

February 2, 2023

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 CT5870

33 Neptune Avenue, Moodus, CT 06469 (the "Property") Latitude: 41-29-55.65 N Longitude: 72-27-35.99 W

#### Dear Ms. Bachman:

AT&T currently maintains (6) antennas at the 88' level on the existing 90' monopole tower ("Tower") located at 33 Neptune Avenue, in the Moodus section of East Haddam, CT. The tower and property are owned by Baron Smith American Legion 15. AT&T intends to modify its Facility by adding (3) 4478 B5 & (3) 4415 B25 remote radio units ("RRUs") and adding (24) TSXDC-4310FM Surge Arrestors at the equipment location, all at ground level. There are no proposed changes to the tower loading with this modification, therefore, no mount analysis or structural analysis reports are included with this filing. However, an RF Emissions Report is included due to AT&T's additional frequencies in use.

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 AT&T Facility was approved by the CT Siting Council ("Council") under Petition 637 on November 20, 2003. AT&Ts 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 to the Hon. Irene M. Haines, First Selectman, Town of East Haddam, Mr. James F. Ventres, Land Use Administrator/Zoning Enforcement Officer, Town of East Haddam and Baron Smith American Legion 15, the tower & 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,

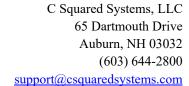
# Hollis M. Redding

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

hredding@saigrp.com

**Enclosures** 

Cc: Hon. Irene M. Haines, First Selectman, Town of East Haddam Mr. James F. Ventres, Land Use Administrator/Zoning Enforcement Officer, Town of East Haddam Baron Smith American Legion 15, the tower & property owner





# Calculated Radio Frequency Emissions Report



CT5870 33 Neptune Avenue, Moodus, CT 06469

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#### 1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed installation of AT&T antenna arrays to be mounted at 88', and 86' AGL on an existing monopole tower located at 33 Neptune Avenue in Moodus, CT. The coordinates of the tower are 41° 29' 55.65" N, 72° 27' 35.99" 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&T<sup>1</sup> 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/cm<sup>2</sup>). 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.

<sup>&</sup>lt;sup>1</sup> As referenced to AT&T's Radio Frequency Design Sheet updated 11/08/2022.



#### 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:

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

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 1.6

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 /<br>Call Sign | TX<br>Freq<br>(MHz) | Power at<br>Antenna<br>(Watts) | Ant<br>Gain<br>(dBi) | Power<br>EIRP<br>(Watts) | Antenna Model      | Beam<br>Width | Mech.<br>Tilt | Length (ft) | Antenna<br>Centerline<br>Height<br>(ft) |
|----------|-----------------------|---------------------|--------------------------------|----------------------|--------------------------|--------------------|---------------|---------------|-------------|---|
|          | 41.1 /                | 850                 | 160                            | 13.5                 | 3582                     | 7770.00            | 85            | 0             | 4.58        | 88                                      |
|          | Alpha / 30° & 35°     | 1900                | 160                            | 16.0                 | 6370                     | 7770.00            | 85            | 0             | 4.36        | 00                                      |
|          |                       | 763                 | 160                            | 15.5                 | 5677                     | AMX-X-CD-16-65-00T | 65            | 0             | 6.0         | 86                                      |
|          | D /                   | 850                 | 160                            | 13.5                 | 3582                     | 7770.00            | 85            | 0             | 4.58        | 88                                      |
| AT&T     | Beta /<br>150° & 155° | 1900                | 160                            | 16.0                 | 6370                     | 7770.00            | 85            | U             | 4.36        | 00                                      |
|          | 130 & 133             | 763                 | 160                            | 15.5                 | 5677                     | AMX-X-CD-16-65-00T | 65            | 0             | 6.0         | 86                                      |
|          | 6 /                   | 850                 | 160                            | 13.5                 | 3582                     | 7770.00            | 85            | 0             | 4.58        | 88                                      |
|          | Gamma /<br>270°       | 1900                | 160                            | 16.0                 | 6370                     | 7770.00            | 85            | U             | 4.38        | 00                                      |
|          | 2/0°                  | 763                 | 160                            | 15.5                 | 5677                     | AMX-X-CD-16-65-00T | 65            | 0             | 6.0         | 86                                      |

Table 1: Proposed Antenna Inventory<sup>2</sup>

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<sup>&</sup>lt;sup>2</sup> Antenna heights are in reference to the Hudson Design Group LLC. Construction Drawings, dated 11/04/2022.

<sup>&</sup>lt;sup>3</sup> 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  $\pm$  5 degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.

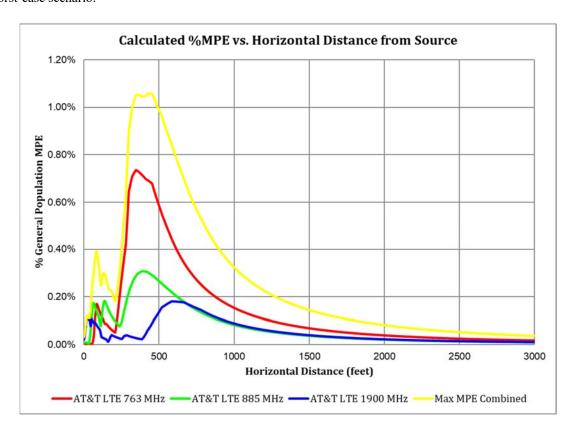


Figure 1: Graph of General Population % MPE vs. Distance

The highest percent of MPE (1.06% of the General Population limit) is calculated to occur at a horizontal distance of 453 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 453 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<br>Transmitters | Power out of<br>Base Station Per<br>Transmitter<br>(Watts) | Antenna<br>Height<br>(Feet) | Distance to<br>the Base of<br>Antennas<br>(Feet) | Power    | Limit<br>(mW/cm²) | %<br>MPE |
|-------------------|---------------------------|--|-----------------------------|--|----------|-------------------|----------|
| AT&T LTE 1900 MHz | 1                         | 160.0  | 88.0                        | 453  | 0.000880 | 1.000             | 0.09%    |
| AT&T LTE 763 MHz  | 1                         | 160.0  | 86.0                        | 453  | 0.003456 | 0.509             | 0.68%    |
| AT&T LTE 885 MHz  | 1                         | 160.0  | 88.0                        | 453  | 0.001717 | 0.590             | 0.29%    |
|                   |                           |  |                             |  |          | Total             | 1.06%    |

