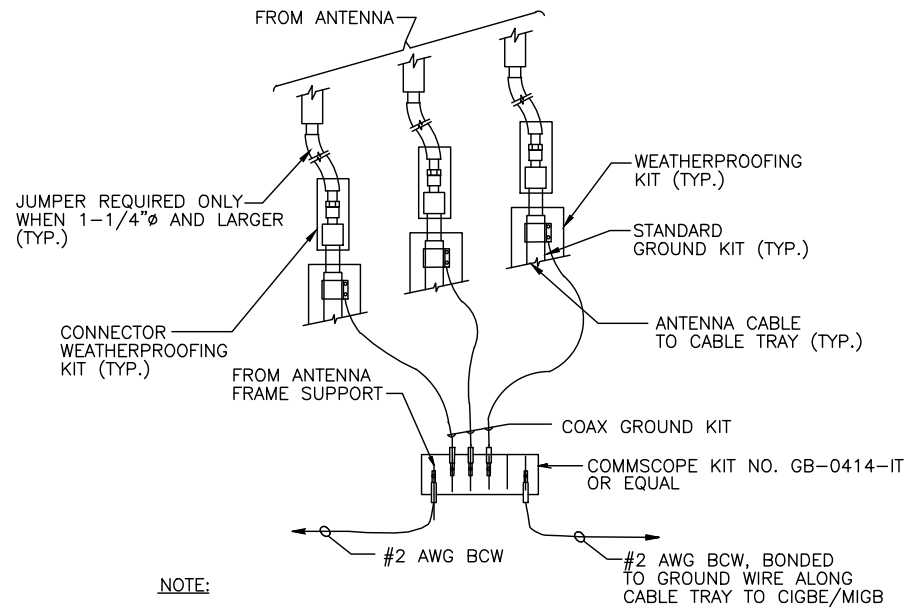
SITE NUMBER: CTL02200
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 284 NEW CANAAN AVENUE
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 FAIRFIELD COUNTY

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 500 ENTERPRISE DRIVE, SUITE 3A
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SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: JS	

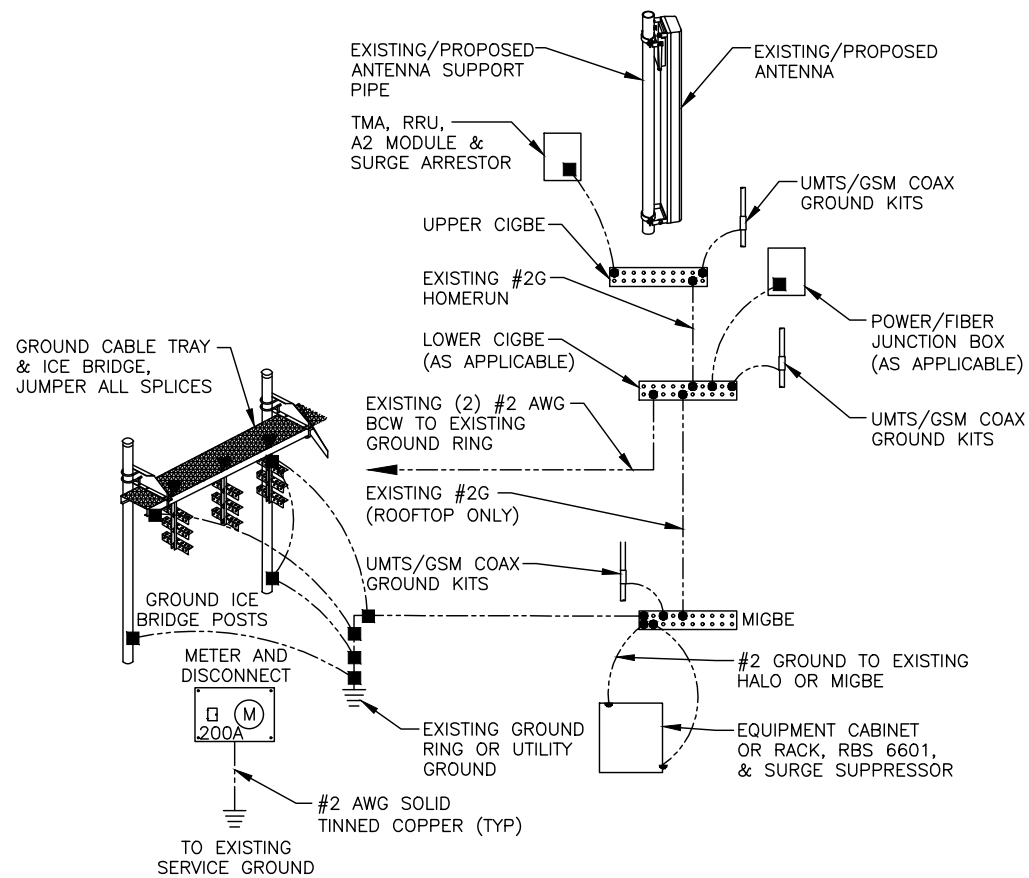


AT&T
MOUNT MODIFICATION DESIGN
 5G NR SOFTWARE UPGRADE, 4TNRX SOFTWARE RETROFIT, 5G NR 100-1, LTE NEXT CARRIER, LTE 4G, CELL SITE RF MODIFICATIONS, 5G NR SOFTWARE UPGRADE
 SITE NUMBER: CTL02200
 DRAWING NUMBER: S-1
 REV: 1

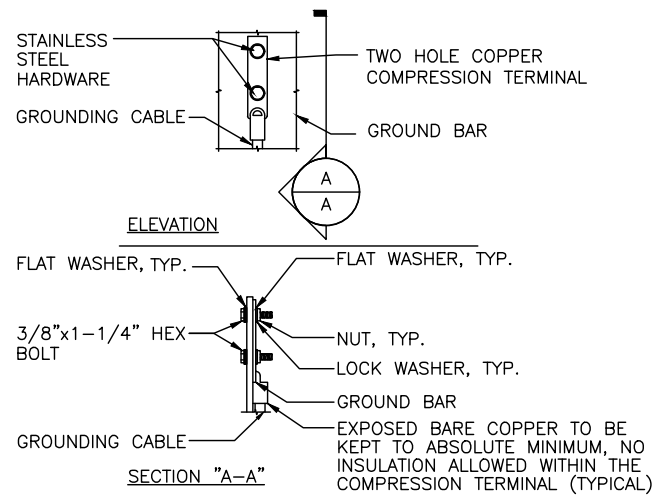


NOTE:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

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



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



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

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

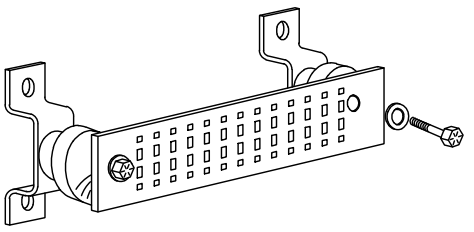
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

