



April 30, 2021

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

Notice of Exempt Modification Sonnecticut String Countries

Notice of Exempt Modification Sonnecticut String Countries

AT&T Site CT5638

Re:

AT&T Telecommunications Facility @ 88 Parsonage Hill Road North Branford, CT 06472

Dear Ms. Bachman,

New Cingular Wireless, PCS, LLC ("AT&T") currently maintains a wireless telecommunications facility on an existing +/- 195' self support tower at the above referenced address, latitude 41.369091, longitude -72.810498. Said self support tower is owned and managed by Ochenkowski Towers LLC.

AT&T desires to modify its existing telecommunications facility by replacing three (3) antennas, installing three (3) additional antennas, replacing six (6) remote radio units, adding (3) remote radio units, adding one (1) surge arrestor, adding two (2) DC cables and (1) fiber cable as more particularly detailed and described on the enclosed Construction Drawings prepared by Hudson Design Group Engineering, last revised on February 17, 2021. The centerline height of the existing antennas is and will remain at 173 feet.

Please accept this letter as notification pursuant to R.C.S.A §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A §16-50j-72(b)(2). In accordance with R.C.S.A §16-50j-73, a copy of this letter is being sent to the following individuals: Michael Paulhus Town Manager of the Town of North Branford: Carey Duques Town Planner of the Town of North Branford: Ochenkowski Towers LLC as tower owner and Jean Szwabowski as property owner.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72(b)(2). 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 modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
- The operation of the modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commissions safety standard. Please see the RF emissions calculation for AT&T's modified facility enclosed herewith.
- The proposed modifications will not cause an ineligible change or alternation in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading. Please see the structural analysis dated April 28, 2021 and prepared by Centek Engineering enclosed herewith.

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

Best Regards,

Allison Hebel

Site Acquisition Consultant – Agent for AT&T Centerline Communications LLC 750 West Center St. Ste 301 West Bridgewater, MA 02379 215-588-7035 ahebel@clinellc.com

Enclosures: Exhibit 1 – Construction Drawings

Exhibit 2 – Property Card and GIS Exhibit 3 – Structural Analysis Exhibit 4 – Mount Analysis

Exhibit 5 – RF Emissions Analysis Report Evaluation

Exhibit 6 – Available Town of North Branford Original Tower Approval Records

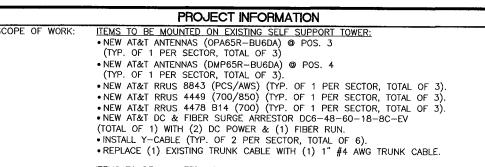
Exhibit 7 – Notice Deliver Confirmations

Cc: Michael Paulhus Town Manager of the Town of North Branford

Carey Duques Town Planner of the Town of North Branford

Ochenkowski Towers LLC as tower owner Jean Szwabowski as property owner

EXHIBIT 1



ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:

• INSTALL (1) DC 12. • INSTALL (1) FIBER MANAGEMENT BOX.

ADD RBS 6630.

• ADD (1) IDLe CABLE.

• ADD (1) RECTIFIER ON EXISTING POWER PLANT.

 UPGRADE FLEX DOOR KIT ON EXISTING FLEX CABINET. • BASEBAND CONFIGURATION AS PER PD / SECTION-7.

ITEMS TO REMAIN:

•(3) ANTENNAS,(6) TMA'S, (6) 1-5/8" COAX, (1) DC POWER & (1) FIBER.

88 PARSONAGE HILL ROAD SITE ADDRESS NORTHFORD, CT 06472

LATITUDE: 41.369091 N, 41' 22' 08.73" N

LONGITUDF: 72.810498 W, 72° 48' 37.79" W

TYPE OF SITE: SELF SUPPORT TOWER / OUTDOOR EQUIPMENT STRUCTURE HEIGHT: 195'-0"±

RAD CENTER:

CURRENT USE TELECOMMUNICATIONS FACILITY PROPOSED USE: TELECOMMUNICATIONS FACILITY



SITE NUMBER: CT5638

SITE NAME: NORTHFORD - TOTOKET

FA CODE: 10071180

PACE ID: MRCTB033810, MRCTB033657, MRCTB033597, MRCTB033747

PROJECT: LTE 3C_4C_5C_4TX4RX 2021 UPGRADE

	DRAWING INDEX		
SHEET NO.	DESCRIPTION	REV.	
T-1	TITLE SHEET	4	
GN-1	GENERAL NOTES	4	
A-1	COMPOUND & EQUIPMENT PLANS	4	
A-2	ANTENNA LAYOUTS & ELEVATION	4	
A-3	DETAILS	4	
G-1	GROUNDING DETAILS	4	
RF-1	RF PLUMBING DIAGRAM	4	

FROM ROCKY HILL, HEAD SOUTHWEST ON CONCRIB LN. TURN LEFT ONTO SOLO DR. TURN RIGHT ONTO GILBERT AVE. TURN RIGHT ONTO STATE HWY 411. TURN LEFT TO MERGE ONTO 1–91 S. TAKE EXIT 14 FOR E CENTER ST TOWARD CT-150. TURN LEFT ONTO E CENTER ST. TURN RIGHT ONTO NORTHFORD RD. CONTINUE ONTO WOODS HILL RD. TURN RIGHT ONTO CT-17 S. TURN LEFT ONTO VILLAGE ST. SLIGHT RIGHT ONTO PARSONAGE HILL RD. SITE WILL BE ON RIGHT.

VICINITY MAP



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

72 HOURS



BEFORE YOU DIG



CALL TOLL FREE 1-800-922-4455

or call 811 Will COMPLY

UNDERGROUND SERVICE ALERT

HUDSON **Design Group LLC** CENTERLINE

SITE NUMBER: CT5638 SITE NAME: NORTHFORD - TOTOKET 88 PARSONAGE HILL ROAD NORTHFORD, CT 06472 NEW HAVEN COUNTY

DIRECTIONS TO SITE:



4 04/13/21 ISSUED FOR CONSTRUCTION 3 02/17/21 ISSUED FOR CONSTRUCTION 2 08/03/20 ISSUED FOR CONSTRUCTION 05/07/19 ISSUED FOR CONSTRUCTION AM AT 10PI A 04/02/19 ISSUED FOR REVIEW NO. DATE BY CHK APP' REVISIONS SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: AM

AT&T

TITLE SHEET (LTE 3C_4C_5C_4TX4RX) DRAWING NUMBER

NORTH ANDOVER, MA 01845

750 WEST CENTER STREET, SUITE #301 WEST BRIDGEWATER, MA 02379

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.
- 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.
- 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 - CENTERLINE 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.
- 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
- 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	Ρ	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND AND THE THE
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE (ANTENNA)	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		A SOM AND



NORTH ANDOVER, MA 01845

FAX: (978) 336-5586



750 WEST CENTER STREET, SUITE #301

WEST BRIDGEWATER, MA 02379"