**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 1.06% of the FCC limit (General Population/Uncontrolled). This maximum cumulative percent of MPE value is calculated to occur 453 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

C Squared Systems, LLC

February 1, 2023

Date

Reviewed/Approved By:

Martin J. Lavin

Senior RF Engineer C Squared Systems, LLC

Mark of Fand

February 1, 2023 Date



#### **Attachment A: References**

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

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

<u>IEEE C95.3-2002 (R2008)</u>, <u>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</u>



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

#### (A) Limits for Occupational/Controlled Exposure<sup>4</sup>

| Frequency<br>Range | Electric Field<br>Strength (E) | Magnetic Field<br>Strength (E) | Power Density (S)<br>(mW/cm <sup>2</sup> ) | Averaging Time $ E ^2$ , $ H ^2$ or S (minutes) |
|--------------------|--------------------------------|--------------------------------|--|---|
| (MHz)              | (V/m)                          | (A/m)                          | (III W/CIII )                              | E ,  H  of 5 (fillitates)                       |
| 0.3-3.0            | 614                            | 1.63                           | (100)*                                     | 6   |
| 3.0-30             | 1842/f                         | 4.89/f                         | $(900/f^2)*$                               | 6   |
| 30-300             | 61.4                           | 0.163                          | 1.0  | 6   |
| 300-1500           | -                              | -                              | f/300                                      | 6   |
| 1500-100,000       | -                              | -                              | 5  | 6   |

#### (B) Limits for General Population/Uncontrolled Exposure<sup>5</sup>

| Frequency<br>Range<br>(MHz) | Electric Field<br>Strength (E)<br>(V/m) | Magnetic Field<br>Strength (E)<br>(A/m) | Power Density (S)<br>(mW/cm <sup>2</sup> ) | 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** 

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<sup>&</sup>lt;sup>4</sup> 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.

<sup>&</sup>lt;sup>5</sup> 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.



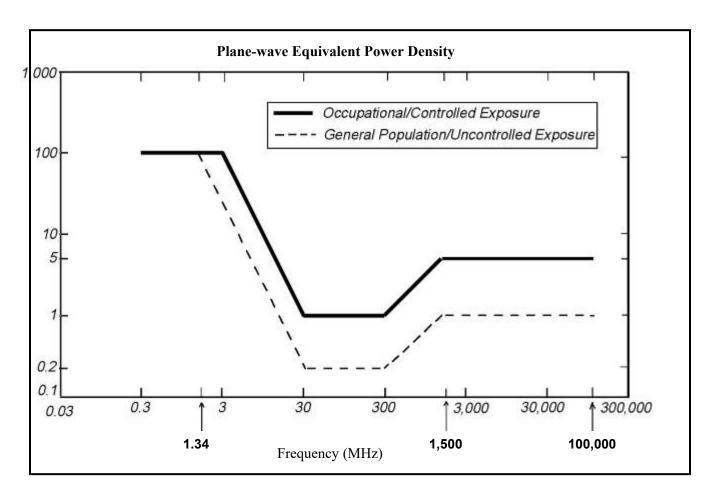


Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)



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

#### **763 MHz**

Manufacturer: KMW

Model #: AM-X-CD-16-00T

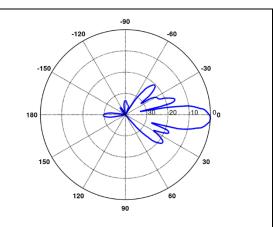
Frequency Band: 698-894 MHz

Gain: 15.5 dBi

Vertical Beamwidth: 12.3° Horizontal Beamwidth: 65°

Polarization: Dual, Slant ±45°

Dimensions (L x W x D): 72" x 11.8" x 5.9"



#### 885 MHz

Manufacturer: Powerwave

Model #: 7770.00

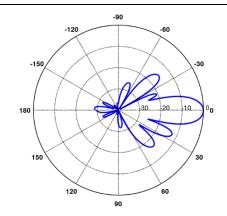
Frequency Band: 806 - 960

Gain: 13.5

Vertical Beamwidth: 14.3 Horizontal Beamwidth: 85

Polarization: Dual Linear ±45

Dimensions (L x W x D): 55.0" x 11.0" x 5.0"



#### 1900 MHz

Manufacturer: Powerwave

Model #: 7770.00

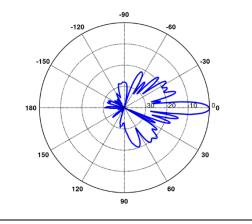
Frequency Band: 1710 - 2170

Gain: 16.0

Vertical Beamwidth: 6.6 Horizontal Beamwidth: 85

Polarization: Dual Linear ±45

Dimensions (L x W x D): 55.0" x 11.0" x 5.0"



#### PROJECT INFORMATION

ITEMS TO BE MOUNTED ON THE EXISTING MONOPOLE:

• NONE SCOPE OF WORK:

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:

- NEW AT&T RRUS: 4478 B5 (850) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: 4415 B25 (PCS) (TYP. OF 1 PER SECTOR, TOTAL OF 3). • NEW AT&T SURGE ARRESTORS: TSXDC-4310FM (TYP. OF 8 PER SECTOR, TOTAL OF
- ADD 6648+ XCEDE CABLE.

ITEMS TO BE REMOVED:

• EXISTING AT&T UMTS CABINET. • DECOMM UMTS ON POS.1 ANTENNAS

ITEMS TO REMAIN:

•(6) ANTENNAS, (3) RRU'S, (6) TMA'S ,(6)(G) DIPLEXERS, (1) SURGE ARRESTOR,

(6) COAX CABLES, (2) DC POWER & (1) FIBER.