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

SECTION "A" - SURGE ABSORBERS

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



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

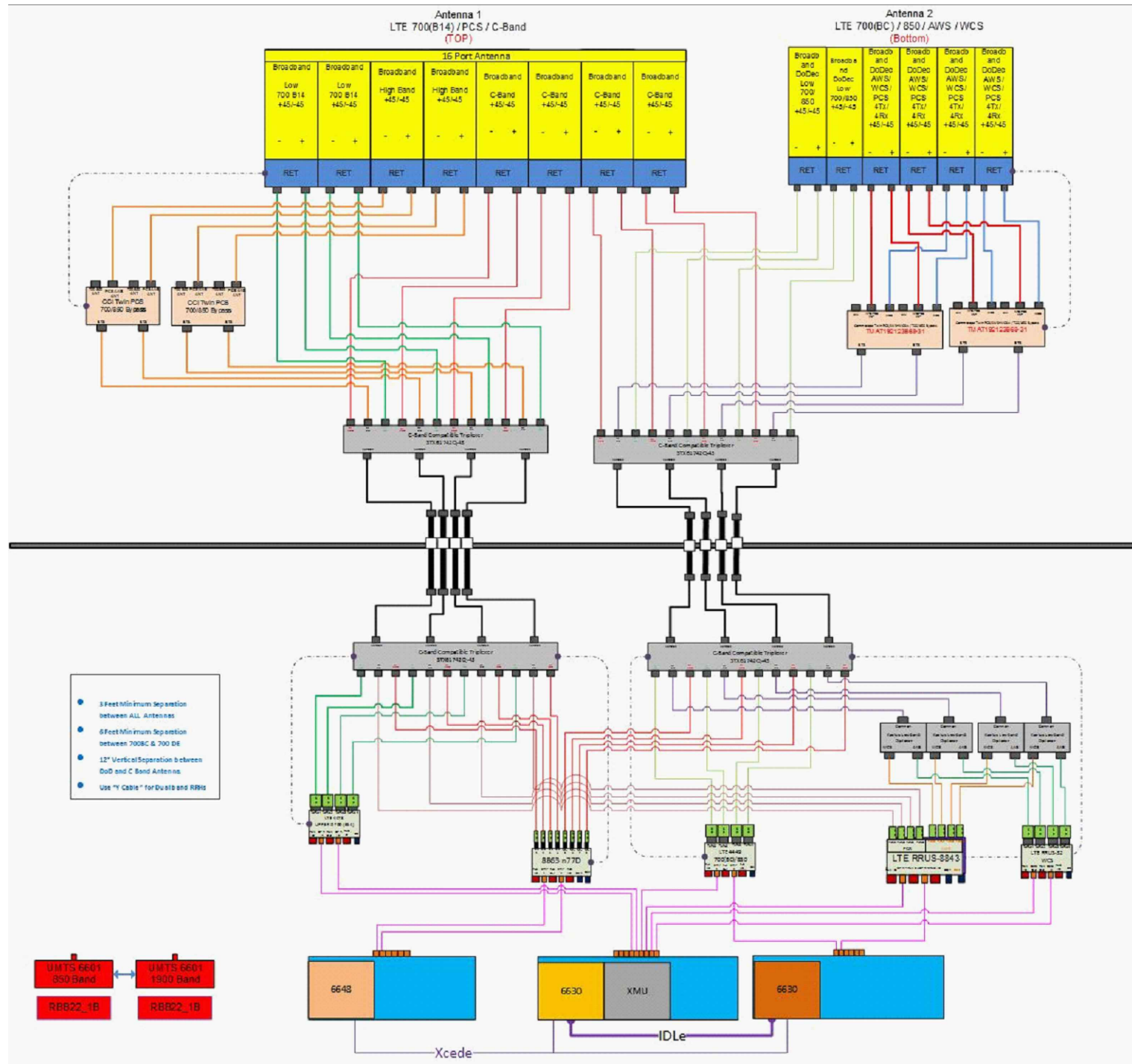
NO.	DATE	REVISIONS	BY	CHK	APP
1	08/04/22	ISSUED FOR CONSTRUCTION	HC	DPH	
A	07/25/22	ISSUED FOR REVIEW	JS	DPH	

SCALE: AS SHOWN DESIGNED BY: HC DRAWN BY: JS



AT&T	
GROUNDING DETAILS	
<small>5G NR SOFTWARE UPGRADE, 4T4R4X SOFTWARE RETROFIT, 5G NR 100-1, LTE NEXT GENERATION, LTE 4G, CELL SITE RF MODIFICATIONS, 5G NR SOFTWARE UPGRADE</small>	
SITE NUMBER	DRAWING NUMBER
CTL02200	G-1
	1

NOTE:
 REV: 4
 DATED: 08/22/2022
 RFDS ID: 4860594



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

NOTE:
 1. CONTRACTOR TO CONFIRM ALL PARTS.
 2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS.
 3. RFDS USED FOR REFERENCE.

NOTE:
 REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

1	08/04/22	ISSUED FOR CONSTRUCTION	YH	HC	DPH
A	07/25/22	ISSUED FOR REVIEW	JS/GA	HC	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: HC	DRAWN BY: JS		

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RF PLUMBING DIAGRAM
 5G NR RADIO, 5G NR 1SR CBAND, ANTENNA MODIFICATIONS, 4T4R4X SOFTWARE RETROFIT, 5G NR 1DR-1, LTE NEXT CARRIER, LTE 4C, CELL SITE RF MODIFICATIONS, 5G NR SOFTWARE UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CTL02200	RF-1	1

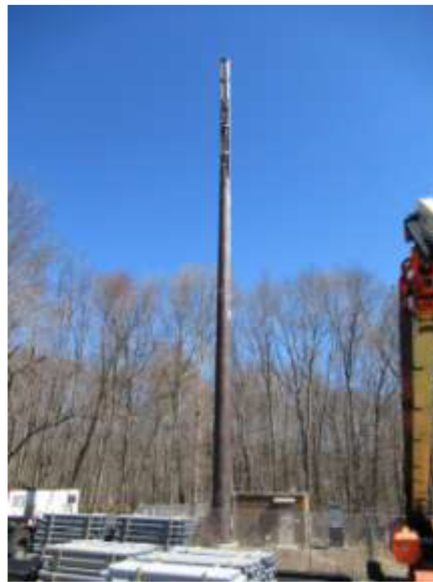
STRUCTURAL ANALYSIS REPORT

For

SITE NUMBER: CT2200
SITE NAME: NORWALK CT NEW CANAAN AVE
FA CODE: 10113256

284 NEW CANAAN AVENUE
NORWALK, CT 06850

**Antennas Enclosed within Fiberglass Shroud Secured to the
Existing Monopole**



Prepared for:



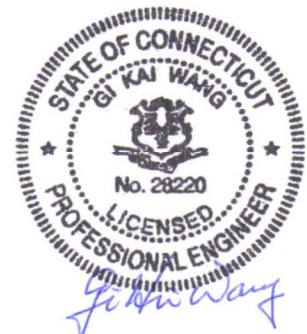
Dated: June 22, 2022

Prepared by:



HUDSON
Design Group LLC

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





HUDSON
Design Group LLC

SCOPE OF WORK:

Hudson Design Group LLC (HDG) has been authorized by AT&T to conduct a structural evaluation of the 140' monopole supporting the existing and proposed AT&T's antennas located at elevation 124' & 134' above the ground level.