SITE NUMBER: CT5638
SITE NAME: NORTHFORD - TOTOKET

88 PARSONAGE HILL ROAD
NORTHFORD, CT 06472
NEW HAVEN COUNTY



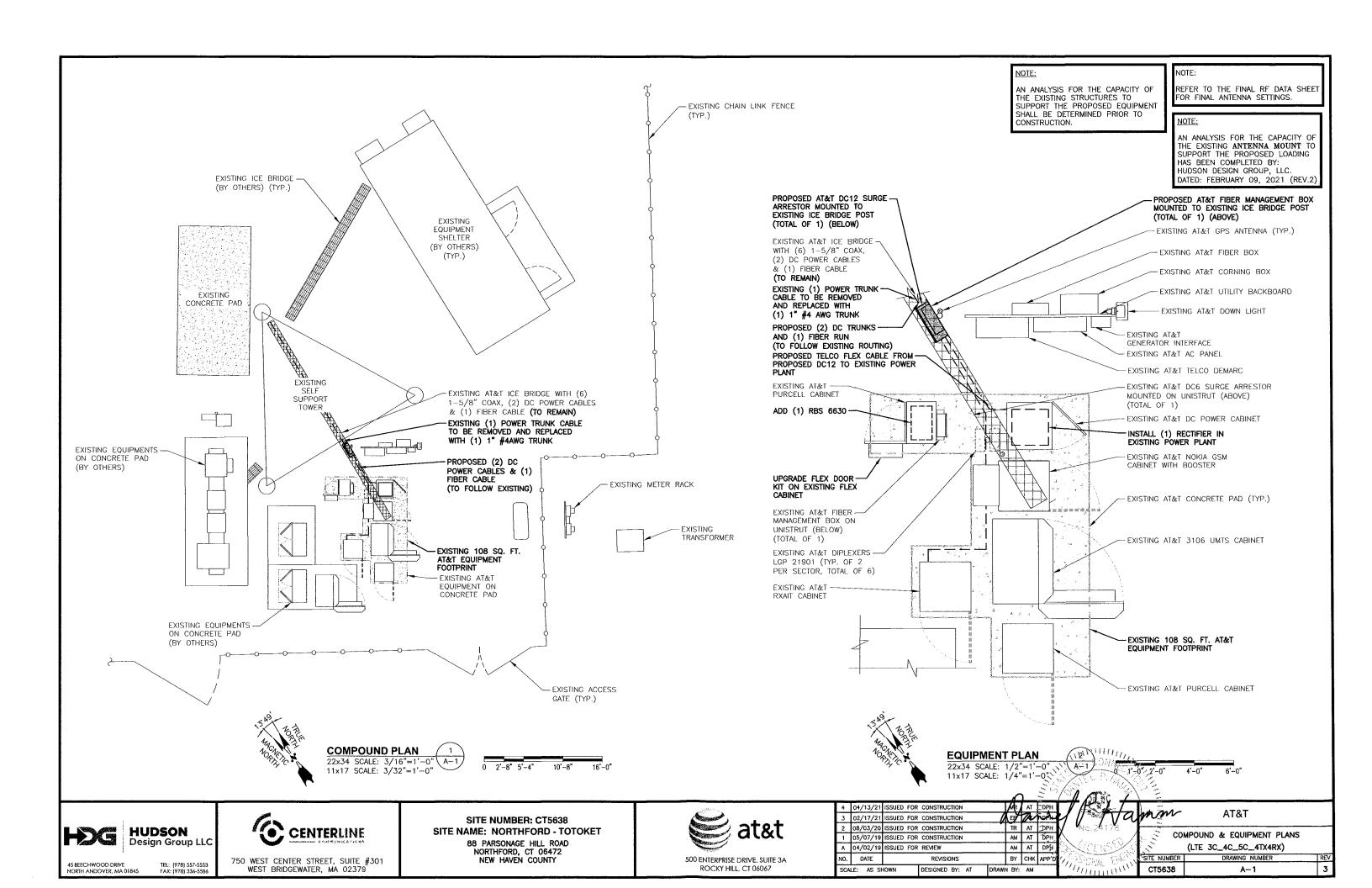
ROCKY HILL, CT 06067

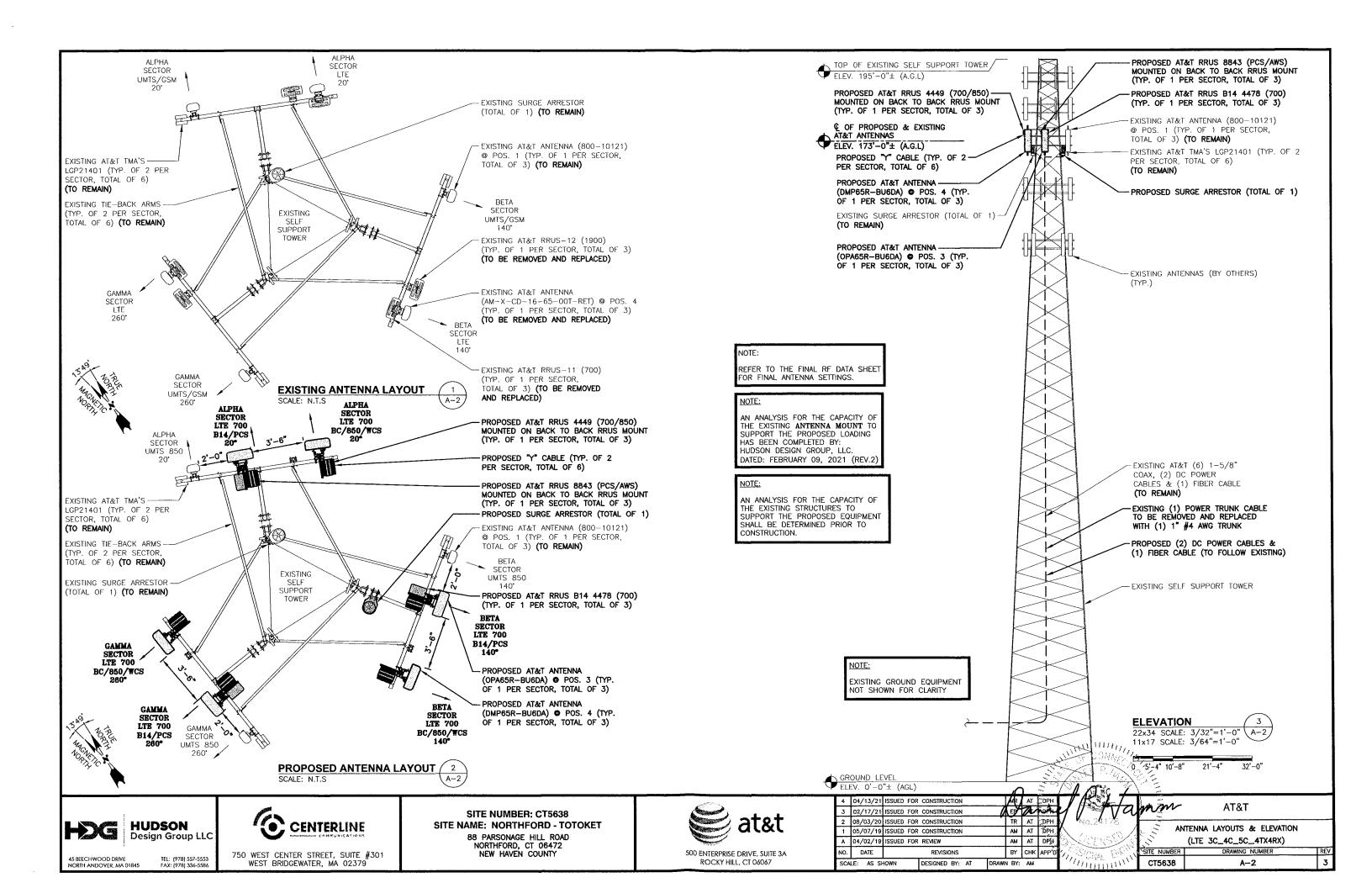
(E)	REF	RENCE)	and	10
4	04/13/21	ISSUED FO	R CONSTRUCTION		MR.	AT :	CDPH	
3	02/17/21	ISSUED FO	R CONSTRUCTION		EP	W	1	V
2	08/03/20	ISSUED FO	R CONSTRUCTION		TR	ΑT	"DPH	V
1	05/07/19	ISSUED FO	R CONSTRUCTION		AM	AT	ĎPH	
Α	04/02/19	ISSUED FO	R REVIEW		AM	AT	DPH	SA
١٥.	DATE		REVISIONS		BY	СНК	APP'D	1/1
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GENERAL NOTES
(LTE 3C_4C_5C_4TX4RX)

SITE NUMBER DRAWING NUMBER R

CT5638 GN-1





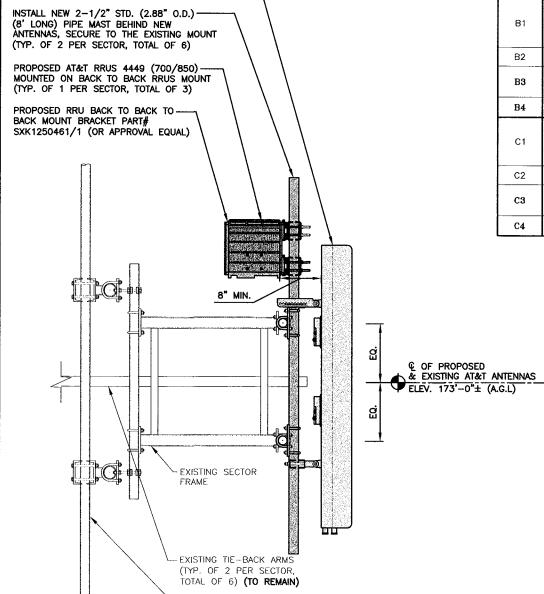


AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

PROPOSED AT&T ANTENNA (DMP65R-BU6DA) O POS. 4 (TYP. OF 1 PER SECTOR, TOTAL OF 3)

NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY: HUDSON DESIGN GROUP, LLC. DATED: FEBRUARY 09, 2021 (REV.2)



					ANT	ENNA SC	CHEDULE				
SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA © HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	EXISTING	UMTS 850	800-10121	54.5X10.3X5.9	173'±	20°	(E)(2) POWERWAVE LGP21401 (E)(2)(G) POWERWAVE LGP21901	-		(2) 1-5/8" COAX (LENGTH 215'±)	RAYCAP 60-18-8C
A2	_	-		_	_	-	-	_	_	-	\$ 6
A3	PROPOSED	LTE 700 B14/PCS	OPA65R-BU6DA	71.2X21X7.8	173'±	20°	(P)(1) "Y" CABLE	(P)(1) 8843 (PCS/AWS) (P)(1) B14 4478 (700)	14.9X13.2X10.9 18.1X13.4X8.3	(E)(2) DC (E)(1) FIBER	(E)(1) DC6-48-6
A4	PROPOSED	LTE 700 BC/850/WCS	DMP65R-BU6DA	71.2X20.7X7.7	173'±	20°	(P)(1) "Y" CABLE	(P)(1) 4449 (700/850)	14.9X13.2X10.4	_	
B1	EXISTING	UMTS 850	800-10121	54.5X10.3X5.9	173'±	140°	(E)(2) POWERWAVE LGP21401 (E)(2)(G) POWERWAVE LGP21901	-	-	(2) 1–5/8" COAX (LENGTH 215'±)	(P)(1) RAYCAP DC6-48-60-18-8C
B2		-	_	_	-	_	-	_	-	-	-66-
В3	PROPOSED	LTE 700 B14/PCS	OPA65R-BU6DA	71.2X21X7.8	173'±	140°	(P)(1) "Y" CABLE	(P)(1) 8843 (PCS/AWS) (P)(1) B14 4478 (700)	14.9X13.2X10.9 18.1X13.4X8.3	(P)(2) DC (P)(1) FIBER	(P)(1)
B4	PROPOSED	LTE 700 BC/850/WCS	DMP65R-BU6DA	71.2X20.7X7.7	173'±	140°	(P)(1) "Y" CABLE	(P)(1) 4449 (700/850)	14.9X13.2X10.4	<u> </u>	1 Ā
C1	EXISTING	UMTS 850	800-10121	54.5X10.3X5.9	173'±	260*	(E)(2) POWERWAVE LGP21401 (E)(2)(G) POWERWAVE LGP21901	-	-	(2) 1-5/8" COAX (LENGTH 215'±)	
C2	-	-		_	-	-	-	-	_	-	1 , 1
C3	PROPOSED	LTE 700 B14/PCS	OPA65R-BU6DA	71.2X21X7.8	173'±	260°	(P)(1) "Y" CABLE	(P)(1) 8843 (PCS/AWS) (P)(1) B14 4478 (700)	14.9X13.2X10.9 18.1X13.4X8.3	_	
C4	PROPOSED	LTE 700 BC/850/WCS	DMP65R-BU6DA	71.2X20.7X7.7	173'±	260°	(P)(1) "Y" CABLE	(P)(1) 4449 (700/850)	14.9X13.2X10.4	-	

RRU CHART QUANTITY MODEL 8843 (PCS/AWS) 3(P) 14.9" 13.2" 10.9" 4449 (700/850) 13.2" 14.9" 10.4" B14 4478 (700) 3(P) 18.1" 13.4" 8.3" MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:

SEE RFDS FOR RRH FREQUENCY AND MODEL NUMBER

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

MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRUS DETAIL SCALE: N.T.S



NOTE:

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

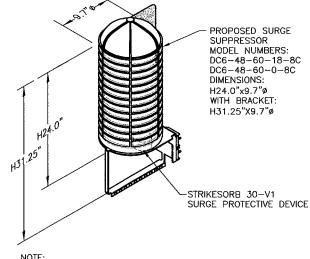
-PROPOSED

ARRESTOR

-EXISTING PIPE

(TOTAL OF 1)

SURGE



MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL

SCALE: N.T.S

SURGE SUPPRESSOR MOUNTING DETAIL

HDG

45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845

HUDSON Design Group LLC



750 WEST CENTER STREET, SUITE #301 WEST BRIDGEWATER, MA 02379

0 0'-6" 1'-0"

(A-3)

EXISTING TOWER LEG

PROPOSED ANTENNA &

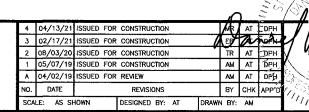
RRH MOUNTING DETAIL

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

SITE NUMBER: CT5638 SITE NAME: NORTHFORD - TOTOKET

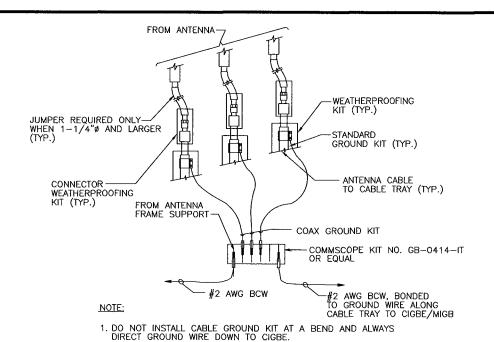
88 PARSONAGE HILL ROAD NORTHFORD, CT 06472 NEW HAVEN COUNTY



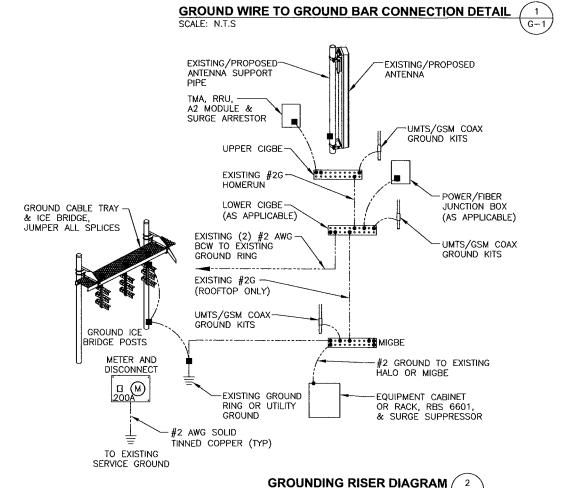


SCALE: N.T.S

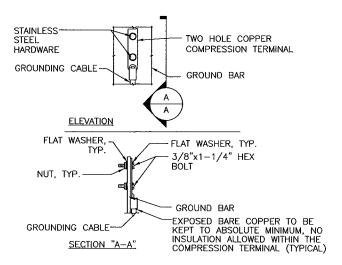
AT&T **DETAILS** (LTE 3C_4C_5C_4TX4RX) DRAWING NUMBER CT5638 A-5







SCALE: N.T.S



NOTE:

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

TYPICAL GROUND BAR CONNECTION DETAIL SCALE: N.T.S



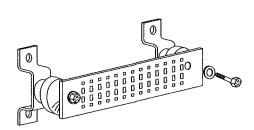
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

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

SECTION "A" - SURGE ABSORBERS

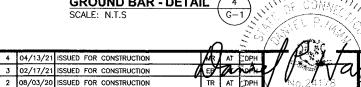
INTERIOR GROUND RING (#2) EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2) METALLIC COLD WATER PIPE (IF AVAILABLE) (#2) BUILDING STEEL (IF AVAILABLE) (#2)





REVISIONS

DESIGNED BY: AT



AM AT LOP

BY CHK APP

DRAWN BY: AM

AT&T

GROUNDING DETAILS

(LTE 3C_4C_5C_4TX4RX) DRAWING NUMBER CT5638 G-1

HUDSON **-**DG **Design Group LLC** CENTERLINE

SITE NUMBER: CT5638 SITE NAME: NORTHFORD - TOTOKET 88 PARSONAGE HILL ROAD NORTHFORD, CT 06472

NEW HAVEN COUNTY

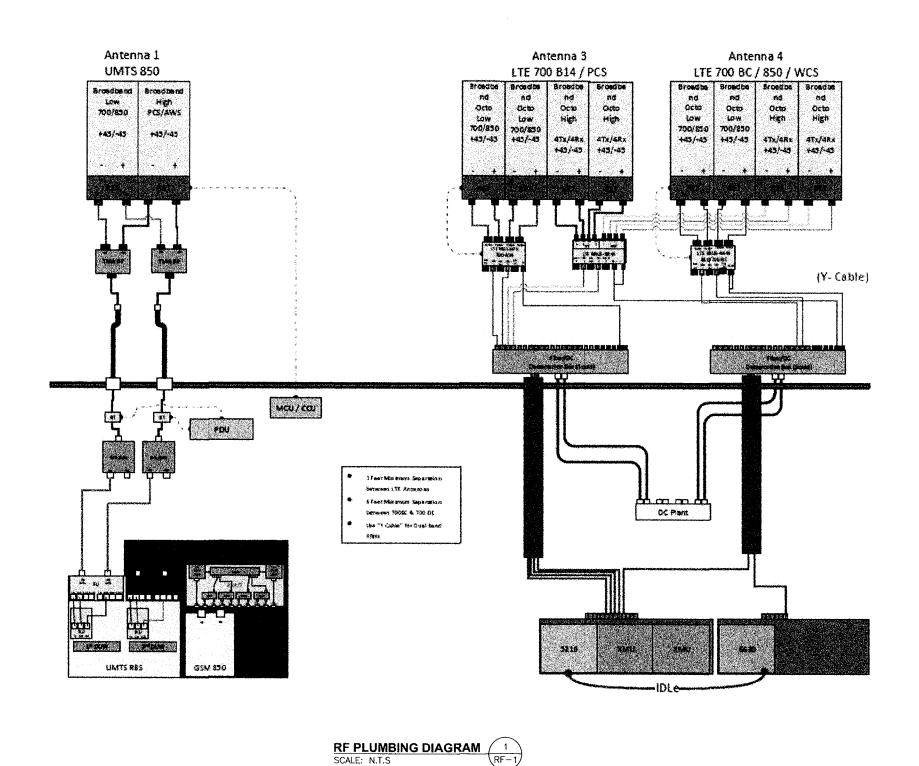
G-1,



ROCKY HILL, CT 06067

750 WEST CENTER STREET, SUITE #301 45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845 TEL: (978) 557-5553 FAX: (978) 336-5586 WEST BRIDGEWATER, MA 02379"

1 05/07/19 ISSUED FOR CONSTRUCTION A 04/02/19 ISSUED FOR REVIEW NO. DATE SCALE: AS SHOWN



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

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

HUDSON Design Group LLC CENTERLINE

SITE NUMBER: CT5638 SITE NAME: NORTHFORD - TOTOKET 88 PARSONAGE HILL ROAD NORTHFORD, CT 06472 NEW HAVEN COUNTY



4	04/13/21	ISSUED FO	R CONSTRUCTIO	N		MR	ΑT	DPH
3	02/17/21	ISSUED FO	OR CONSTRUCTIO	N		EB	ΑT	DPH
2	08/03/20	ISSUED FO	R CONSTRUCTIO	N		TR	AT	DPH
1	05/07/19	ISSUED FO	OR CONSTRUCTIO	N		AM	AT	DPH
Α	04/02/19	ISSUED FO	R REVIEW			AM	ΑT	DPH
NO.	DATE		REVISIONS			BY	снк	APP'D
SCA	F: AS SI	HOWN	DESIGNED BY	ΔT	DRAWN	RY.	ΔМ	

AT&T RF PLUMBING DIAGRAM (LTE 3C_4C_5C_4TX4RX) DRAWING NUMBER SITE NUMBER CT5638 RF-1

45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845

TEL: (978) 557-5553 FAX: (978) 336-5586

750 WEST CENTER STREET, SUITE #301 WEST BRIDGEWATER, MA 02379

EXHIBIT 2





88 Parsonage Hill Rd











Nearby

Send to your phone

88 PARSONAGE HILL RD

Location 88 PARSONAGE HILL RD

Mblu 51/A 7///

Acct# 002953 Owner SZWABOWSKI JEAN 1/3

\$864,000 Assessment

Appraisal \$1,248,800

PID 3060 **Building Count** 4

Current Value

	Appraisal		
Valuation Year	Improvements	Land	Total
2020	\$691,400	\$557,400	\$1,248,800
	Assessment	tarinin se tambuhan yanan karut magasa yanatarin bahin da wakana sa sa jaga ban dangga bangan banga karut mendi	Phatri Paran (1944) di diki da satai kita 1984) da ika zara Barup di diki kan di ketaruan da Accessi.
Valuation Year	Improvements	Land	Total
2020	\$473,900	\$390,100	\$864,000

Owner of Record

Owner

SZWABOWSKI JEAN 1/3

Co-Owner OCHENKOWSKI J J JR 1/3 & K W 1/3 EACH

Address

84 PARSONAGE HL RD NORTHFORD, CT 06472-1445 Sale Price

Sale Date

Certificate

Book & Page

0429/1132 12/23/2009

\$90,000

Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
SZWABOWSKI JEAN 1/3	\$90,000		0429/1132	12/23/2009
SZWABOWSKI JEAN &	\$90,000		0429/1128	12/23/2009
SZWABOWSKI JEAN &	\$0		0276/0749	12/15/1998
OCHENKOWSKI VERONICA TIC +	\$400,000		0269/0844	05/11/1998
OCHENKOWSKI VERONICA	\$0		0040/0206	11/14/1960

Building Information

Building 1 : Section 1

Year Built:

1949

Living Area:

1,996

Replacement Cost:

\$197,304

Building Percent Good:

55

Replacement Cost

Less Depreciation:

\$108,500

Building Attributes			
Field	Description		
Style:	RES TYPE COMM		
Model	Res Type Com		
Grade:	Above Avg		
Stories:	1 1/2 Stories		
Occupancy	2		
Exterior Wall 1	Aluminum Sidng		