SITE ADDRESS:

33 NEPTUNE AVENUE MOODUS, CT 06469

LATITUDE: LONGITUDE: 41.498791° N, 41° 29' 55.65" N 72.459998° W, 72° 27' 35.99" W

TYPE OF SITE:

MONOPOLE / OUTDOOR EQUIPMENT

STRUCTURE HEIGHT: 90'-0"±

RAD CENTER:

88'-0"± (@ POS. 1), 86'-0"± (@ POS. 2) TELECOMMUNICATIONS FACILITY

CURRENT USE: PROPOSED USE:

TELECOMMUNICATIONS FACILITY



**SITE NUMBER: CTL05870** 

SITE NAME: EAST HADDAM NORTH

**FA CODE: 10071141** 

PACE ID: MRCTB062142, MRCTB062384

PROJECT: LTE 2C\_5G NR 1DR-1 UPGRADE

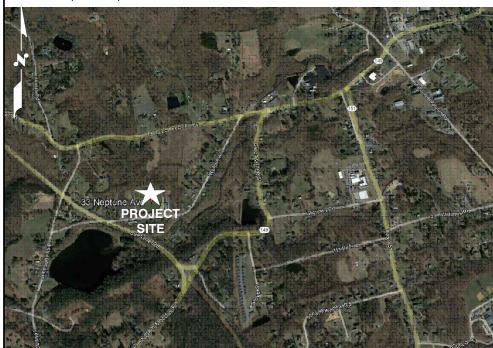
#### **DRAWING INDEX**

| SHEET NO. | DESCRIPTION         | REV. |
|-----------|---------------------|------|
| T-1       | TITLE SHEET         | 1    |
| GN-1      | GENERAL NOTES       | 1    |
| A-1       | COMPOUND PLAN       | 1    |
| A-2       | ELEVATION           | 1    |
| A-3       | DETAILS             | 1    |
| G-1       | GROUNDING DETAILS   | 1    |
| RF-1      | RF PLUMBING DIAGRAM | 1    |

#### VICINITY MAP

#### **DIRECTIONS TO SITE:**

START OUT GOING NORTHEAST ON ENTERPRISE DR TOWARDS CAPITAL BLVD. 0.4MI TURN LEFT ONTO CAPITAL BLVD. 0.2 MI TURN LEFT ONTO WEST ST. 0.3 MI TAKE RAMP LEFT FOR I-91S. 1.4 MI AT EXIT 22S, TAKE RAMP LEFT FOR CT-9 SOUTH TOWARD OLD SAYBROOK /MIDDLETOWN. 5.5 MI BEAR RIGHT ONTO CT-17/ ST JOGHS SQ. 0.2 MI BEAR RIGHT ONTO CT-17N/ CT-66N. 0.1MI ROAD NAME CHANGES TO CT-17/ CT-66. 0.8 MO TURN RIGHT ONTO CT-17N/ CT-66E/MARLBOROUGH ST. 2.0 MI KEEP STRAIGHT ONTO CT-66 E/ PORTLAND COBALT RD. 0.5 MI KEEP STRAIGHT ONTO CT-66/ PORTLAND COBALT RD. 2.5 MI BEAR RIGHT ONTO CT-151/ MIDDLE HADDAM RD. 22.5 MI KEEP LEFT TO STAY ON CT-151/ MOODUS RD. 3.1 MI BEAR RIGHT ONTO NEPTUNE AVE. 0.1 MI ARRIVE AT 33 NEPTUNE AVE, MOODÚS, CT 06469.



#### **GENERAL NOTES**

- 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.
- 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.
- CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OF RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.

#### 72 HOURS



BEFORE YOU DIG

CALL TOLL FREE 1-800-922-4455

or call 811

UNDERGROUNDESERVICE ALERT

45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845



**SITE NUMBER: CTL05870** SITE NAME: EAST HADDAM NORTH



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

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

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

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

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, 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           |
| втсм | 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      | Р     | PROPOSED                               | TYP  | TYPICAL                    |
| E    | EXISTING                      | NTS , | MOTITOIBEALE                           | UG   | UNDER GROUND               |
| EGB  | EQUIPMENT GROUND BAR          | RADE  | MOTHOLOGIALE<br>ORADIAHOM COUNTER LINE | VIF  | VERIFY IN FIELD            |
| EGR  | EQUIPMENT GROUND RING         | REF   |  |      |                            |