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

Record drawings of the existing monopole were not available for our use. Foundation drawings prepared by Nello Corporation, dated July 22, 2014, were available and obtained for our use.

Tower mapping report prepared by ProVertic LLC, dated May 5, 2022, was provided to this office.

CONCLUSION SUMMARY:

Based on our evaluation, we have determined that the existing monopole and foundation are in conformance with the ANSI/TIA-222-H Standard for the loading considered under the criteria listed in this report. The monopole structure is rated at **87.5%** - (Pole Section L3 from El.91.2' to El.110.7' Controlling).



APPURTENANCES CONFIGURATION:

Tenant	Appurtenances	Elev.	Mount
AT&T	40" diameter X 10' FRP Shroud	135.7'	Pipe
AT&T	40" diameter X 10' FRP Shroud	125.7'	Pipe
AT&T	36" diameter X 10' FRP Shroud	115.7'	Pipe
	36" diameter X 10' FRP Shroud	105.7'	Pipe
	36" diameter X 10' FRP Shroud	95.7'	Pipe

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

AT&T EXISTING/PROPOSED COAX CABLES:

Tenant	Coax Cables	Elev.	Mount
AT&T	(10) 1 5/8" Cables	134'	Inside Monopole
AT&T	(5) 1 5/8" Cables	124'	Inside Monopole
AT&T	(1) DC Power Cable	134'	Inside Monopole
AT&T	(1) Fiber Cable	134'	Inside Monopole
AT&T	(5) 1 5/8" Cables	134'	Inside Monopole
AT&T	(10) 1 5/8" Cables	124'	Inside Monopole

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

ANALYSIS RESULTS SUMMARY:

Component	Max. Stress Ratio	Elev. of Component (ft)	Pass/Fail	Comments
Pole Section-L1	81.1 %	111.2 – 140.7	PASS	
Pole Section-L2	81.0 %	110.7 – 111.2	PASS	
Pole Section-L3	87.5 %	91.2 – 110.7	PASS	Controlling
Pole Section-L4	87.5 %	90.7 – 91.2	PASS	
Pole Section-L5	17.1 %	48.8 – 90.7	PASS	
Pole Section-L6	40.8 %	2 – 48.8	PASS	
Base Plate & Anchor Bolts	70.3 %	2	PASS	

FOUNDATION COMPARISON SUMMARY:

	Original Design Reactions X 1.35	Proposed Reactions	Pass/Fail	Comments
AXIAL	35.6 k	32.0 k	PASS	
SHEAR	24.3 k	10.7 k	PASS	
MOMENT	1808 ft-k	794 ft-k	PASS	



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DESIGN CRITERIA:

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

City/Town: Norwalk
County: Fairfield
Basic Wind Speed: 120 mph
Risk Category: II
Exposure Category: B
Topographic Category: 1
Ice Thickness: 1.0 inch

ASSUMPTIONS:

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

SUPPORT RECOMMENDATIONS:

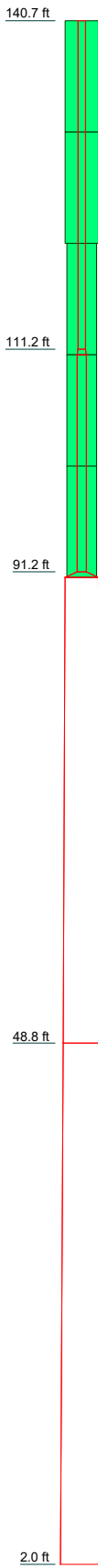
HDG recommends that the proposed antennas and TMAs be mounted on the inside of the FRP shrouds supported by the monopole.



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TNX INPUT/OUTPUT

Section	6	5	4	3	2	1
Length (ft)	46.83	41.84	0.50	19.50	0.50	29.50
Number of Sides	18	18	1	1	1	1
Thickness (in)	0.2500	0.3125	0.5000	0.5000	0.3220	0.3220
Top Dia (in)	40.8020	36.0000	10.7500	10.7500	8.6250	8.6250
Bot Dia (in)	46.6300	40.8020	36.0000	10.7500	10.7500	8.6250
Grade	A572-65	A53-B-35				
Weight (lb)	12863.6	5496.1	611.1	1088.4	16.1	843.1



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
40"x10' Shroud (CT 2200) (ATI)	135.7	36"x10' Shroud (CT 2200)	105.7
40"x10' Shroud (CT 2200)	125.7	36"x10' Shroud (CT 2200)	95.7
36"x10' Shroud (CT 2200)	115.7		

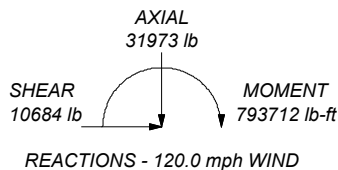
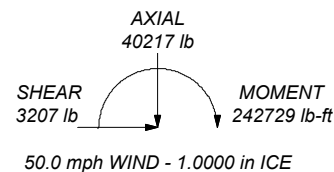
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-35	35 ksi	63 ksi	A572-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-H Standard.
3. Tower designed for a 120.0 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50.0 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60.0 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 87.5%

ALL REACTIONS
ARE FACTORED



Hudson Design Group LLC		Job: CT2200	
45 Beechwood Drive		Project: 140 ft Monopole	
North Andover, MA 01845		Client: AT&T	Drawn by: kw
Phone: (P) 978.557.5553		Code: TIA-222-H	Date: 06/22/22
FAX: (F) 978.336.5586		Path:	Scale: NTS
		C:\CT2200\CT2200.en	Dwg No. E-1

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586	Job	CT2200	Page	1 of 9
	Project	140 ft Monopole	Date	10:46:45 06/22/22
	Client	AT&T	Designed by	kw

Tower Input Data

The tower is a monopole.

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

The following design criteria apply:

Tower is located in Fairfield County, Connecticut.