Building Photo



Exterior Wall 2	
Roof Structure:	Gable/Hip
Roof Cover	Asphalt Shingl
Interior Wall 1	Plastered
Interior Wall 2	Plywood Panel
Interior Flr 1	Carpet
Interior FIr 2	Hardwood
Heat Fuel	Oil
Heat Type:	Forced Air-Duc
AC Type:	Central
Total Bedrooms:	2 Bedrooms
Total Bthrms:	2
Total Half Baths:	1
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	Average
Kitchen Style:	Average
Num Kitchens	02
Cndtn	
Num Park	
Fireplaces	
Fndtn Cndtn	
Basement	

Building 2 : Section 1

Year Built:

1958

Living Area:

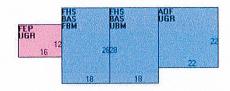
2,286

Replacement Cost: **Building Percent Good:** \$183,022 64

Replacement Cost

Building	Attributes : Bldg 2 of 4
Field	Description
Style:	Ranch
Model	Residential
Grade:	Average
Stories:	1 Story
Occupancy	1
Exterior Wall 1	Vinyl Siding
Exterior Wall 2	
Roof Structure:	Gable/Hip
Roof Cover	Asphalt Shingl
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Flr 1	Carpet
Interior FIr 2	
Heat Fuel	Oil
Heat Type:	Hot Water
AC Type:	None
Total Bedrooms:	3 Bedrooms
Total Bthrms:	2
Total Half Baths:	0

Building Layout



 $(http://images.vgsi.com/photos/NorthBranfordCTPhotos//Sketches/3060_3) \\$

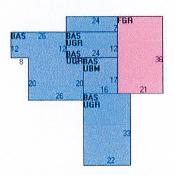
	Building Sub-Areas (sq ft)			
Code	Description	Gross Area	Living Area	
BAS	First Floor	1,008	1,008	
FHS	Half Story, Finished	1,008	504	
AOF	Office, (Average)	484	484	
FBM	Basement, Finished	504	0	
FEP	Porch, Enclosed, Finished	192	0	
UBM	Basement, Unfinished	504	0	
UGR	Garage, Unfinished	676	0	
Control of the second	Agricultura de Andrea de Andrea (Andrea de Andrea de And	4,376	1,996	

Building Photo



(http://images.vgsi.com/photos/NorthBranfordCTPhotos//default.jpg)

Building Layout



 $(http://images.vgsi.com/photos/NorthBranfordCTPhotos//Sketches/3060_5) and the control of the$

Building Sub-Areas (sq ft)

Legend

Total Xtra Fixtrs:	
Total Rooms:	5 Rooms
Bath Style:	Average
Kitchen Style:	Average
Num Kitchens	01
Cndtn	CONTENTION OF THE PROPERTY OF
Num Park	and the second and th
Fireplaces	# 5.75 Mark (1988) of all griffs beauty is provided. See Augustiness of the Control of the See Augustiness of the September o
Fndtn Cndtn	
Basement	

Code	Description	Gross Area	Living Area
BAS	First Floor	2,286	2,286
FGR	Garage, Framed	756	0
UBM	Basement, Unfinished	272	0
UGR	Garage, Unfinished	1,182	0
	en gelden zur jegenzer und den einer der zugen zu heben kannen gereicht zur geweine der zur gemeine zur der de	4,496	2,286

Building 3 : Section 1

Year Built:

1973

Living Area:

600

Replacement Cost:

\$38,964 49

Building Percent Good: Replacement Cost

Less Depreciation:	\$19,100
Bui	lding Attributes : Bldg 3 of 4
Field	Description
Style:	Industrial
Model	Ind or Comm
Grade	Average
Stories:	1
Occupancy	1.00
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Rolled Compos
Interior Wall 1	Drywall/Sheet
Interior Wall 2	Minim/Masonry
Interior Floor 1	Vinyl/Asphalt
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	Heat Pump
Struct Class	
Bldg Use	COMM WHSE MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	0311
Heat/AC	HEAT/AC PKGS
Frame Type	MASONRY
Baths/Plumbing	LIGHT
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	0.00
% Comn Wall	12.00
CHARLES AND	

Building 4 : Section 1

Year Built:

Living Area:

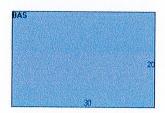
0

Building Photo



(http://images.vgsi.com/photos/NorthBranfordCTPhotos//default.jpg)

Building Layout



(http://images.vgsi.com/photos/NorthBranfordCTPhotos//Sketches/3060_5

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	600	600
	and the same and t	600	600

Replacement Cost:

\$0

Building Percent Good:

Replacement Cost

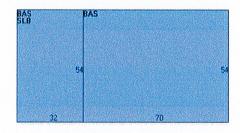
ess Deprecia	tion:	\$0	
	150	200	

Building Attributes : Bldg 4 of 4		
Field	Description	
Style:	Outbuildings	
Model		
Grade:		
Stories:		
Occupancy		
Exterior Wall 1		
Exterior Wall 2	Marithment Marit Scott and American (C. Marine Brights of the government of the marity and specific and speci	
Roof Structure:		
Roof Cover		
Interior Wall 1		
nterior Wall 2		
Interior FIr 1		
nterior Flr 2		
Heat Fuel		
Heat Type:		
AC Type:		
Total Bedrooms:		
Total Bthrms:		
Total Half Baths:		
Total Xtra Fixtrs:		
Total Rooms:		
Bath Style:		
Kitchen Style:		
Num Kitchens		
Cndtn		
Num Park		
Fireplaces		
Fndtn Cndtn		
Basement		



(http://images.vgsi.com/photos/NorthBranfordCTPhotos//default.jpg)

Building Layout



(http://images.vgsi.com/photos/NorthBranfordCTPhotos//Sketches/3060_5

	Legend	
	No Data for Building Sub-Areas	

Extra Features

Extra Features			Legend	
Code	Description	Size	Value	Bldg #
FPL2	FIREPLACE 1.5 STY	1.00 UNITS	\$2,800	1

Land

Land Use

Land Line Valuation

Use Code Description 010M

SINGLE FAM MDL-03

Zone

R40

Category

Alt Land Appr

Neighborhood

No

Depth Assessed Value \$390,100

Size (Acres)

Frontage

Appraised Value \$557,400

9.31

0

0

Outbuildings

Code	Description	Sub Code	Sub Description	Size	Value	Bldg#
ELCB	ELECTRONIC COMM BLDG			576.00 S.F.	\$64,800	4
PAV1	PAVING-ASPHALT			4000.00 S.F.	\$3,400	3
SHD1	SHED FRAME			220.00 S.F.	\$800	2
ELCB	ELECTRONIC COMM BLDG			576.00 S.F.	\$64,800	4
FN5	FENCE-10'CHAIN			300.00 L.F.	\$3,200	3
BRN1	BARN - 1 STORY			5058.00 S.F.	\$13,000	4
SHD8	SHED UNDER 144 SF			128.00 S.F.	\$15,000	3
FGR2	GARAGE-GOOD			1200.00 S.F.	\$27,000	3
SHD1	SHED FRAME			288.00 S.F.	\$1,700	1
MSC40	RADIO TOWER			175.00 UNIT	\$17,500	3
MSC40	RADIO TOWER			175.00 UNIT	\$87,500	3
TW1	CELL TOWER			125.00 HEIGHT	\$50,600	3
ELCB	ELECTRONIC COMM BLDG	A SAME AND A SAME OF THE SAME		360.00 S.F.	\$60,800	3
ELCB	ELECTRONIC COMM BLDG			200.00 S.F.	\$33,800	3

Valuation History

Appraisal					
Valuation Year Improvements Land Total					
2019	\$691,400	\$557,400	\$1,248,800		
2018	\$691,400	\$557,400	\$1,248,800		
2017	\$691,400	\$ 557,400	\$1,248,800		

Assessment				
Valuation Year Improvements Land Total				
2019	\$473,900	\$390,100	\$864,000	
2018	\$473,900	\$390,100	\$864,000	
2017	\$473,900	\$390,100	\$864,000	

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1

EXHIBIT 3



Centered on Solutions™

Structural Analysis Report

195' Existing Lattice Tower

Proposed AT&T Antenna Upgrade

Site Ref: CT5638

88 Parsonage Hill Road Northford, CT

CENTEK Project No. 21048.02

Date: April 28, 2021

Max Stress Ratio = 74.9%



Prepared for: AT&T Mobility 500 Enterprise Drive, Suite 3A Rocky Hill, CT 06067

Structural Analysis - 195-ft Lattice Tower AT&T Antenna Upgrade – CT5638 Northford, CT April 28, 2021

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SECTION 1 - REPORT

- INTRODUCTION
- ANTENNA AND APPURTENANCE SUMMARY
- PRIMARY ASSUMPTIONS USED IN THE ANALYSIS
- ANALYSIS
- TOWER LOADING
- TOWER CAPACITY
- FOUNDATION AND ANCHORS
- CONCLUSION

SECTION 2 - CONDITIONS & SOFTWARE

- STANDARD ENGINEERING CONDITIONS
- GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM

SECTION 3 - CALCULATIONS

- tnxTower INPUT/OUTPUT SUMMARY
- tnxTower FEED LINE PLAN
- tnxTower FEED LINE DISTRIBUTION
- tnxTower DETAILED OUTPUT
- FOUNDATION ANALYSIS

SECTION 4 - REFERENCE MATERIALS

RF DATA SHEET

Structural Analysis - 195-ft Lattice Tower AT&T Antenna Upgrade – CT5638 Northford, CT April 28, 2021

Introduction

The purpose of this report is to summarize the results of the non-linear, $P-\Delta$ structural analysis of the antenna upgrade proposed by AT&T on the existing lattice tower located in Northford (North Branford), Connecticut.

The host tower is a 195-ft, three legged, lattice tower originally designed and manufactured by Central Tower project no. F-722 dated 4/9/99. The tower geometry, structure member sizes and foundation information were taken from the aforementioned design documents.

Existing antenna and appurtenance inventory was taken from tower mapping reports prepared by Provertic dated January 18, 2019 and Hightower Solutions dated January 16, 2020.

Proposed antenna and appurtenance inventory for T-Mobile was taken from an RF data sheet dated 8/24/20.

Proposed antenna and appurtenance inventory for AT&T was taken from an RF data sheet dated 4/5/21.