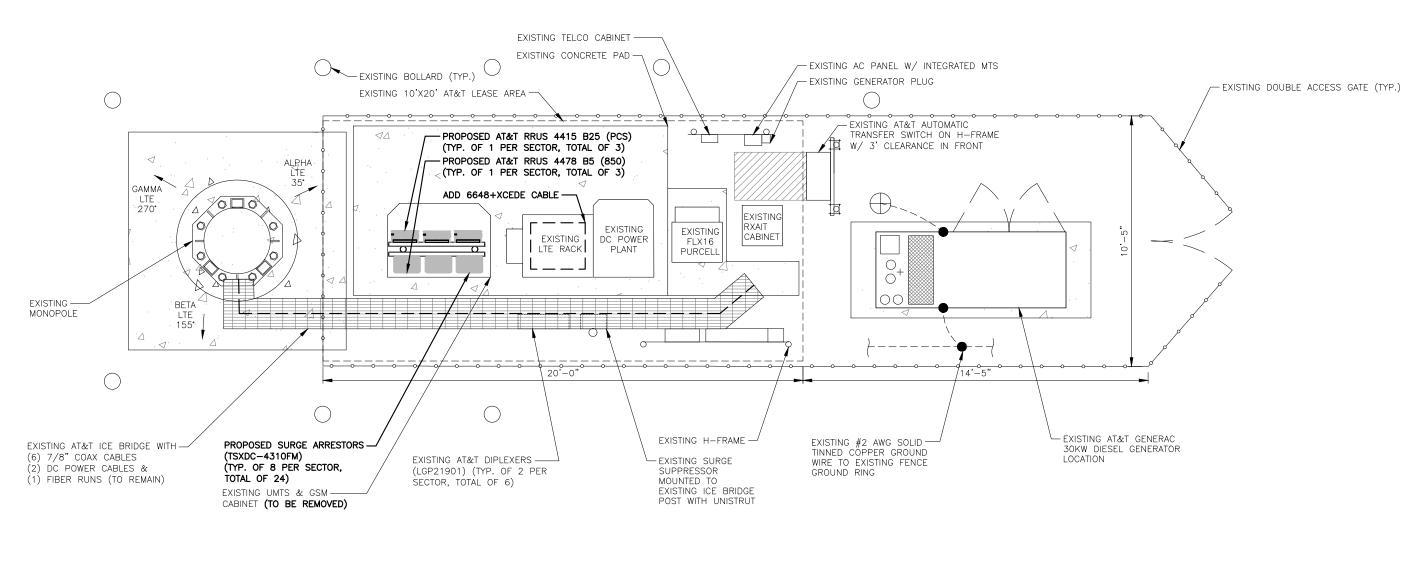
SITE NUMBER: CTL05870 SITE NAME: EAST HADDAM NORTH







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





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



0 1'-0" 2'-0" 4'-0" 6'-





SITE NUMBER: CTL05870 SITE NAME: EAST HADDAM NORTH

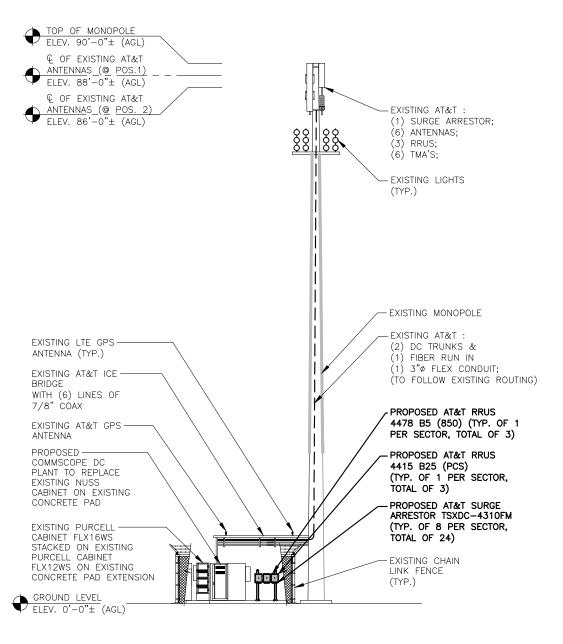


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| DIX  | *      | •     | AT&T                                  |     |
|--|--------|-------|---------------------------------------|-----|
| ICENS  |        | LTE   | COMPOUND PLAN  2C_5G NR 1DR-1 UPGRADE |     |
| Scrau ENG  | SITE N | UMBER | DRAWING NUMBER                        | REV |
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NOTE:

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



SOUTH ELEVATION
22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"







SITE NUMBER: CTL05870 SITE NAME: EAST HADDAM NORTH

> 33 NEPTUNE AVENUE MOODUS, CT 06469 MIDDLESEX COUNTY



|     |           |                         |                   |     |    |      |           | _   |       |    |
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| 1   | 01/24/23  | FINALS FOR CONSTRUCTION |                   |     |    |      | /N        | Œ   | MPH.  | ٥  |
| Α   | 11/07/22  | ISSUED FOR              | ISSUED FOR REVIEW |     |    |      |           | НС  | Qb.H  | 2  |
| NO. | DATE      | REVISIONS               |                   |     |    |      | BY        | СНК | APP B | ŀ, |
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ELEVATION

LTE 2C\_5G NR 1DR-1 UPGRADE

SITE NUMBER DRAWING NUMBER RE

CTL05870 A-2 1

|        |                       |         |                           |                              |                     | ANTENNA               | SCHEDU      | JLE                                 |   |                                |                                |                         |
|--------|-----------------------|---------|---------------------------|------------------------------|---------------------|-----------------------|-------------|-------------------------------------|---|--------------------------------|--------------------------------|-------------------------|
| SECTOR | EXISTING/<br>PROPOSED | BAND    | ANTENNA                   | SIZE (INCHES)<br>(L x W x D) | ANTENNA<br>© HEIGHT | ANTENNA<br>TIP HEIGHT | AZIMUTH     | TMA/<br>DIPLEXER                    | RRU   | SIZE (INCHES)<br>(L x W x D)   | FEEDER                         | RAYCAP                  |
| A1     | EXISTING              | PCS/850 | 7770.00.850.04            | 55X11X5                      | 88'-0"±             | 90'-4"±               | 30°         | (G)(E)(2)LGP21901<br>(E)(2)LGP21401 | (G)(P)(1) 4478 B5 (850)<br>(G)(P)(1) 4415 B25 (PCS) | 18.1X13.4X8.3<br>16.5X13.4X5.9 | (2) 7/8 COAX                   | _ დ                     |
| A2     | EXISTING              | 700 BC  | AM-X-CD-16-65-00<br>T-RET | 72X11.8X5.9                  | <b>86'</b> -0″ ±    | 89'-0"±               | 35 <b>°</b> | _                                   | (E)(1) RRUS-11 B12 (700)                            | _                              | (E)(2) DC POWER<br>& (1) FIBER | (1) RAYCAP<br>-48-60-18 |
| А3     | -                     | _       | -                         | _                            | _                   | _                     | _           | -                                   | -   | -                              | -                              | (E) (1<br>DC6-4         |
| A4     | _                     | _       | _                         | _                            | _                   | _                     | _           | _                                   | -   | _                              | _                              |                         |
| B1     | EXISTING              | PCS/850 | 7770.00.850.04            | 55X11X5                      | 88'-0"±             | 90'-4"±               | 150°        | (G)(E)(2)LGP21901<br>(E)(2)LGP21401 | (G)(P)(1) 4478 B5 (850)<br>(G)(P)(1) 4415 B25 (PCS) | 18.1X13.4X8.3<br>16.5X13.4X5.9 | (2) 7/8 COAX                   |                         |
| B2     | EXISTING              | 700 BC  | SBNHH-1D6565C             | 96.4X11.9X7.1                | <b>86'</b> -0″ ±    | 89'-0"±               | 155°        | -                                   | (E)(1) RRUS-11 B12 (700)                            | _                              | -                              | 1                       |
| В3     | -                     | _       | _                         | _                            | -                   | _                     | _           | -                                   | -   | -                              | -                              |                         |
| B4     | -                     | _       | -                         | _                            | _                   | _                     | _           | -                                   | -   | -                              | -                              |                         |
| C1     | EXISTING              | PCS/850 | 7770.00.850.04            | 55X11X5                      | 88'-0"±             | 90'-4"±               | 270°        | (G)(E)(2)LGP21901<br>(E)(2)LGP21401 | (G)(P)(1) 4478 B5 (850)<br>(G)(P)(1) 4415 B25 (PCS) | 18.1X13.4X8.3<br>16.5X13.4X5.9 | (2) 7/8 COAX                   |                         |
| C2     | EXISTING              | 700 BC  | AM-X-CD-17-65-00<br>T-RET | 96X11.8X6                    | <b>86</b> ' -0″ ±   | 89'-0"±               | 270°        | _                                   | (E)(1) RRUS-11 B12 (700)                            | _                              | -                              | ı                       |
| С3     | -                     | -       | _                         | _                            | -                   | _                     | -           | -                                   | -   | -                              | -                              |                         |
| C4     | -                     | -       | -                         | _                            | _                   | _                     | _           | -                                   | -   | -                              | -                              |                         |