Tower base elevation above sea level: 198.00 ft.

Basic wind speed of 120.0 mph.

Risk Category II.

Exposure Category B.

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

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.0000 in.

Ice thickness is considered to increase with height.

Ice density of 56.0 pcf.

A wind speed of 50.0 mph is used in combination with ice.

Temperature drop of 50.0 °F.

Deflections calculated using a wind speed of 60.0 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

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

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	140.67-111.17	29.50	0.00	Round	8.6250	8.6250	0.3220		A53-B-35 (35 ksi)
L2	111.17-110.67	0.50	0.00	Round	8.6250	10.7500	0.3220		A53-B-35 (35 ksi)
L3	110.67-91.17	19.50	0.00	Round	10.7500	10.7500	0.5000		A53-B-35 (35 ksi)
L4	91.17-90.67	0.50	0.00	Round	10.7500	36.0000	0.5000		A53-B-35 (35 ksi)
L5	90.67-48.83	41.84	0.00	18	36.0000	40.8020	0.3125	1.2500	A572-65 (65 ksi)
L6	48.83-2.00	46.83		18	40.8020	46.6300	0.2500	1.0000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	I/Q in ²	w in	w/t
L1	8.6250	8.3993	72.4892	2.9378	4.3125	16.8091	144.9785	4.1971	0.0000	0
	8.6250	8.3993	72.4892	2.9378	4.3125	16.8091	144.9785	4.1971	0.0000	0
L2	8.6250	8.3993	72.4892	2.9378	4.3125	16.8091	144.9785	4.1971	0.0000	0

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586	Job	CT2200	Page	2 of 9
	Project	140 ft Monopole	Date	10:46:45 06/22/22
	Client	AT&T	Designed by	kw

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	I/Q in ²	w in	w/t
L3	10.7500	10.5489	143.5267	3.6886	5.3750	26.7026	287.0534	5.2713	0.0000	0
	10.7500	16.1007	211.9501	3.6282	5.3750	39.4326	423.9003	8.0455	0.0000	0
	10.7500	16.1007	211.9501	3.6282	5.3750	39.4326	423.9003	8.0455	0.0000	0
L4	10.7500	16.1007	211.9501	3.6282	5.3750	39.4326	423.9003	8.0455	0.0000	0
	36.0000	55.7633	8786.2002	12.5524	18.0000	488.1222	17572.4003	27.8650	0.0000	0
L5	36.5071	35.3975	5695.6431	12.6691	18.2880	311.4416	11398.7808	17.7021	5.7860	18.515
	41.3832	40.1605	8318.0521	14.3738	20.7274	401.3068	16647.0493	20.0841	6.6312	21.22
L6	41.3929	32.1780	6685.3049	14.3960	20.7274	322.5344	13379.4064	16.0921	6.7412	26.965
	47.3108	36.8025	10001.7643	16.4649	23.6880	422.2284	20016.6891	18.4048	7.7669	31.068

Monopole Base Plate Data

Base Plate Data

Base plate is square	
Base plate is grouted	
Anchor bolt grade	A615-75
Anchor bolt size	2.2500 in
Number of bolts	8
Embedment length	60.0000 in
f _c	4.0 ksi
Grout space	4.0000 in
Base plate grade	A36
Base plate thickness	1.7500 in
Bolt circle diameter	53.5000 in
Outer diameter	60.0000 in
Inner diameter	24.0000 in
Base plate type	Plain Plate

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C _{AA} ft ² /ft	Weight plf
1 5/8 (AT&T)	B	No	Yes	Inside Pole	134.00 - 8.00	10	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04
1 5/8	B	No	Yes	Inside Pole	124.00 - 8.00	5	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04
DC Power Cable	B	No	Yes	Inside Pole	134.00 - 8.00	1	No Ice	0.00	0.58
							1/2" Ice	0.00	0.58
							1" Ice	0.00	0.58
FB-L98B-002	B	No	Yes	Inside Pole	134.00 - 8.00	1	No Ice	0.00	0.25
							1/2" Ice	0.00	0.25
							1" Ice	0.00	0.25

1 5/8 (AT&T)	B	No	Yes	Inside Pole	134.00 - 8.00	5	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04
1 5/8	B	No	Yes	Inside Pole	124.00 - 8.00	10	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586	Job	CT2200	Page	3 of 9
	Project	140 ft Monopole	Date	10:46:45 06/22/22
	Client	AT&T	Designed by	kw

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			Horz Lateral	Vert						
			ft	ft	°	ft	ft ²	ft ²	lb	
40"x10' Shroud (CT 2200) (AT&T)	A	None			0.0000	135.70	No Ice	15.56	15.56	2100.00
							1/2" Ice	22.30	22.30	2357.81
							1" Ice	23.04	23.04	2625.55
40"x10' Shroud (CT 2200)	A	None			0.0000	125.70	No Ice	15.56	15.56	2100.00
							1/2" Ice	22.30	22.30	2357.81
							1" Ice	23.04	23.04	2625.55
36"x10' Shroud (CT 2200)	A	None			0.0000	115.70	No Ice	14.07	14.07	1900.00
							1/2" Ice	20.13	20.13	2126.25
							1" Ice	20.86	20.86	2362.02
36"x10' Shroud (CT 2200)	A	None			0.0000	105.70	No Ice	14.07	14.07	1900.00
							1/2" Ice	20.13	20.13	2126.25
							1" Ice	20.86	20.86	2362.02
36"x10' Shroud (CT 2200)	A	None			0.0000	95.70	No Ice	14.07	14.07	1900.00
							1/2" Ice	20.13	20.13	2126.25
							1" Ice	20.86	20.86	2362.02

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp

<p style="text-align: center;">tnxTower</p> <p style="text-align: center;">Hudson Design Group LLC</p> <p style="text-align: center;">45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586</p>	<p>Job</p> <p style="text-align: center;">CT2200</p>	<p>Page</p> <p style="text-align: center;">4 of 9</p>
	<p>Project</p> <p style="text-align: center;">140 ft Monopole</p>	<p>Date</p> <p style="text-align: center;">10:46:45 06/22/22</p>
	<p>Client</p> <p style="text-align: center;">AT&T</p>	<p>Designed by</p> <p style="text-align: center;">kw</p>

Comb. No.	Description
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	27	40216.72	0.00	3207.09
	Max. H _x	20	31972.62	10683.55	0.00
	Max. H _z	2	31972.62	0.00	10683.55
	Max. M _x	2	793696.85	0.00	10683.55
	Max. M _z	8	793696.85	-10683.55	0.00
	Max. Torsion	6	0.02	-9252.22	5341.77
	Min. Vert	5	23979.47	-5341.77	9252.22
	Min. H _x	8	31972.62	-10683.55	0.00
	Min. H _z	14	31972.62	0.00	-10683.55
	Min. M _x	14	-793696.85	0.00	-10683.55
	Min. M _z	20	-793696.85	10683.55	0.00
	Min. Torsion	10	-0.02	-9252.22	-5341.77