The tower consists of ten (10) vertical sections consisting of solid round pipe legs conforming to ASTM A529 Gr. 50 and steel angle lateral bracing conforming to ASTM A36. The vertical tower sections are connected by bolted flange plates with the diagonal and horizontal bracing to pipe legs consisting of bolted connections. The width of the tower face is 5-ft 0-in at the top and 23-ft 6-in at the bottom.

Antenna and Appurtenance Summary

The existing and proposed loads considered in the analysis consist of the following:

- Sprint (Existing): <u>Antenna:</u> Three (3) RFS APXVSPP18-C-A20 panel antennas, three (3) 1900MHz 4X45W RRHs, three (3) 800MHz 2X50W RRHs and three (3) Notch Filters mounted on a triangular platform with a RAD center elevation of ±192-ft above grade level. <u>Coax Cable:</u> Three (3) 1-1/4"Ø Hybriflex cables running on a leg/face of the existing tower as specified in Section 3 of this report.
- T-MOBILE (Existing Configuration): <u>Antennas</u>: Six (6) Ericsson AIR21 panel antennas, three (3) Andrew LNX-6515DS panel antennas, three (3) TMAs and three (3) Ericsson RRUS-11 mounted on three (3) 15-ft T-Frames with a RAD center elevation of ±180-ft above grade level. <u>Coax Cables</u>: Twelve (12) 1-5/8" Ø coax cables and one (1) 1-5/8" Ø fiber cable running on a face of the existing tower as specified in Section 3 of this report.
- T-MOBILE (Final Configuration):

 Antennas: Three (3) Ericsson AIR6449 panel antennas, three (3) Ericsson
 AIR32 panel antennas, three (3) RFS APXVAALL24_43 panel antennas, three (3)
 TMAs, three (3) Ericsson 4449 remote radio heads, three (3) Ericsson 4415
 remote radio heads and three (3) Commscope SDX1926Q-43 diplexers
 mounted on three (3) SitePro VFA12-HD V-Frames with a RAD center elevation
 of ±180-ft above grade level.
 Coax Cables: Six (6) 1-5/8" Ø coax cables and three (3) 1-5/8" Ø fiber cable

running on a face of the existing tower as specified in Section 3 of this report.

Structural Analysis - 195-ft Lattice Tower AT&T Antenna Upgrade – CT5638 Northford, CT April 28, 2021

AT&T (Existing Configuration):
Antenna: Three (3) Kathrein 800-10121 panel antennas, three (3) KMW AM-X-CD-16-65-00T panel antennas, six (6) Powerwave LGP21401 TMAs, three (3) Ericsson RRUS-11 remote radio heads, three (3) Ericsson RRUS-12 remote radio heads and one (1) Raycap DC6-48-60-18-8F surge arrestor mounted on three (3) 12-ft T-Frames with a RAD center elevation of ±172-ft above grade level.

Coax Cable: Six (6) 1-5/8" Ø coax cables, one (1) fiber cable and two (2) dc control

cables running on a leg/face of the existing tower as specified in Section 3 of this report.

AT&T (Proposed Final Configuration):
Antenna: Three (3) Kathrein 800-10121 panel antennas, three (3) CCI OPA65R-BU6DA panel antennas, three (3) CCI DMP65R-BU6DA panel antennas, six (6) Powerwave LGP21401 TMAs, three (3) Ericsson 4478 B14 remote radio heads, three (3) Ericsson 4449 B5/B12 remote radio heads, three (3) Ericsson 8843 B2/B66A remote radio heads and two (2) Raycap DC6-48-60-18-8F surge arrestors mounted on three (3) 12-ft T-Frames with a RAD center elevation of ±172-ft above grade level.

<u>Coax Cable:</u> Six (6) 1-5/8" \varnothing coax cables, two (2) fiber cable and four (4) dc control cables running on a leg/face of the existing tower as specified in Section 3 of this report.

- Empty Mounts (Existing):
 <u>Antenna:</u> Three (3) 12-ft T-Frames with a RAD center elevation of ±160-ft above grade level.
- Verizon (Existing): <u>Antennas:</u> Three (3) Andrew LNX-6513DS panel antennas, three (3) Antel BXA-171063-12CF panel antennas, three (3) Antel BXA-171085/8BF panel antennas, three (3) Antel BXA-70063/6CF panel antennas, three (3) RFS diplexers, three (3) Alcatel-Lucent RRH2x40-AWS remote radio heads and one (1) main distribution box mounted on (3) 12-ft T-Frames with a RAD center elevation of ±144-ft above grade level. <u>Coax Cable:</u> Twelve (12) 1-5/8" Ø coax cables and one (1) 1-5/8" Ø fiber cable running on a leg/face of the existing tower as specified in Section 3 of this report.
- Sprint (Existing):
 Antenna: One (1) GPS antenna on a 2-ft standoff with an elevation of ±80-ft above grade level.
 Coax Cable: One (1) 1/2" Ø coax cable running on a leg/face of the existing tower as specified in Section 3 of this report.

Structural Analysis - 195-ft Lattice Tower AT&T Antenna Upgrade – CT5638 Northford, CT April 28, 2021

Primary Assumptions Used in the Analysis

- The tower structure's theoretical capacity not including any assessment of the condition of the tower.
- The tower carries the horizontal and vertical loads due to the weight of antennas, ice load and wind.
- Tower is properly installed and maintained.
- Tower is in plumb condition.
- Tower loading for antennas and mounts as listed in this report.
- All bolts are appropriately tightened providing the necessary connection continuity.
- All welds are fabricated with ER-70S-6 electrodes.
- All members are assumed to be as specified in the original tower design documents.
- All members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- All member protective coatings are in good condition.
- All tower members were properly designed, detailed, fabricated, installed and have been properly maintained since erection.
- Any deviation from the analyzed antenna loading will require a new analysis for verification of structural adequacy.
- All coax cables should be routed as specified in section 3 of this report.

Structural Analysis - 195-ft Lattice Tower AT&T Antenna Upgrade – CT5638 Northford, CT April 28, 2021

Analysis

The existing tower was analyzed using a comprehensive computer program entitled tnxTower. The program analyzes the tower, considering the worst case loading condition. The tower is considered as loaded by concentric forces along the tower, and the model assumes that the tower members are subjected to bending, axial, and shear forces.

The existing tower was analyzed for the controlling basic wind speed (3-second gust) with no ice and the applicable wind and ice combination to determine stresses in members as per guidelines of TIA-222-G-2005 entitled "Structural Standard for Antenna Support Structures and Antennas", the American Institute of Steel Construction (AISC) and the Manual of Steel Construction; Load and Resistance Factor Design (LRFD).

The controlling wind speed is determined by evaluating the local available wind speed data as provided in Appendix N of the CSBC¹ and the wind speed data available in the TIA-222-G-2005 Standard.

Tower Loading

Tower loading was determined by the basic wind speed as applied to projected surface areas with modification factors per TIA-222-G-2005, gravity loads of the tower structure and its components, and the application of 0.75" radial ice on the tower structure and its components.

Basic	Wind
Speed	d:

Northford; v = 101 mph (Vasd)

[Appendix N of the 2018 CT Building Code]

Load Cases:

Load Case 1; 101 mph wind speed w/ no ice plus gravity load – used in

[Appendix N of the 2018 CT Building Code]

calculation of tower stresses and rotation.

Load Case 2; 50 mph wind speed w/

[Annex B of TIA-222-G-2005]

0.75" radial ice plus gravity load – used in calculation of tower stresses.

¹ The 2015 International Building Code as amended by the 2018 Connecticut State Building Code (CSBC).

Structural Analysis - 195-ft Lattice Tower AT&T Antenna Upgrade – CT5638 Northford, CT April 28, 2021

Tower Capacity

Tower stresses were calculated utilizing the structural analysis software tnxTower. Design flexural strength was determined based on section 4.7 and Table 4-8 of the TIA-222-G.

Calculated stresses were found to be within allowable limits.

Tower Section	Elevation	Stress Ratio (percentage of capacity)	Result
Diagonal (T10)	0'-0"-20'-0"	74.9%	PASS
Leg (T9)	20'-0"-40'-0"	65.4%	PASS

Foundation and Anchors

The existing foundation consists of a three (3) 3-ft \emptyset x 4-ft long reinforced concrete piers concentrically bearing on a 34-ft square x 2-ft 6-in thick reinforced concrete mat. The sub grade conditions used in the foundation analysis were derived from the aforementioned design documents. The base of the tower is connected to the foundation by means of (8) 1.375 $^{\circ}\emptyset$, ASTM A449 anchor bolts per leg embedded 5-ft 10-in into the concrete foundation structure.

The tower reactions developed from the governing Load Case were used in the verification of the foundation and anchor bolts:

Load Effect	Proposed Tower Reactions
Leg Shear	45,101 lbs
Leg Compression	423,598 lbs
Leg Tension	358,716 lbs
Base Moment	8,065,138 ft-lbs
Base Shear	73,889 lbs

The anchor bolts were found to be within allowable limits.

Tower Section	Component	Stress Ratio (percentage of capacity)	Result
Anchor Bolts	Tension	50.4%	PASS

Structural Analysis - 195-ft Lattice Tower AT&T Antenna Upgrade – CT5638 Northford, CT April 28, 2021

The foundation was found to be within allowable limits.

Foundation	Design Limit	TIA-222-G Section 9.4 FS ⁽¹⁾	Proposed Loading (FS) ⁽¹⁾	Result
Reinforced Concrete Pad and Piers	Overturning	1.0	1.61	PASS

Note 1: FS denotes Factor of Safety

Conclusion

This analysis shows that the subject tower <u>is adequate</u> to support the proposed antenna configuration with the below recommendations.

The analysis is based, in part, on the information provided to this office by AT&T. If the existing conditions are different than the information in this report, Centek Engineering, Inc. must be contacted for resolution of any potential issues.

Please feel free to call with any questions or comments.