|   | RRU CHART         |                  |  |  |  |  |  |  |  |  |
|---|-------------------|------------------|--|--|--|--|--|--|--|--|
| QUANTITY                                      | MODEL             | SIZE (L x W x D) |  |  |  |  |  |  |  |  |
| 3(P)(G)                                       | 4478 B5 (850)     | 18.1"x13.4"x8.3" |  |  |  |  |  |  |  |  |
| 3(P)(G)                                       | 4415 B25 (PCS)    | 16.5"x13.4"x5.9" |  |  |  |  |  |  |  |  |
| 3(E)  | RRUS-11 B12 (700) | 19.7"x17.0"x7.2" |  |  |  |  |  |  |  |  |
| NOTE: MOUNT PER MANUFACTURER'S SPECIFICATIONS |                   |                  |  |  |  |  |  |  |  |  |

,

FINAL ANTENNA SCHEDULE

NOTE:

SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER

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

NOTE: MOUNT PER MANUFACTURER'S SPECIFICATIONS.







SITE NUMBER: CTL05870 SITE NAME: EAST HADDAM NORTH

> 33 NEPTUNE AVENUE MOODUS, CT 06469 MIDDLESEX COUNTY



|     | SCALE: N.T.S |            |                 |      |       |     |                   |             |                |       |       |      |        |         |             |         |     |
|-----|--------------|------------|-----------------|------|-------|-----|-------------------|-------------|----------------|-------|-------|------|--------|---------|-------------|---------|-----|
|     |              |            |                 |      |       | h   | *                 |             | _<br>          |       | =     | *    |        |         | AT&T        |         |     |
| 1   |              |            | CONSTRUCTION    |      | A     | Va. | -<br><b>10</b> PH | M           |                | 12    |       | N.   |        | _       | DETAILS     |         |     |
| Α   | 11/07/22     | ISSUED FOR | REVIEW          |      | YH    | HC  | DPH               | a.          | $\sim 10^{10}$ | CENA  |       |      | LTI    | E 2C_5G | NR 1DR-1    | UPGRADE |     |
| NO. | DATE         |            | REVISIONS       |      | BY    | СНК | APP B             | <b>1</b> /3 | SSIC           | 14/41 | ENCIL | SITE | NUMBER |         | DRAWING NUM | IBER    | REV |
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|     |              |            |                 |      |       |     |                   |             |                |       |       |      |        |         |             |         |     |

PROPOSED 3.5" (O.D.)
GALVANIZED PIPE WITH CAP

PROPOSED AT&T RRUS
4478 B5 (850) (TYP. OF 1
PER SECTOR, TOTAL OF 3)

PROPOSED AT&T RRUS
4415 B25 (PCS)
(TYP. OF 1 PER SECTOR,
TOTAL OF 3)

PROPOSED AT&T SURGE
ARRESTOR TSXDC—4310FM
(TYP. OF 8 PER SECTOR,
TOTAL OF 24)

HILTI HIT—HY 200
1/2" HAS—E ROD
WITH 4 1/2" MIN EMD.

8"x8"x1/2" PLATE

EXISTING CONCRETE PAD

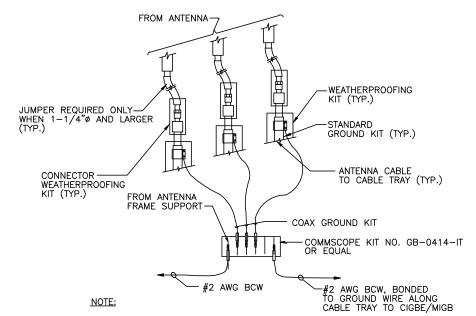
PROPOSED RUS MICRUS AS A CONTROL OF TAIL

3

3'-0"

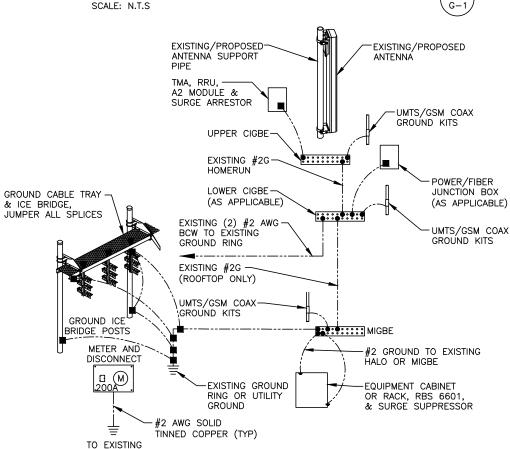
NOTE:

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

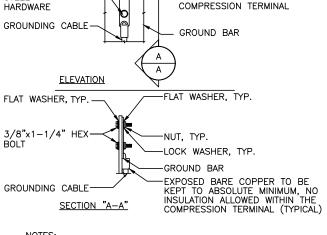


1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.





SCALE: N.T.S



#### NOTES:

STAINLESS STEEL

"DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.

TWO HOLE COPPER

- . OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATION.
- 3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB

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

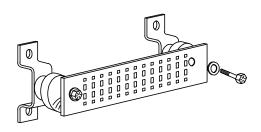
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