Tower Mast Reaction Summary

Load Combination	Vertical lb	Shear _x lb	Shear _z lb	Overturning Moment, M _x lb-ft	Overturning Moment, M _z lb-ft	Torque lb-ft
Dead Only	26643.85	0.00	0.00	0.00	0.00	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	31972.62	0.00	-10683.55	-793696.85	0.00	0.00
0.9 Dead+1.0 Wind 0 deg - No Ice	23979.47	0.00	-10683.54	-780817.28	0.00	0.00
1.2 Dead+1.0 Wind 30 deg - No Ice	31972.62	5341.77	-9252.22	-687374.97	-396856.19	0.02
0.9 Dead+1.0 Wind 30 deg - No Ice	23979.47	5341.77	-9252.22	-676210.70	-390410.45	0.00

<p style="text-align: center;">tnxTower</p> <p style="text-align: center;">Hudson Design Group LLC</p> <p style="text-align: center;">45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586</p>	Job	CT2200	Page	5 of 9
	Project	140 ft Monopole	Date	10:46:45 06/22/22
	Client	AT&T	Designed by	kw

<i>Load Combination</i>	<i>Vertical lb</i>	<i>Shear_x lb</i>	<i>Shear_z lb</i>	<i>Overturning Moment, M_x lb-ft</i>	<i>Overturning Moment, M_z lb-ft</i>	<i>Torque lb-ft</i>
1.2 Dead+1.0 Wind 60 deg - No Ice	31972.62	9252.22	-5341.77	-396856.19	-687374.97	-0.02
0.9 Dead+1.0 Wind 60 deg - No Ice	23979.47	9252.22	-5341.77	-390410.45	-676210.70	-0.00
1.2 Dead+1.0 Wind 90 deg - No Ice	31972.62	10683.55	0.00	0.00	-793696.85	0.00
0.9 Dead+1.0 Wind 90 deg - No Ice	23979.47	10683.54	0.00	0.00	-780817.28	0.00
1.2 Dead+1.0 Wind 120 deg - No Ice	31972.62	9252.22	5341.77	396856.19	-687374.97	0.02
0.9 Dead+1.0 Wind 120 deg - No Ice	23979.47	9252.22	5341.77	390410.45	-676210.70	0.00
1.2 Dead+1.0 Wind 150 deg - No Ice	31972.62	5341.77	9252.22	687374.97	-396856.19	-0.02
0.9 Dead+1.0 Wind 150 deg - No Ice	23979.47	5341.77	9252.22	676210.70	-390410.45	-0.00
1.2 Dead+1.0 Wind 180 deg - No Ice	31972.62	0.00	10683.55	793696.85	0.00	0.00
0.9 Dead+1.0 Wind 180 deg - No Ice	23979.47	0.00	10683.54	780817.28	0.00	0.00
1.2 Dead+1.0 Wind 210 deg - No Ice	31972.62	-5341.77	9252.22	687374.97	396856.19	0.02
0.9 Dead+1.0 Wind 210 deg - No Ice	23979.47	-5341.77	9252.22	676210.70	390410.45	0.00
1.2 Dead+1.0 Wind 240 deg - No Ice	31972.62	-9252.22	5341.77	396856.19	687374.97	-0.02
0.9 Dead+1.0 Wind 240 deg - No Ice	23979.47	-9252.22	5341.77	390410.45	676210.70	-0.00
1.2 Dead+1.0 Wind 270 deg - No Ice	31972.62	-10683.55	0.00	0.00	793696.85	0.00
0.9 Dead+1.0 Wind 270 deg - No Ice	23979.47	-10683.54	0.00	0.00	780817.28	0.00
1.2 Dead+1.0 Wind 300 deg - No Ice	31972.62	-9252.22	-5341.77	-396856.19	687374.97	0.02
0.9 Dead+1.0 Wind 300 deg - No Ice	23979.47	-9252.22	-5341.77	-390410.45	676210.70	0.00
1.2 Dead+1.0 Wind 330 deg - No Ice	31972.62	-5341.77	-9252.22	-687374.97	396856.19	-0.02
0.9 Dead+1.0 Wind 330 deg - No Ice	23979.47	-5341.77	-9252.22	-676210.70	390410.45	-0.00
1.2 Dead+1.0 Ice+1.0 Temp	40216.72	0.00	0.00	0.00	0.00	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	40216.72	0.00	-3207.09	-242728.60	0.00	0.00
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	40216.72	1603.55	-2777.42	-210209.14	-121364.31	0.00
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	40216.72	2777.42	-1603.55	-121364.31	-210209.14	-0.00
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	40216.72	3207.09	0.00	0.00	-242728.60	0.00
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	40216.72	2777.42	1603.55	121364.31	-210209.14	0.00
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	40216.72	1603.55	2777.42	210209.14	-121364.31	-0.00
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	40216.72	0.00	3207.09	242728.60	0.00	0.00
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	40216.72	-1603.55	2777.42	210209.14	121364.31	0.00
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	40216.72	-2777.42	1603.55	121364.31	210209.14	-0.00
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	40216.72	-3207.09	0.00	0.00	242728.60	0.00

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586	Job	CT2200	Page	6 of 9
	Project	140 ft Monopole	Date	10:46:45 06/22/22
	Client	AT&T	Designed by	kw

Load Combination	Vertical	Shear _x	Shear _z	Overturning Moment, M _x	Overturning Moment, M _z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	40216.72	-2777.42	-1603.55	-121364.31	210209.14	0.00
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	40216.72	-1603.55	-2777.42	-210209.14	121364.31	-0.00
Dead+Wind 0 deg - Service	26643.85	0.00	-2520.25	-191814.10	0.00	0.00
Dead+Wind 30 deg - Service	26643.85	1260.13	-2182.60	-166115.89	-95907.07	0.00
Dead+Wind 60 deg - Service	26643.85	2182.60	-1260.13	-95907.07	-166115.89	-0.00
Dead+Wind 90 deg - Service	26643.85	2520.25	0.00	0.00	-191814.10	0.00
Dead+Wind 120 deg - Service	26643.85	2182.60	1260.13	95907.07	-166115.89	0.00
Dead+Wind 150 deg - Service	26643.85	1260.13	2182.60	166115.89	-95907.07	-0.00
Dead+Wind 180 deg - Service	26643.85	0.00	2520.25	191814.10	0.00	0.00
Dead+Wind 210 deg - Service	26643.85	-1260.13	2182.60	166115.89	95907.07	0.00
Dead+Wind 240 deg - Service	26643.85	-2182.60	1260.13	95907.07	166115.89	-0.00
Dead+Wind 270 deg - Service	26643.85	-2520.25	0.00	0.00	191814.10	0.00
Dead+Wind 300 deg - Service	26643.85	-2182.60	-1260.13	-95907.07	166115.89	0.00
Dead+Wind 330 deg - Service	26643.85	-1260.13	-2182.60	-166115.89	95907.07	-0.00