Respectfully Submitted by:

Timothy J. Lynn, PE Structural Engineer

Structural Analysis - 195-ft Lattice Tower AT&T Antenna Upgrade – CT5638 Northford, CT April 28, 2021

Standard Conditions for Furnishing of Professional Engineering Services on Existing Structures

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessarily limited to:

- Information supplied by the client regarding the structure itself, its foundations, the soil conditions, the antenna and feed line loading on the structure and its components, or other relevant information.
- Information from the field and/or drawings in the possession of Centek Engineering, Inc. or generated by field inspections or measurements of the structure.
- It is the responsibility of the client to ensure that the information provided to Centek Engineering, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and are in an uncorroded condition and have not deteriorated. It is therefore assumed that its capacity has not significantly changed from the "as new" condition.
- All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement. In the absence of information to the contrary, all work will be performed in accordance with the latest revision of ANSI/ASCE10 & ANSI/EIA-222
- All services performed, results obtained, and recommendations made are in accordance
 with generally accepted engineering principles and practices. Centek Engineering, Inc.
 is not responsible for the conclusions, opinions and recommendations made by others
 based on the information we supply.

Structural Analysis - 195-ft Lattice Tower AT&T Antenna Upgrade – CT5638 Northford, CT April 28, 2021

<u>GENERAL DESCRIPTION OF STRUCTURAL ANALYSIS PROGRAM</u>

tnxTower, is an integrated structural analysis and design software package for Designed specifically for the telecommunications industry, tnxTower, formerly RISA Tower, automates much of the tower analysis and design required by the TIA/EIA 222 Standard.

tnxTower Features:

- tnxTower can analyze and design 3- and 4-sided guyed towers, 3- and 4-sided selfsupporting towers and either round or tapered ground mounted poles with or without guys.
- The program analyzes towers using the TIA-222-G (2005) standard or any of the previous TIA/EIA standards back to RS-222 (1959). Steel design is checked using the AISC ASD 9th Edition or the AISC LRFD specifications.
- Linear and non-linear (P-delta) analyses can be used in determining displacements and forces in the structure. Wind pressures and forces are automatically calculated.
- Extensive graphics plots include material take-off, shear-moment, leg compression, displacement, twist, feed line, guy anchor and stress plots.
- tnxTower contains unique features such as True Cable behavior, hog rod take-up, foundation stiffness and much more.

REPORT

EXHIBIT 4



April 15, 2019 July 23, 2020 (Rev. 1) **February 9, 2021 (Rev. 2)**





Centerline Communications 750 West Center Street, Suite #301 West Bridgewater, MA 02379

RE:

Site Number:

CT5638 (LTE 3C/4C/5C)

FA Number: PACE Number:

10071180 MRCTB033810

PACE Number: PT Number:

2101A0JD7W

Site Name: Site Address: NORTHFORD- TOTOKET

88 Parsonage Hill Road Northford, CT 06472

To Whom It May Concern:

Hudson Design Group LLC (HDG) has been authorized by Centerline Communications to perform a mount analysis on the existing AT&T antenna/RRH mounts to determine their capability of supporting the following additional loading:

- (3) 800-10121 Antennas (54.5"x10.3"x5.9"- Wt. = 45 lbs. /each)
- (6) LGP21401 TMA's (14.4"x9.0"x2.7" Wt. = 19 lbs. /each)
- (1) Squid Surge Arrestor (24.0"x9.7" Φ Wt. = 33 lbs. /each) (Tower Mount)
- (3) OPA65R-BU6DA Antennas (71.2"x21.0"x7.8" Wt. = 63 lbs. /each)
- (3) DMP65R-BU6DA Antennas (71.2"x20.7"x7.7" Wt. = 80 lbs. /each)
- (3) 4478 B14 RRH's (18.1"x13.4"x8.3" Wt. = 60 lbs. /each)
- (3) 8843 B2/B66A RRH's (14.9"x13.2"x10.9" Wt. = 72 lbs. /each)
- (3) 4449 B5/B12 RRH's (17.9"x13.2"x9.4" Wt. = 73 lbs. /each)
- (1) Squid Surge Arrestor (24.0"x9.7" Φ Wt. = 33 lbs. /each)

No original structural design documents or fabrication drawings were available for the existing mounts. HDG's subconsultant, ProVertic LLC, conducted a survey climb and mapping of the existing AT&T antenna mounts on April 9, 2019.

^{*}Proposed equipment shown in bold.

Mount Analysis Methods:

- This analysis was conducted in accordance with EIA/TIA-222-G, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the International Building Code 2015 with 2018 Connecticut State Building Code, and AT&T Mount Technical Directive R11.
- HDG considers this mount to be asymmetrical and has applied wind loads in 30 degree increments all around the mount. Per TIA-222-G Annex B, the max basic wind speed for this site is equal to 115 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 0.75 in. Per the AT&T Mount Technical Directive and Appendix N of the Connecticut State Building Code, an ultimate wind speed of 125 mph converted to a nominal wind speed of 97 mph and an escalated ice thickness of 1.77 in was used for this analysis.
- HDG considers this site to be exposure category C; tower is located near large, flat, open, terrain/grasslands.
- HDG considers this site to be topographic category 1; tower is located on flat terrain or the bottom of a hill or ridge.
- HDG considers this site to have a minimum spectral response acceleration parameter at short periods, Min. SS, of 0.260 and a maximum spectral response acceleration parameter at a period of 1 second, Max. SS, of 0.320.
- The mount has been analyzed with load combinations consisting of 250 lbs live load using a service wind speed of 30 mph wind on the worst case antenna. Analysis performed on each antenna pipe to determine worst case location; worst case location was antenna position 2.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worst
 case location on the mount.
- The existing mount is secured to the existing tower with threaded rods. The connection is considered OK by visual inspection.

Based on our evaluation, we have determined that the existing mounts **ARE CAPABLE** of supporting the proposed installation.

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Existing (LTE 3C/4C/5C) Mount Rating	3	LC28	91%	PASS

Reference Documents:

• Mount mapping report prepared by ProVertic LLC dated April 15, 2019.

This determination was based on the following limitations and assumptions:

- HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
- 2. 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. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
- 4. The existing mount has been adequately secured to the tower structure per the mount manufacturer's specifications.
- 5. All components pertaining to AT&T's mounts must be tightened and re-plumbed prior to the installation of new appurtenances.
- 6. HDG performed a localized analysis on the mount itself and not on the supporting tower structure.

Please feel free to contact our office should you have any questions.

Respectfully Submitted, Hudson Design Group LLC

fuluel al

Michael Cabral Vice President Daniel P. Hamm, PE Principal

OF CONNEC

EXHIBIT 5



Radio Frequency Safety Survey Report Prediction (RFSSRP)

AT&T Wireless Self Support Facility

Site ID: CTL05638

Site Name: Northford - Totoket

Address: 88 Parsonage Hill Road,

Northford, CT 06472 **Latitude:** 41.369092

Longitude: -72.810499

<u>USID:</u> 26043 **FA**: 10071180 Prepared for:

AT&T

Pace ID: MRCTB033810, MRCTB033657,

MRCTB033597, MRCTB033747

Report Writer: Samuel Cosgrove

Date: February 17, 2021

Report Reviewer: Brandon Green



Statement of Compliance

AT&T is compliant with FCC Regulations.



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1.0 GENERAL SUMMARY

Centerline Communications, LLC ("Centerline") has been contracted to provide a Radio Frequency (RF) Analysis for the following AT&T Mobility wireless self support facility to determine whether the facility is in compliance with federal standards and regulations regarding RF emissions. This analysis includes theoretical emissions calculations, for all equipment for AT&T Mobility .

1.1 SITE SUMMARY

	Analysis Site Da	ta	
	26043		
	10071180		
	Northford - Totoket		
Site Address:		88 Parsonage Hill Road, Northford CT	
		06472	
	41.369092		
	-72.810499		
	Self Support		
	Compliance Summ	ary	
(Compliant		
Maximum Modeled AT&T MPE% o	0.66%		
(Gen			
Maximum Modeled AT&T MPE	0.05%		
(Gen			
	Site Survey Data	a i i i i i i i i i i i i i i i i i i i	
Is Access Lock	Unknown		
Lock or Control M	Unknown		
	None		
	Site Data Informat	ion	
CD: CT5638_	CT5638_LTE_3C_4C_5C_4TX4RX_CD_REV3_02.17.21		
RFDS: Config fro	Config from CD was used for this modeling		



Signage and barriers are the primary means of mitigating access to accessible areas of exposure. Below is a summary of existing and recommended signage at this AT&T facility.

	Existing Signage and Barriers (AT&T Sectors)												
Location	Information	Notice	Notice 2	Caution	Caution 2	Caution 2B	Caution 2C	Warning	Warning 2	Barriers			
Access 1	0	0	0	0	0	1	0	0	0	0			
Alpha	0	0	0	0	0	0	0	0	0	0			
Beta	0	0	0	0	0	0	0	0	0	0			
Gamma	0	0	0	0	0	0	0	0	0	0			

Recommended Signage and Barriers (AT&T Sectors) – Actions that MUST be Taken											
Location	Notice 2	Caution 2	Caution 2B	Caution 2C	Warning 2	Barriers					
Access 1	0	0	0	0	0	0					
Alpha	0	0	0	0	0	0					
Beta	0	0	0	0	0	0					
Gamma	0	0	0	0	0	0					

	Final Compliant Configuration (AT&T Sectors) – All Mitigation Items that MUST be in Place												
Location	Information	Notice	Notice 2	Caution	Caution 2	Caution 2B	Caution 2C	Warning	Warning 2	Barriers			
Access 1	0	0	0	0	0	1	0	0	0	0			
Alpha	0	0	0	0	0	0	0	0	0	0			
Beta	0	0	0	0	0	0	0	0	0	0			
Gamma	0	0	0	0	0	0	0	0	0	0			

Alpha:

• No action required.

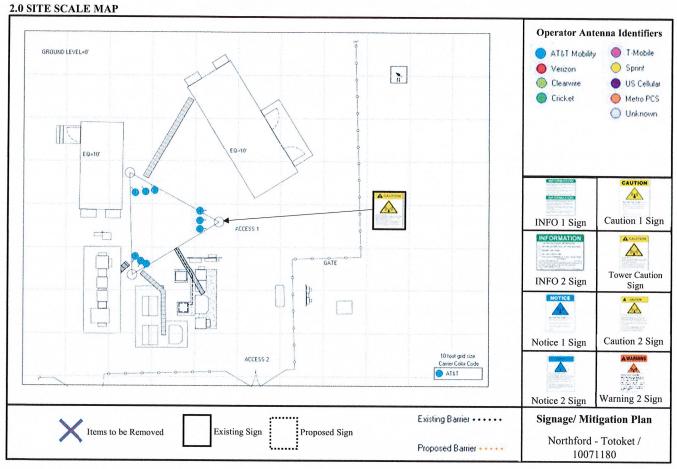
Beta:

• No action required.