#### 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)









SERVICE GROUND

SITE NUMBER: CTL05870 SITE NAME: EAST HADDAM NORTH

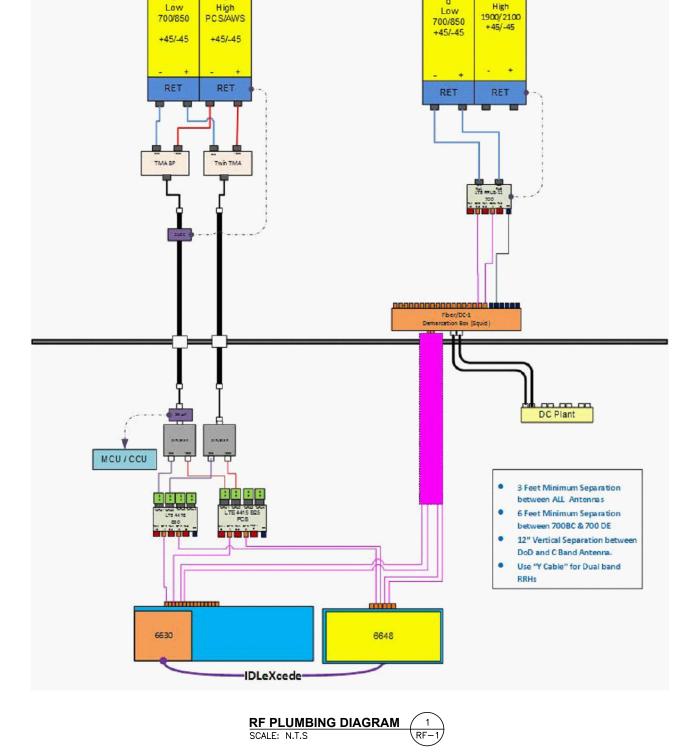
GROUNDING RISER DIAGRAM / 2



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|     |           |            |                |   |      | 7     | $\sqcap$ | #    | *   | 1  | N     | September 1 |       | <b> </b>     |
|     |           |            |                |   |      |       | Π        | E    |     |  | N6.2  | 41 Z8       |       | ⊢            |
| 1   | 01/24/23  | FINALS FOR | CONSTRUCTION   |   |      | M     | Xue      | U O  | PH, | M  | ( * T | 410         |       | $\mathbf{k}$ |
| Α   | 11/07/22  | ISSUED FOR | REVIEW         |   |      | ΥH    | НС       | ß    | ¥.  | 8  | ₹/ČF  | NRE         |       | S            |
| NO. | DATE      |            | REVISIONS      | 3 |      | BY    | СН       | < AP | PΒ  | 7.53   | SION  | AI FI       | Clus  | SIT          |
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|     | **          | AT&T                                       |     |  |  |  |  |  |  |  |
|-----|-------------|--|-----|--|--|--|--|--|--|--|
|     | <b>1</b>    | GROUNDING DETAILS E 2C_5G NR 1DR-1 UPGRADE |     |  |  |  |  |  |  |  |
| 12. | SITE NUMBER | DRAWING NUMBER                             | REV |  |  |  |  |  |  |  |
| ",, | CTL05870    | G-1  | 1   |  |  |  |  |  |  |  |
|     |             |  |     |  |  |  |  |  |  |  |

NOTE: REV: 2 DATED: 11/08/2022 RFDS ID: 5122574



Antenna 2 700 BC

Broadband

- 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.





SITE NUMBER: CTL05870 SITE NAME: EAST HADDAM NORTH

Antenna 1

PCS / 850

33 NEPTUNE AVENUE MOODUS, CT 06469 MIDDLESEX COUNTY



| 1   | 01/24/23  | FINALS FOR | CONSTRUCTION |    |      | DO    | НС  | DPH   |
|-----|-----------|------------|--------------|----|------|-------|-----|-------|
| Α   | 11/07/22  | ISSUED FOR | REVIEW       |    |      | ₹     | Ħ   | DPH   |
| NO. | DATE      |            | REVISIO      | NS |      | BY    | СНК | APP'D |
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AT&T

RF PLUMBING DIAGRAM LTE 2C\_5G NR 1DR-1 UPGRADE

SITE NUMBER DRAWING NUMBER CTL05870 RF-1

#### **33 NEPTUNE AVE**

Location 33 NEPTUNE AVE Mblu M55/ / L034/ /

Acct# 00207700 Owner BARON SMITH AMERICAN

LEGION 15

**Assessment** \$392,910 **Appraisal** \$561,300

PID 2488 Building Count 1

#### **Current Value**

| Appraisal      |              |           |           |  |  |  |  |  |  |
|----------------|--------------|-----------|-----------|--|--|--|--|--|--|
| Valuation Year | Improvements | Land      | Total     |  |  |  |  |  |  |
| 2020           | \$302,200    | \$259,100 | \$561,300 |  |  |  |  |  |  |
|                | Assessment   |           |           |  |  |  |  |  |  |
| Valuation Year | Improvements | Land      | Total     |  |  |  |  |  |  |
| 2020           | \$211,540    | \$181,370 | \$392,910 |  |  |  |  |  |  |

#### **Owner of Record**

OwnerBARON SMITH AMERICAN LEGION 15Sale Price\$0

Co-Owner Certificate

Address PO BOX 100 Book & Page 0072/0163 MOODUS, CT 06469-0100 Sale Date 05/15/1057

OODUS, CT 06469-0100 Sale Date 05/15/1957

Instrument 29

#### **Ownership History**

| Ownership History              |            |             |             |            |            |  |  |  |
|--------------------------------|------------|-------------|-------------|------------|------------|--|--|--|
| Owner                          | Sale Price | Certificate | Book & Page | Instrument | Sale Date  |  |  |  |
| BARON SMITH AMERICAN LEGION 15 | \$0        |             | 0072/0163   | 29         | 05/15/1957 |  |  |  |

#### **Building Information**

#### **Building 1 : Section 1**

Year Built: 1952 Living Area: 4,432 Replacement Cost: \$406,288 Building Percent Good: 68