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
1	0.00	-26643.85	0.00	0.00	26643.85	0.00	0.000%
2	0.00	-31972.62	-10683.54	0.00	31972.62	10683.55	0.000%
3	0.00	-23979.47	-10683.54	0.00	23979.47	10683.54	0.000%
4	5341.77	-31972.62	-9252.22	-5341.77	31972.62	9252.22	0.000%
5	5341.77	-23979.47	-9252.22	-5341.77	23979.47	9252.22	0.000%
6	9252.22	-31972.62	-5341.77	-9252.22	31972.62	5341.77	0.000%
7	9252.22	-23979.47	-5341.77	-9252.22	23979.47	5341.77	0.000%
8	10683.54	-31972.62	0.00	-10683.55	31972.62	0.00	0.000%
9	10683.54	-23979.47	0.00	-10683.54	23979.47	0.00	0.000%
10	9252.22	-31972.62	5341.77	-9252.22	31972.62	-5341.77	0.000%
11	9252.22	-23979.47	5341.77	-9252.22	23979.47	-5341.77	0.000%
12	5341.77	-31972.62	-9252.22	-5341.77	31972.62	-9252.22	0.000%
13	5341.77	-23979.47	9252.22	-5341.77	23979.47	-9252.22	0.000%
14	0.00	-31972.62	10683.54	0.00	31972.62	-10683.55	0.000%
15	0.00	-23979.47	10683.54	0.00	23979.47	-10683.54	0.000%
16	-5341.77	-31972.62	9252.22	5341.77	31972.62	-9252.22	0.000%
17	-5341.77	-23979.47	9252.22	5341.77	23979.47	-9252.22	0.000%
18	-9252.22	-31972.62	5341.77	9252.22	31972.62	-5341.77	0.000%
19	-9252.22	-23979.47	5341.77	9252.22	23979.47	-5341.77	0.000%
20	-10683.54	-31972.62	0.00	10683.55	31972.62	0.00	0.000%
21	-10683.54	-23979.47	0.00	10683.54	23979.47	0.00	0.000%
22	-9252.22	-31972.62	-5341.77	9252.22	31972.62	5341.77	0.000%
23	-9252.22	-23979.47	-5341.77	9252.22	23979.47	5341.77	0.000%
24	-5341.77	-31972.62	-9252.22	5341.77	31972.62	9252.22	0.000%
25	-5341.77	-23979.47	-9252.22	5341.77	23979.47	9252.22	0.000%
26	0.00	-40216.72	0.00	0.00	40216.72	0.00	0.000%
27	0.00	-40216.72	-3207.08	0.00	40216.72	3207.09	0.000%
28	1603.54	-40216.72	-2777.41	-1603.55	40216.72	2777.42	0.000%
29	2777.41	-40216.72	-1603.54	-2777.42	40216.72	1603.55	0.000%
30	3207.08	-40216.72	0.00	-3207.09	40216.72	0.00	0.000%
31	2777.41	-40216.72	1603.54	-2777.42	40216.72	-1603.55	0.000%
32	1603.54	-40216.72	2777.41	-1603.55	40216.72	-2777.42	0.000%
33	0.00	-40216.72	3207.08	0.00	40216.72	-3207.09	0.000%
34	-1603.54	-40216.72	2777.41	1603.55	40216.72	-2777.42	0.000%
35	-2777.41	-40216.72	1603.54	2777.42	40216.72	-1603.55	0.000%

tnxTower Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586	Job	CT2200	Page	7 of 9
	Project	140 ft Monopole	Date	10:46:45 06/22/22
	Client	AT&T	Designed by	kw

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	
36	-3207.08	-40216.72	0.00	3207.09	40216.72	0.00	0.000%
37	-2777.41	-40216.72	-1603.54	2777.42	40216.72	1603.55	0.000%
38	-1603.54	-40216.72	-2777.41	1603.55	40216.72	2777.42	0.000%
39	0.00	-26643.85	-2520.25	0.00	26643.85	2520.25	0.000%
40	1260.12	-26643.85	-2182.60	-1260.13	26643.85	2182.60	0.000%
41	2182.60	-26643.85	-1260.12	-2182.60	26643.85	1260.13	0.000%
42	2520.25	-26643.85	0.00	-2520.25	26643.85	0.00	0.000%
43	2182.60	-26643.85	1260.12	-2182.60	26643.85	-1260.13	0.000%
44	1260.12	-26643.85	2182.60	-1260.13	26643.85	-2182.60	0.000%
45	0.00	-26643.85	2520.25	0.00	26643.85	-2520.25	0.000%
46	-1260.12	-26643.85	2182.60	1260.13	26643.85	-2182.60	0.000%
47	-2182.60	-26643.85	1260.12	2182.60	26643.85	-1260.13	0.000%
48	-2520.25	-26643.85	0.00	2520.25	26643.85	0.00	0.000%
49	-2182.60	-26643.85	-1260.12	2182.60	26643.85	1260.13	0.000%
50	-1260.12	-26643.85	-2182.60	1260.13	26643.85	2182.60	0.000%


Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	140.67 - 111.17	13.4367	42	1.2839	0.0000
L2	111.17 - 110.67	6.1724	42	0.8473	0.0000
L3	110.67 - 91.17	6.0842	42	0.8359	0.0000
L4	91.17 - 90.67	3.5735	42	0.3166	0.0000
L5	90.67 - 48.83	3.5404	42	0.3161	0.0000
L6	48.83 - 2	1.1418	42	0.2201	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
135.70	40"x10' Shroud (CT 2200)	42	12.0473	1.2284	0.0000	10164
125.70	40"x10' Shroud (CT 2200)	42	9.3694	1.1040	0.0000	3394
115.70	36"x10' Shroud (CT 2200)	42	7.0452	0.9409	0.0000	2036
105.70	36"x10' Shroud (CT 2200)	42	5.2585	0.6894	0.0000	2728
95.70	36"x10' Shroud (CT 2200)	42	3.9559	0.3738	0.0000	1784

Base Plate Design Data

Plate Thickness in	Number of Anchor Bolts	Anchor Bolt Size in	Actual Allowable Ratio Bolt Tension lb	Actual Allowable Ratio Bolt Compression lb	Actual Allowable Ratio Plate Stress ksi	Actual Allowable Ratio Stiffener Stress ksi	Controlling Condition	Ratio
1.7500	8	2.2500	85018.50 243576.14	93010.42 404336.40	22.789 32.400		Plate	0.70 