Gamma:

No action required.





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3.0 ANTENNA INVENTORY

ANT ID	Operator	Antenna Make	Antenna Model	Type	Freq (MHz)	TPO (Watts)	# of TX	Azimuth (°)	BW (°)	Gain (dBd)	Total ERP (Watts)	Length (ft.)	Antenna Z Value (ft.) NWS*	Antenna Z Value (ft.) AGL**
1	AT&T	KATHREIN	80010121	Panel	850	40	2	20	86	11.35	1091.67	4.5	170.7	170.7
2	АТ&Т	CCI	OPA65R-BU6D	Panel	700	40	4	20	61	11.85	2449.74	5.9	170.0	170.0
2	AT&T	CCI	OPA65R-BU6D	Panel	1900	40	4	20	66	14.45	4457.79	5.9	170.0	170.0
2	AT&T	CCI	OPA65R-BU6D	Panel	2100	40	4	20	69	14.95	5001.73	5.9	170.0	170.0
3	AT&T	CCI	DMP65R-BU6D	Panel	700	40	4	20	66	11.75	2393.98	5.9	170.0	170.0
3	AT&T	CCI	DMP65R-BU6D	Panel	850	40	4	20	71	11.45	2234.19	5.9	170.0	170.0
3	AT&T	CCI	DMP65R-BU6D	Panel	2300	25	4	20	52	14.15	2600.16	5.9	170.0	170.0
4	AT&T	KATHREIN	80010121	Panel	850	40	2	140	86	11.25	1066.82	4.5	170.7	170.7
5	AT&T	CCI	OPA65R-BU6D	Panel	700	40	4	140	61	11.85	2449.74	5.9	170.0	170.0
5	AT&T	CCI	OPA65R-BU6D	Panel	1900	40	4	140	66	14.45	4457.79	5.9	170.0	170.0
5	AT&T	CCI	OPA65R-BU6D	Panel	2100	40	4	140	69	14.95	5001.73	5.9	170.0	170.0
6	AT&T	CCI	DMP65R-BU6D	Panel	700	40	4	140	66	11.75	2393.98	5.9	170.0	170.0
6	AT&T	CCI	DMP65R-BU6D	Panel	850	40	4	140	71	11.45	2234.19	5.9	170.0	170.0
6	AT&T	CCI	DMP65R-BU6D	Panel	2300	25	4	140	52	14.15	2600.16	5.9	170.0	170.0
7	AT&T	KATHREIN	80010121	Panel	850	40	2	260	86	11.25	1066.82	4.5	170.7	170.7
8	AT&T	CCI	OPA65R-BU6D	Panel	700	40	4	260	61	11.85	2449.74	5.9	170.0	170.0
8	AT&T	CCI	OPA65R-BU6D	Panel	1900	40	4	260	66	14.45	4457.79	5.9	170.0	170.0
8	AT&T	CCI	OPA65R-BU6D	Panel	2100	40	4	260	69	14.95	5001.73	5.9	170.0	170.0
9	АТ&Т	CCI	DMP65R-BU6D	Panel	700	40	4	260	66	11.75	2393.98	5.9	170.0	170.0
9	АТ&Т	CCI	DMP65R-BU6D	Panel	850	40	4	260	71	11.45	2234.19	5.9	170.0	170.0
9	AT&T	CCI	DMP65R-BU6D	Panel	2300	25	4	260	52	14.15	2600.16	5.9	170.0	170.0

Table 1: Total Site Data Table (*NWS = Nearest Walking Surface, **AGL = Above Ground Level)

Note: Z Value represents the bottom tip height of the antenna



4.0 PREDICTED EMISSION LEVELS AND DISCUSSION

All calculations performed based upon the data listed for this facility have produced results that are within allowable limits for General Population limits for exposure to RF emissions as specified by federal standards.

AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document states that microwave dishes are compliant if they are mounted 20 feet or greater above any accessible walking or working surface.

Maximum Predicted MPE Level on Site:	% of MPE Limit:	Location:
Accessible General Population MPE Limits:	Canton A	
Accessible Occupational MPE Limits:	0.13%	Sector A

Ground Level Assessment:	% of MPE Limit:
Ground Level General Population MPE Limits:	0.05%
Ground Level Occupational MPE Limits:	0.01%

Sector A: Transmitting over EQ Level	% of MPE Limit:	*Distance from Antenna:
Accessible General Population MPE Limits:	0.66%	0'
Accessible Occupational MPE Limits:	0.13%	0'

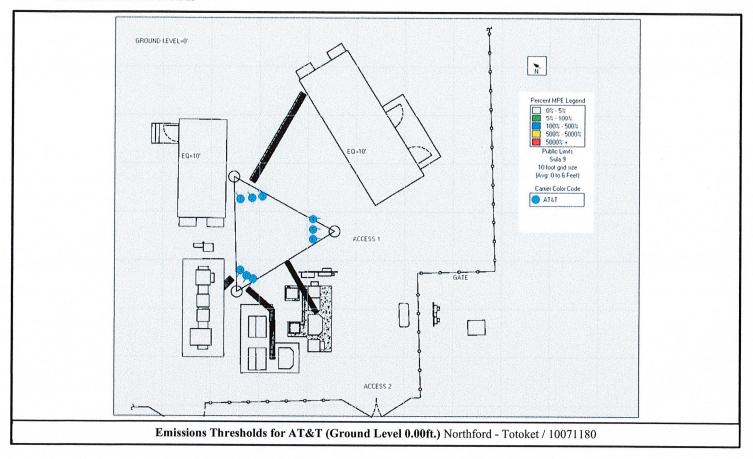
Sector B: Transmitting over EQ Level	% of MPE Limit:	*Distance from Antenna:
Accessible General Population MPE Limits:	0.04%	0'
Accessible Occupational MPE Limits:	0.01%	0'

Sector C: Transmitting over Ground Level	% of MPE Limit:	*Distance from Antenna:
Accessible General Population MPE Limits:	0.05%	0'
Accessible Occupational MPE Limits:	0.01%	0'

^{*}Distance from Antenna is the distance that the MPE limits are exceeded from the front face of the antenna, outward across an accessible area.

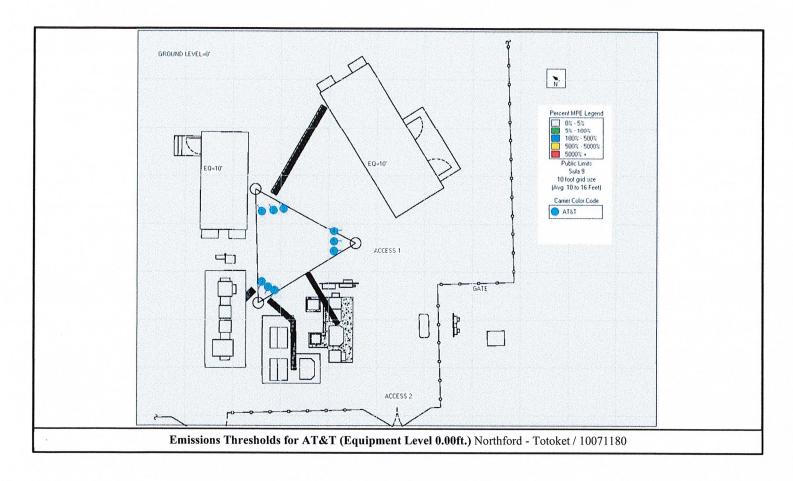


5.0 EMISSIONS DIAGRAMS



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6.0 STATEMENT OF COMPLIANCE

Centerline conducted worst case modeling to determine whether the self support facility located at 88 Parsonage Hill Road in Northford, Connecticut is in compliance with FCC Regulations.

6.1 STATEMENT OF AT&T MOBILITY COMPLIANCE

Based on the information analyzed, AT&T is in compliance with FCC Regulations. No additional action is required by AT&T.

6.2 RECOMMENDATIONS

	Existing Signage and Barriers (AT&T Sectors)												
Location	Information	Notice	Notice 2	Caution	Caution 2	Caution 2B	Caution 2C	Warning	Warning 2	Barriers			
Access 1	0	0	0	0	0	1	0	0	0	0			
Alpha	0	0	0	0	0	0	0	0	0	0			
Beta	0	0	0	0	0	0	0	0	0	0			
Gamma	0	0	0	0	0	0	0	0	0	0			

Rec	ommended Signa	ge and Barrie	rs (AT&T Sectors	s) – Actions that M	UST be Taken	
Location	Notice 2	Caution 2	Caution 2B	Caution 2C	Warning 2	Barriers
Access 1	0	0	0	0	0	0
Alpha	0	0	0	0	0	0
Beta	0	0	0	0	0	0
Gamma	0	0	0	0	0	0

	Final Compliant Configuration (AT&T Sectors) – All Mitigation Items that MUST be in Place												
Location	Information	Notice	Notice 2	Caution	Caution 2	Caution 2B	Caution 2C	Warning	Warning 2	Barriers			
Access 1	0	0	0	0	0	1	0	0	0	0			
Alpha	0	0	0	0	0	0	0	0	0	0			
Beta	0	0	0	0	0	0	0	0	0	0			
Gamma	0	0	0	0	0	0	0	0	0	0			

Alpha:

• No action required.

Beta:

• No action required.

Gamma:

No action required.