**Replacement Cost** 

Less Depreciation: \$276,300

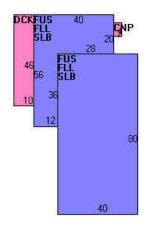
| Building Attributes |                |  |  |  |  |  |  |  |
|---------------------|----------------|--|--|--|--|--|--|--|
| Field               | Description    |  |  |  |  |  |  |  |
| Style:              | Clubs/Lodges   |  |  |  |  |  |  |  |
| Model               | Comm/Ind       |  |  |  |  |  |  |  |
| Grade               | С              |  |  |  |  |  |  |  |
| Stories:            | 1              |  |  |  |  |  |  |  |
| Occupancy           | 0.00           |  |  |  |  |  |  |  |
| Exterior Wall 1     | Clapboard      |  |  |  |  |  |  |  |
| Exterior Wall 2     |                |  |  |  |  |  |  |  |
| Roof Structure      | Gable          |  |  |  |  |  |  |  |
| Roof Cover          | Asphalt        |  |  |  |  |  |  |  |
| Interior Wall 1     | Drywall        |  |  |  |  |  |  |  |
| Interior Wall 2     |                |  |  |  |  |  |  |  |
| Interior Floor 1    | Carpet         |  |  |  |  |  |  |  |
| Interior Floor 2    | Pine/Soft Wood |  |  |  |  |  |  |  |
| Heating Fuel        | Oil            |  |  |  |  |  |  |  |
| Heating Type        | Forced Hot Air |  |  |  |  |  |  |  |
| AC Percent          | 100            |  |  |  |  |  |  |  |
| Foundation          | Slab           |  |  |  |  |  |  |  |
| Bldg Use            | Exempt Comm    |  |  |  |  |  |  |  |
| Total Rooms         | 0              |  |  |  |  |  |  |  |
| Total Bedrms        | 0              |  |  |  |  |  |  |  |
| Total Fixtures      | 6              |  |  |  |  |  |  |  |
| % Sprinklers        | 0              |  |  |  |  |  |  |  |
| Bsmt Area           | 0              |  |  |  |  |  |  |  |
| 1st Floor Use:      |                |  |  |  |  |  |  |  |
| Heat/AC             | Heat/Ac Split  |  |  |  |  |  |  |  |
| Frame Type          | Masonry        |  |  |  |  |  |  |  |
| Baths/Plumbing      | Average        |  |  |  |  |  |  |  |
| Ceiling/Wall        | Sus-Ceil & WI  |  |  |  |  |  |  |  |
| Rooms/Prtns         | Average        |  |  |  |  |  |  |  |
| Wall Height         | 9.00           |  |  |  |  |  |  |  |
| % Comn Wall         | 0.00           |  |  |  |  |  |  |  |

#### **Building Photo**



(https://images.vgsi.com/photos/EastHaddamCTPhotos/\00\00\70\36.jpg)

#### **Building Layout**



 $(https://images.vgsi.com/photos/EastHaddamCTPhotos//Sketches/2488\_2 instance of the control of$ 

|      | Building Sub-Areas (sq ft) | )             | <u>Legend</u>  |  |
|------|----------------------------|---------------|----------------|--|
| Code | Description                | Gross<br>Area | Living<br>Area |  |
| FUS  | Finished Upper Story       | 4,432         | 4,432          |  |
| CNP  | Canopy                     | 28            | 0              |  |
| DCK  | Deck                       | 460           | 0              |  |
| FLL  | Fin Lower Level Comm       | 4,432         | 0              |  |
| SLB  | Slab                       | 4,432         | 0              |  |
|      |                            | 13,784        | 4,432          |  |

#### **Extra Features**

| Extra Features             | <u>Legend</u> |
|----------------------------|---------------|
| No Data for Extra Features |               |

#### **Land Use**

#### **Land Line Valuation**

Use Code 201E

**Size (Acres)** 7.12

Description

Exempt Comm

Frontage Depth

Zone R1/2 Neighborhood

Assessed Value \$181,370

Alt Land Appr No

Appraised Value \$259,100

Category

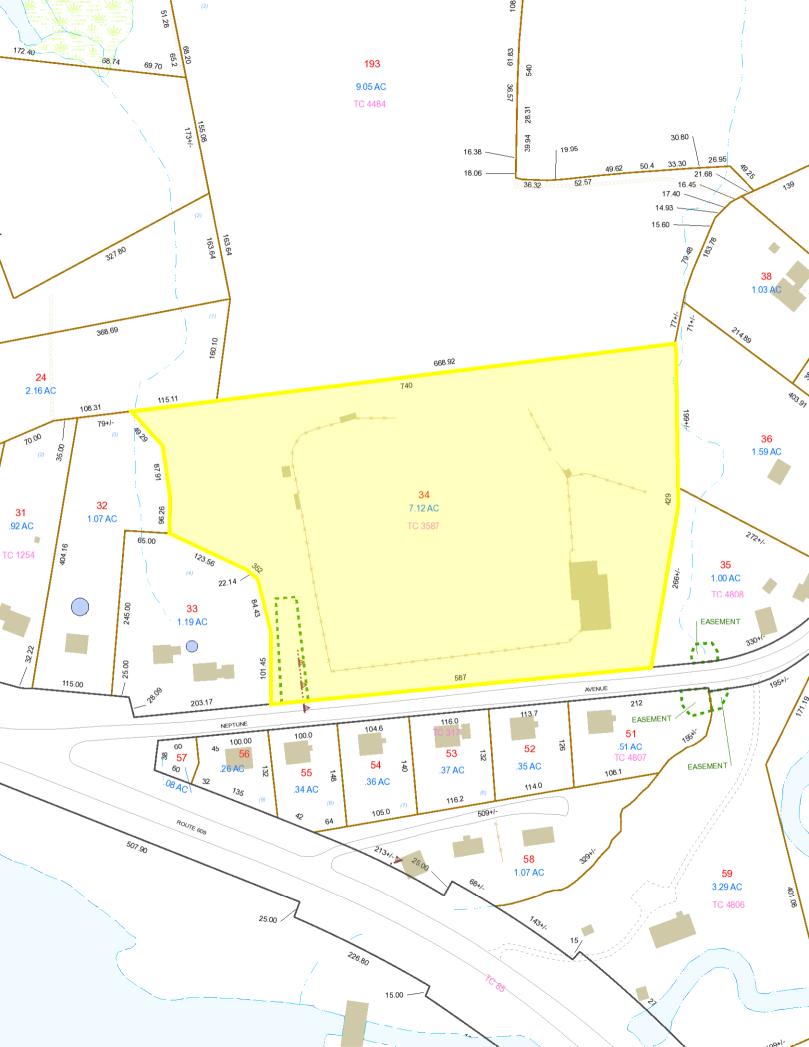
#### Outbuildings

|      |             |          | Outbuildings    |               |          | <u>Legend</u> |
|------|-------------|----------|-----------------|---------------|----------|---------------|
| Code | Description | Sub Code | Sub Description | Size          | Value    | Bldg #        |
| SHD1 | Shed        |          |                 | 128.00 S.F.   | \$1,200  | 1             |
| FOP  | Porch       |          |                 | 128.00 S.F.   | \$1,600  | 1             |
| SHD1 | Shed        |          |                 | 192.00 S.F.   | \$1,200  | 1             |
| SHD1 | Shed        |          |                 | 320.00 S.F.   | \$2,100  | 1             |
| PAV1 | Paving      |          |                 | 11024.00 S.F. | \$16,500 | 1             |
| SHD1 | Shed        |          |                 | 360.00 S.F.   | \$3,300  | 1             |