<p>tnxTower</p> <p>Hudson Design Group LLC</p> <p>45 Beechwood Drive North Andover, MA 01845 Phone: (P) 978.557.5553 FAX: (F) 978.336.5586</p>	Job	CT2200	Page	9 of 9
	Project	140 ft Monopole	Date	10:46:45 06/22/22
	Client	AT&T	Designed by	kw

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	140.67 - 111.17 (1)	TP8.625x8.625x0.322	2890.26	79373.00	0.036	0.01	57941.17	0.000
L2	111.17 - 110.67 (2)	TP10.75x8.625x0.322	2886.90	99687.00	0.029	0.01	57941.17	0.000
L3	110.67 - 91.17 (3)	TP10.75x10.75x0.5	4183.19	152151.00	0.027	0.01	137113.33	0.000
L4	91.17 - 90.67 (4)	TP36x10.75x0.5	4188.91	526963.00	0.008	0.00	137113.33	0.000
L5	90.67 - 48.83 (5)	TP40.802x36x0.3125	7578.09	704817.00	0.011	0.01	2499191.67	0.000
L6	48.83 - 2 (6)	TP46.63x40.802x0.25	10698.30	645884.00	0.017	0.02	2623408.33	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio P_u ϕP_n	Ratio M_{ux} ϕM_{ux}	Ratio M_{uy} ϕM_{uy}	Ratio V_u ϕV_n	Ratio T_u ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	140.67 - 111.17 (1)	0.033	0.776	0.000	0.036	0.000	0.811	1.000	4.8.2 ✓
L2	111.17 - 110.67 (2)	0.034	0.776	0.000	0.029	0.000	0.810	1.000	4.8.2 ✓
L3	110.67 - 91.17 (3)	0.031	0.844	0.000	0.027	0.000	0.875	1.000	4.8.2 ✓
L4	91.17 - 90.67 (4)	0.031	0.844	0.000	0.008	0.000	0.875	1.000	4.8.2 ✓
L5	90.67 - 48.83 (5)	0.010	0.161	0.000	0.011	0.000	0.171	1.000	4.8.2 ✓
L6	48.83 - 2 (6)	0.015	0.393	0.000	0.017	0.000	0.408	1.000	4.8.2 ✓

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	140.67 - 111.17	Pole	TP8.625x8.625x0.322	1	-8860.82	264577.00	81.1	Pass
L2	111.17 - 110.67	Pole	TP10.75x8.625x0.322	2	-8868.33	264577.00	81.0	Pass
L3	110.67 - 91.17	Pole	TP10.75x10.75x0.5	3	-15556.80	507171.00	87.5	Pass
L4	91.17 - 90.67	Pole	TP36x10.75x0.5	4	-15608.70	507171.00	87.5	Pass
L5	90.67 - 48.83	Pole	TP40.802x36x0.3125	5	-23689.60	2349390.00	17.1	Pass
L6	48.83 - 2	Pole	TP46.63x40.802x0.25	6	-31967.70	2114030.00	40.8	Pass
Summary								
Pole (L3)							87.5	Pass
Base Plate							70.3	Pass
RATING =							87.5	Pass

284 NEW CANAAN AVE

Location 284 NEW CANAAN AVE

Mblu 5/ 46/ 76/ 0/

Acct# 17508

Owner INDIAN HILL RE LLC

Assessment \$2,380,000

Appraisal \$3,400,000

PID 17508

Building Count 2

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2018	\$539,473	\$2,860,527	\$3,400,000

Assessment			
Valuation Year	Improvements	Land	Total
2018	\$377,626	\$2,002,374	\$2,380,000

Owner of Record

Owner INDIAN HILL RE LLC

Sale Price \$0

Co-Owner

Certificate

Address 46 INDIAN HILL RD

Book & Page 8594/111

WESTPORT, CT 06880

Sale Date 10/06/2017

Instrument 15

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
INDIAN HILL RE LLC	\$0		8594/111	15	10/06/2017
CONNECTICUT STATE OF	\$0		8504/140	19	03/23/2017
CONNECTICUT STATE OF	\$0		695/452		02/27/1968

Building Information

Building 1 : Section 1

Year Built: 1971
Living Area: 27,972
Replacement Cost: \$3,605,570
Building Percent Good: 3

Building Photo

 Building Photo

(<https://images.vgsi.com/photos/NorwalkCTPhotos/G:\ASR\Assessor\ASR>)

Building Percent Good: 5

Replacement Cost

Less Depreciation: \$8,260

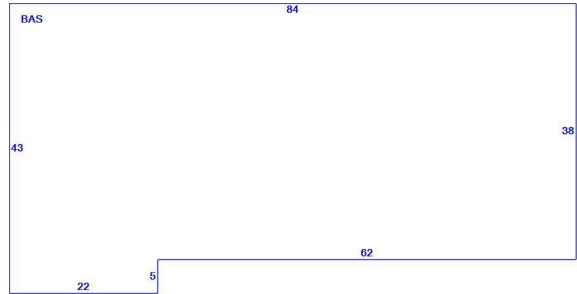
Building Attributes : Bldg 2 of 2	
Field	Description
Style:	Pre-Eng Garage
Model:	Commercial
Grade	C+
Stories:	1.00
Occupancy	1.00
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar and Gravel
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete
Interior Floor 2	Cork Tile
Heating Fuel	Electric
Heating Type	Radiant
AC Percent	0
Heat Percent	100
Bldg Use	State Bldg Com
Total Rooms	2
Bedrooms	0
Full Baths	0
Half Baths	1
Extra Fixtures	0
FBM Area	
Heat/AC	None
Frame	Masonry
Plumbing	Average
Foundation	Slab
Partitions	Average
Wall Height	14.00
% Sprinkler	0.00
# of Heat Systems	1
Insulation	Typical

Building Photo

Building Photo

(<https://images.vgsi.com/photos/NorwalkCTPhotos//G:\ASR\Assessor\ASR 30-15/7-30-15%20030.jpg.jpg>)

Building Layout



(ParcelSketch.ashx?pid=17508&bid=50688)

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	3,302	3,302
		3,302	3,302

Extra Features

Extra Features

Legend

No Data for Extra Features

Land

Land Use

Use Code 201V
Description Commercial Improved
Zone A3
Neighborhood C210

Land Line Valuation

Size (Acres) 11.12
Frontage
Depth
Assessed Value \$2,002,374
Appraised Value \$2,860,527