7.0 FALL ARREST AND PARAPET INFORMATION

As per AT&T barrier policy, rooftop edges that are protected with a 39-inch parapet wall or guardrail are safe for work activity within six (6) feet of the edge. OSHA has stated that an existing 39-inch guardrail or parapet provides sufficient protection for employees. The height of the top rail or equivalent component of guardrail systems in new construction shall be at least 42 inches above the walking or working surface. It should also be noted that the height of the parapet or guardrail may be reduced to no less than 30 inches at any point provided the sum of the depth (horizontal distance) of the top edge, and the height of the top edge (vertical distance from the work surface to the top edge of the top member, is at least 48 inches. If there is no reason for working atop the roof, then edge protection is not required. In addition, workers may use personnel lifts or temporary fall protection measures to perform work within 6 feet of the roof edge in place of permanent edge protection. Reference: 29 CFR 1910.28, 29 CFR 1910.23 (NPRM-1990); OSHA Letters of Interpretation 2/9/83 and 3/8/9



APPENDIX A: RF SIGNAGE

AT&T RF Signage

Sign	Description	Sign	Description
INFORMATION SE OFFICIAL SERVICE AND A SERVI	Information 1 Sign Gives guidelines on how to proceed and who to contact regarding areas that may exceed either the FCC's General Population or Occupational emissions limits.	Silf general control of the part of the pa	Caution 2C Sign Gives specific information on how to proceed and who to contact regarding antennas that are façade mounted, concealed or on stand-alone structures.
Beyond This Point you are mining a sains where RF Emissions may exceed the COCT General Projection Exposite Limiter	Blue Notice 1 Sign Used to alert individuals that they are entering an area that may exceed the FCC's General Population emissions limit. Must be positioned such that persons approaching from any angle have ample warning to avoid the marked areas.	MOTICE ((a)) All specific administration one. Feynod Bill Paint and are retiring an axia who could be paint; (b) thick may assess who could be paint; (b) thick may assess who could be paint of popular asses. (fine self-all behinders own trap in a bill control of the Bill Bill Bill and you for anothers or intensities part is preferring any motions or improve above (they are). • 600 6.18 more search.	Blue Notice 2 Sign Used to alert individuals that they are entering an area that may exceed the FCC's General Population emissions limits. To be used on barriers or antenna sectors as a hybrid of the Information 1 and Blue Notice 1 signs.
Beyond This Point you are ordering a controlled area when \$1.8 Amounts may sure of the PICC Corrupational Exportant Controlled The Controlled C	Yellow Caution 1 Sign- Rooftop Used to inform individuals that they are entering an area that may exceed the FCC's Occupational emissions limit. Must be positioned such that persons approaching from any angle have ample warning to avoid the marked areas.	CAUTION California enteror interest. Insection in the case the caution in the case and the part of the case and the california in the following public for earlier in the case and the california in the califor	Yellow Caution 2 Sign-Rooftop Used to alert individuals that they are entering an area that may exceed the FCC's Occupational emissions limit. To be used on barriers or antenna sectors as a hybrid of the Information 1 and Yellow Caution 1 signs.
On this tower: The state of th	Yellow Caution 2B Sign- Tower Used to inform individuals that they are entering an area that may exceed the FCC's Occupational emissions limits. Must be placed at the base of the tower to warn tower climbers of potential for exposure.	MAT species screens at this see. Mat species screens at this see. Sepond This Partie species continues a consistence and responses species (still field screen) the fill Conceptional proposed terms. Fairne to bishow suffly quadries the scritting size of international confirmation strong per centure ASAT at 800 sets 282, person 9 and 1, and respect assistance up that is proceeding, beyond this point.	Warning 2 Sign Used to inform individuals that they are entering an area that may exceed the FCC's Occupational emissions limit by a factor of 10 or greater. Must be positioned such that persons approaching from any angle have ample warning to avoid the marked areas.



APPENDIX B: FCC GUIDELINES AND EMISSIONS THRESHOLD LIMITS

All power density values used in this report were analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μ W/cm²). The number of μ W/cm² calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter (μ W/cm²). The general population exposure limit for the 700 and 800 MHz Bands is approximately 467 μ W/cm² and 567 μ W/cm² respectively, and the general population exposure limit for the 1900 MHz PCS and 2100 MHz AWS bands is 1000 μ W/cm². Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/Controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure, have been properly trained in RF safety and can exercise control over their exposure. Occupational/Controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure, have been trained in RF safety and can exercise control over his or her exposure by leaving the area or by some other appropriate means. The Occupational/Controlled exposure limits all utilized frequency bands is five (5) times the FCC's General Public / Uncontrolled exposure limit.

The FCC Mandates that if a site is found to be out of compliance with regard to emissions that any system operator contributing 5% or more to areas exceeding the FCC's allowable limits will be responsible for bringing the site into compliance.

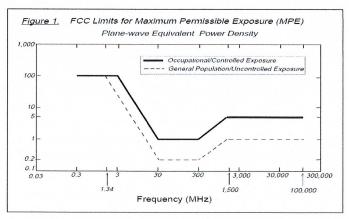
Additional details can be found in FCC OET 65.



(A) Limits for Occupati	onal/Controlled Exposure			
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time [E] ² , [H] ² , or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-I,500			f/300	6
1,500-100,000			5	6
(B) Limits for General I	Public/Uncontrolled Exposure	е		•
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm²)	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-I,500			f/1,500	30
1,500-100,000	**		1.0	30

f = Frequency in (MHz)

^{*} Plane-wave equivalent power density





APPENDIX C: CALCULATION METHODOLOGY

Centerline Communications, LLC has performed theoretical modeling using Waterford Consultants' RoofMasterTM 2020 Version 21.9.04.20 which uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations the power decreases inversely with the square of the distance. This modeling technique is accurate with low antenna centerlines, such as rooftops, where persons can get close to the antennas and pass through fields in close proximity.

The modeling is based on worst-case assumptions for the number of antennas and transmitter power. No losses were included in the power calculations unless they were specifically provided for the project.



APPENDIX D: CERTIFICATIONS

I, Samuel Cosgrove, preparer of this report certify that I am fully trained and aware of the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I have been trained in the procedures and requirements outlined in AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document.

Samuel Cosgrove

2/17/2021

I, Brandon Green, reviewer and approver of this report certify that I am fully trained and aware of the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation. I have been trained in the procedures and requirements outlined in AT&T's RF Exposure: Responsibilities, Procedures & Guidelines document.

Brandon Green

2/17/2021



APPENDIX E: PROPRIETARY STATEMENT

This report was prepared for the use of AT&T Mobility, LLC to meet requirements specified in AT&T's corporate RF safety guidelines. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by Centerline Communications, LLC are based solely on the information provided by AT&T Mobility and all observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to Centerline Communications, LLC so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

EXHIBIT 6

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NORTH BRANFORD ZONING BOARD OF APPEALS NORTH BRANFORD, CONNECTICUT

bl baurel Street brenford, Conn. Lay 22, 1968

Joseph Ochenkowski Parsonage Hill Road Northford, Conn.

Door Mr. Ochenkowski:

This is to advise that key 20 the Zoning Board of Appeals of Aorth Branford (Howard F. Krom, chairman, Charles Johnson, Charles Gum, Robert Saith and Charles Seegert, alternate) rendered the Tollowing decision:

Appenl #68-35 heard pursuant to due notice on May 20, 1968. Apper of Joseph Ochenkowski for use and height variances for the construction of a radio signal tower, located on the west side of Parsonage Hill Roud, 1,000 feet north of the intersection with Totoket Road.

It was RESOLVED by unanimous vote that said appeal be approved, subject to the following limitations. Such approval is effective key 25, 1968.

- A front burier strip of 175! shall be maintained along Parsonage hill Road.
- A buffer strip of 50' shall be maintained along the remaining rear and sides property lines.
- 5. The area is to left in its present natural state, with the exception of one access road or utility right+oi-way. If construction necessitates removal of natural trees, they shall be replaced.
- 4. We buildings related to, or towers, to be located within the buffer gone.
- No tower or building shall be built within 300° of Parsonage will Road front line.
- 6. No more than four towern shall be constructed on this parcel of land.
- 7. The maximum height shall be 300 from ground level.

Such approval is effective May 25, 1900.

Very truly yourn,

lirs, Edwird D. Amstrudo

Secreter

EXHIBIT 7

- 1. Ensure there are no other shipping or tracking labels attached to your package. Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.
- 2. Fold the printed label at the solid fine below. Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

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Customers with a Daily Pickup

Your driver will pickup your shipment(s) as usual.

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Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.

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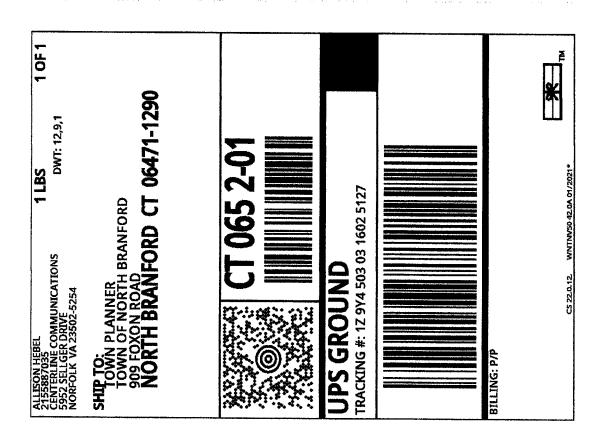
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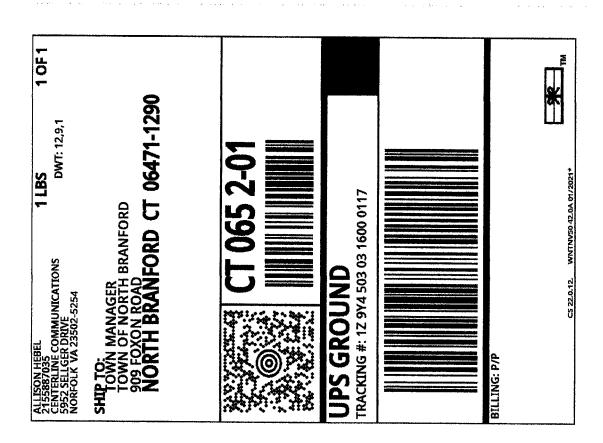
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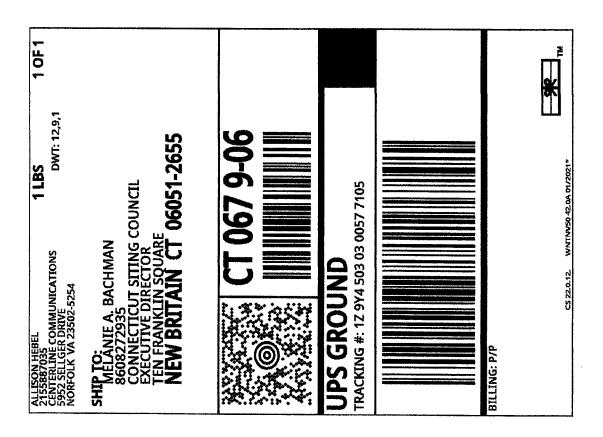
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