#### **Valuation History**

| Appraisal      |              |           |           |  |
|----------------|--------------|-----------|-----------|--|
| Valuation Year | Improvements | Land      | Total     |  |
| 2021           | \$302,200    | \$259,100 | \$561,300 |  |
| 2020           | \$302,200    | \$259,100 | \$561,300 |  |
| 2018           | \$302,200    | \$259,100 | \$561,300 |  |

| Assessment     |              |           |           |  |
|----------------|--------------|-----------|-----------|--|
| Valuation Year | Improvements | Land      | Total     |  |
| 2021           | \$211,540    | \$181,370 | \$392,910 |  |
| 2020           | \$211,540    | \$181,370 | \$392,910 |  |
| 2018           | \$211,540    | \$181,370 | \$392,910 |  |





#### STATE OF CONNECTICUT

#### CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@po.state.ct.us Web Site: www.state.ct.us/csc/index.htm

# CERTIFIED MAIL RETURN RECEIPT REQUESTED

December 16, 2003

Christopher B. Fisher, Esq. Cuddy & Feder & Worby LLP 90 Maple Avenue White Plains, NY 10601-5196

RE: **PETITION NO. 637** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed attachment of telecommunications antennas and related equipment to a replacement light pole at 33 Neptune Avenue, East Haddam, Connecticut.

Dear Attorney Fisher:

At a public meeting held on November 20, 2003, the Connecticut Siting Council (Council) considered and ruled that this proposal would not have a substantial adverse environmental effect, and pursuant to General Statutes § 16-50k would not require a Certificate of Environmental Compatibility and Public Need.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition, dated July 17, 2003, and additional information dated September 26, 2003.

Enclosed for your information is a copy of the staff report on this project.

Very truly yours,

Pamela B Katz P F

Chairman

PBK/laf

Enclosure: Staff Report dated November 20, 2003

B. Kety

c: Honorable Susan D. Merrow, First Selectman, Town of East Haddam James Ventres, Land-Use Administrator, Town of East Haddam

#### Petition 637: East Haddam AT&T Staff Report November 20, 2003

On Friday, August 22, 2003, Council member Phil Ashton and staff member David Martin met with AT&T representatives Chris Fisher, Joanne Desjardins, and Joe Falivene at the American Legion baseball field on Neptune Avenue in the Moodus section of East Haddam.

The American Legion is in the process of replacing six 50' wooden light poles that provided lighting for its ballfield with six newer and taller poles that would provide better lighting with less light spillover to adjacent properties. AT&T was searching for a site in this area and learned of the Legion's plans. AT&T negotiated an agreement with the Legion to place its antennas on one of the replacement light poles. Four of the six new poles will be 70' high. Two poles will be 90' high; one to accommodate three AT&T antennas, and one to be available for any other wireless carrier that might be interested in a site in this area. The ballfield is well-screened by mature deciduous trees for most of its perimeter. There is a cleared area near the entrance to the Legion property opposite several residences on Neptune Avenue.

The Legion and AT&T have taken the lighting plan to the East Haddam Planning and Zoning Commission and have received approval for the replacement poles. During the local approval process, AT&T provided notice to property owners within 250' of the Legion property and also flew two balloons at the proposed height of the taller poles.

In its petition, AT&T requests a declaratory ruling that the Siting Council has no jurisdiction over its facility. In making this request, AT&T contends that the primary purpose of the replacement poles are to light the ballfield and that its antennas would be an accessory use of the sort usually exempt from the Council's regulatory authority. Should the Council deem it does have jurisdiction, AT&T suggests that its use of the light poles would not have any substantial adverse environmental effect and that the Council should rule accordingly.

Setting the jurisdiction question aside, AT&T's use of a light pole to place its antennas in the Moodus area represents an imaginative solution to the problem of where to place a pole for its antennas and is not expected to create any significant adverse environmental impacts.

The Council has also received a letter from a nearby resident who is requesting the Council to order the relocation of the second 90-foot tower from a location behind third base to a location just beyond the outfield fence in right-center field. He is making this request to protect the view from his home a short distance away. The location he is proposing for the second tower, however, is close to the few homes on Neptune Avenue that have a relatively clear view of the field. During AT&T's consultation with the town, the Town Planner made clear his preference to locate the taller poles away from these homes.



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SALEM NH 03079-2837 12 INDUSTRIAL WAY SAI GROUP

HOLLIS M REDDING

Expected Delivery Date: 02/04/23 Ref#: CT5870

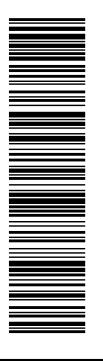
**R002** 



HON. IRENE M. HAINES, 1ST SELECTMAN, EAST HADDAM MUNICIPAL OFFICE COMPLEX

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1 PLAINS RD MOODUS CT 06469-1125



Electronic Rate Approved #038555749







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02/02/2023

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SALEM NH 03079-2837

Expected Delivery Date: 02/04/23 Ref#: CT5870

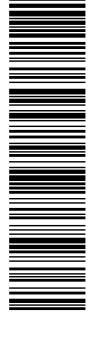
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**B001** 



BARON SMITH AMERICAN LEGION 15 PO BOX 100 MOODUS CT 06469-0100

# **USPS TRACKING #**



Electronic Rate Approved #038555749







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02/02/2023

**PRIORITY MAIL®** 

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SALEM NH 03079-2837 12 INDUSTRIAL WAY HOLLIS M REDDING SAI GROUP

**USPS TRACKING #** 



Electronic Rate Approved #038555749



Cut on dotted line.

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

#### **Hollis Redding**

**From:** auto-reply@usps.com

Sent: Thursday, February 2, 2023 4:37 PM

To: Hollis Redding

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#### Hello HOLLIS M REDDING,

USPS is now in possession of your item as of 4:20 pm on February 2, 2023 in MERIDEN, CT 06450.

Tracking Number: <u>9405503699300470822774</u>

### **Expected Delivery By**



By 9:00pm



#### **Hollis Redding**

**From:** auto-reply@usps.com

Sent: Thursday, February 2, 2023 4:37 PM

To: Hollis Redding

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#### Hello HOLLIS M REDDING,

USPS is now in possession of your item as of 4:19 pm on February 2, 2023 in MERIDEN, CT 06450.

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### **Expected Delivery By**



By 9:00pm