Outbuildings

Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV1	Paving Asph.			35000.00 S.F.	\$0	1
FN6	Fence 6'			1000.00 L.F.	\$0	1
CEL1	Cell Tower		Steel	1.00 UNITS	\$0	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$539,473	\$2,860,527	\$3,400,000
2019	\$594,223	\$2,805,777	\$3,400,000
2018	\$594,223	\$2,805,777	\$3,400,000

Assessment			
Valuation Year	Improvements	Land	Total
2020	\$377,626	\$2,002,374	\$2,380,000
2019	\$415,956	\$1,964,044	\$2,380,000
2018	\$415,956	\$1,964,044	\$2,380,000

284 New Canaan Ave



Norwalk Information

ID 103-5-46-76-0
Site Address 284 NEW CANAAN AVE
Owner INDIAN HILL RE LLC
Co-Owner
Owner Address 46 INDIAN HILL RD



**MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT**

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Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

DOCKET NO. 442 – New Cingular Wireless PCS, LLC } application for a Certificate of Environmental Compatibility and } Public Need for the construction, maintenance, and operation of a } telecommunications facility located at 284 New Canaan Avenue, } Norwalk, Connecticut. }	Connecticut Siting Council May 29, 2014
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Decision and Order

Pursuant to Connecticut General Statutes §16-50p and the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, maintenance, and operation of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to New Cingular Wireless PCS LLC, hereinafter referred to as the Certificate Holder, for a telecommunications facility located at 284 New Canaan Avenue, Norwalk, Connecticut.

Unless otherwise approved by the Council, the facility shall be constructed, operated, and maintained substantially as specified in the Council’s record in this matter, and subject to the following conditions:

1. The telecommunications facility shall be constructed as two monopoles, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of New Cingular Wireless PCS LLC, Cellco Partnership d/b/a Verizon Wireless and other entities, both public and private, but each tower comprising the facility shall not exceed a height of 140 feet above ground level. All panel antennas shall be mounted in a flush-mount configuration, concealed behind a radio-frequency transparent casing of uniform appearance. The outer diameter of the monopoles and related transparent casing shall be no greater than necessary to accommodate the antennas and related equipment of New Cingular Wireless PCS LLC and Verizon Wireless, but shall not exceed 56 inches.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of New Canaan and the City of Norwalk for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
 - a) a final site plan(s) of site development to include specifications for the facility, facility foundation, antennas, equipment compound, radio equipment, compound access, utility line, emergency backup generator and landscaping; and
 - b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
 - c) provisions to reduce the amount of disturbance to the buffer zone associated with the wetlands east and west of the facility compound.

3. Prior to the commencement of operation, the Certificate Holder shall provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.
4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
6. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed with at least one fully operational wireless telecommunications carrier providing wireless service within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.
7. Any request for extension of the time period referred to in Condition 6 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the City of Norwalk and the Town of New Canaan. Any proposed modifications to this Decision and Order shall likewise be so served.
8. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
9. Any nonfunctioning antenna, and associated antenna mounting equipment, on this facility shall be removed within 60 days of the date the antenna ceased to function.
10. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction, and the commencement of site operation.
11. The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.

12. This Certificate may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Certificate Holder/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Certificate Holder/transferor and the transferee shall provide the Council a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.
13. The Certificate Holder shall maintain the facility and associated equipment, including but not limited to, the towers, tower foundations, antennas, equipment compound, radio equipment, site access, utility line and landscaping in a reasonable physical and operational condition that is consistent with this Decision and Order and a Development and Management Plan to be approved by the Council.
14. If the Certificate Holder is a wholly-owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the Certificate Holder within 30 days of the sale and/or transfer.
15. This Certificate may be surrendered by the Certificate Holder upon written notification and approval by the Council.

We hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed in the Service List, dated November 14, 2013, and notice of issuance published in the Norwalk Hour and the New Canaan Advertiser.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.



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SAI GROUP

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SALEM NH 03079-2837

Expected Delivery Date: 10/26/22

Ref#: CT2200

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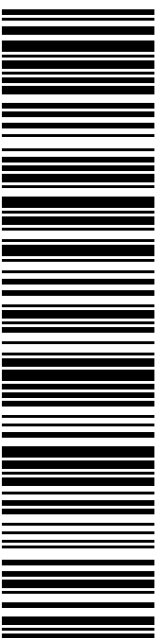
C005



HON HARRY RILLING, MAYOR
CITY OF NORWALK, CITY HALL
125 EAST AVE
NORWALK CT 06851-5702

MR. STEVEN

USPS TRACKING #



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HOLLIS M REDDING

SAI GROUP

12 INDUSTRIAL WAY

SALEM NH 03079-2837

Expected Delivery Date: 10/26/22

Ref#: CT2200

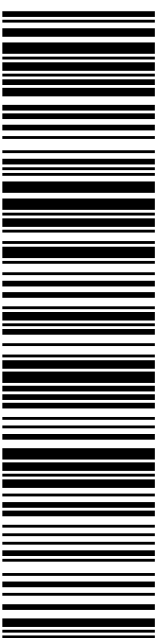
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C033



MR. VINCENT PENNA
INDIAN HILL RE LLC
46 INDIAN HILL RD
WESTPORT CT 06880-5813

USPS TRACKING #



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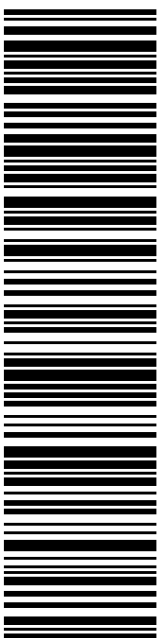
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C006



MELANIE BACHMAN EXECUTIVE DIRECTOR
CT SITING COUNCIL
10 FRANKLIN SQ
NEW BRITAIN CT 06051-2655

USPS TRACKING #



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From: auto-reply@usps.com
Sent: Monday, October 24, 2022 5:44 PM
To: Hollis Redding
Subject: USPS® Expected Delivery by Wednesday, October 26, 2022 arriving by 9:00pm 9405503699300377261164



Hello **HOLLIS M REDDING**,

Your item has left our acceptance facility and is in transit to a sorting facility on October 24, 2022 at 5:33 pm in WALLINGFORD, CT 06492.

Tracking Number: [9405503699300377261164](#)

Expected Delivery By



By 9:00pm



From: auto-reply@usps.com
Sent: Monday, October 24, 2022 5:43 PM
To: Hollis Redding
Subject: USPS® Expected Delivery by Wednesday, October 26, 2022 arriving by 9:00pm 9405503699300377261171



Hello **HOLLIS M REDDING**,

Your item has left our acceptance facility and is in transit to a sorting facility on October 24, 2022 at 5:33 pm in WALLINGFORD, CT 06492.

Tracking Number: [9405503699300377261171](#)

Expected Delivery By



By 9:00pm

