QC Development
PO Box 916
Storrs, CT 06268
860-670-9068
Mark.Roberts@QCDevelopment.net

January 31, 2020

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

Notice of Exempt Modification – New Cingular Wireless PCS, LLC (AT&T) – CT1171
530 Bushy Hill Road, Simsbury, CT 06070
N 41.81812778
W 72.86303611

Dear Ms. Bachman:

AT&T currently maintains three (3) antennas at the 104-foot level and three (3) antennas at the 94-foot level of the existing 120-foot Stealth Flagpole at 530 Bushy Hill Road, Simsbury, CT. The tower and property are owned by E&A/I&G SIMSBURY COMMONS LP. AT&T now intends to remove the three (3) Andrew antennas at the 94-foot level and replace them with three (3) new CCI DMP65R-BU4DA antennas. AT&T will also remove and replace six (6) Tower Mounted Amplifiers (TMA) at the 94-foot level.

This facility was approved by the Connecticut Siting Council in Docket # 279 on June 23, 2004. This approval included the condition that the tower be designed as a flagpole not to exceed 120 feet in height. No increase in tower height is proposed, and this modification therefore complies with the aforementioned approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Eric Wellman, First Selectman for the Town of Simsbury, and the Simsbury Planning and Land Use Department,

as well as the property and tower owner.

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

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

2. The proposed modifications will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

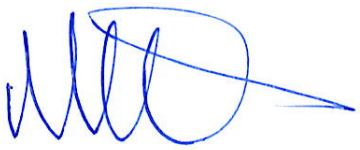
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, 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).

Please feel free to call me at (860) 670-9068 with any questions regarding this matter. Thank you for your consideration.

Sincerely,



Mark Roberts
QC Development
Consultant for AT&T

Attachments

cc: Eric Wellman - Elected Official
Michael Glidden – Director of Planning & Community Development
E&A/I&G SIMSBURY COMMONS LP – Property and Tower Owner

Power Density

Existing Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm^2)	Freq. Band (MHz**)	Limit S (mW /cm^2)	%MPE
Other Carriers*							4.56%
AT&T UMTS	2	500	104	0.0374	880	0.5867	0.64%
AT&T UMTS	1	500	104	0.0187	1900	1.0000	0.19%
AT&T LTE	1	500	104	0.0187	700	0.4667	0.40%
AT&T LTE	1	500	104	0.0187	1900	1.0000	0.19%
AT&T LTE	1	500	104	0.0187	2300	1.0000	0.19%
AT&T UMTS	2	492	96	0.0437	880	0.5867	0.74%
AT&T UMTS	1	817	96	0.0363	1900	1.0000	0.36%
AT&T LTE	1	1104	96	0.0490	734	0.4893	1.00%
AT&T LTE	1	2203	96	0.0978	1900	1.0000	0.98%
AT&T LTE	1	1791	96	0.0795	2300	1.0000	0.80%
Site Total							10.04%

*Per CSC Records (available upon request, includes calculation formulas)

** If a range of frequencies are used, such as 880-894, enter the lowest value, i.e. 880

Proposed Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm^2)	Freq. Band (MHz**)	Limit S (mW /cm^2)	%MPE
Other Carriers*							4.56%
AT&T UMTS	1	500	104	0.0187	850	0.5667	0.33%
AT&T LTE	1	3664	104	0.1372	1900	1.0000	1.37%
AT&T LTE	1	1476	94	0.0685	700	0.4667	1.47%
AT&T LTE	1	1000	94	0.0929	850	0.5667	1.64%
AT&T 5G	1	1000	94	0.0464	850	0.5667	0.82%
AT&T LTE	2	3664	94	0.1702	1900	1.0000	1.70%
AT&T LTE	1	3837	94	0.1782	2100	1.0000	1.78%
Site Total							13.67%

*Per CSC Records (available upon request, includes calculation formulas)

** If a range of frequencies are used, such as 880-894, enter the lowest value, i.e. 880

PROJECT INFORMATION

SCOPE OF WORK:

ITEMS TO BE MOUNTED ON THE EXISTING FLAGPOLE:
- NEW AT&T ANTENNAS: DMP65R-BU4DA (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T TMA: TMABPD7823VG12A (TYP. OF 2 PER SECTOR, TOTAL OF 6).

ITEMS TO BE MOUNTED AT EQUIPMENT LOCATION:
- NEW AT&T RRUS: 4449 B5/B12 (850/700) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- NEW AT&T RRUS: 8843 B2/B66A (PCS/AWS) (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS-12 B2 (TYP. OF 1 PER SECTOR, TOTAL OF 3) TO BE RELOCATED FROM POSITION 4 TO POSITION 1.
- SWAP BB WITH (2) RBS 6630.
- ADD (1)XMU, ADD (1)IDLe, ADD (1) ARGUS SHELF
- PROPOSED SURGE ARRESTOR (TSXDC-4310FM) (TOTAL OF 36)

ITEMS TO BE REMOVED:
- EXISTING AT&T ANTENNAS: SBNHH-1D65A (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS: RRUS-A2 B25 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS: RRUS-11 B12 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T TMA'S: DTMABP7819VG12A (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- EXISTING AT&T SURGE ARRESTORS: APTDC-BDFDM-DB (TYP. OF 6 PER SECTOR, TOTAL OF 18).

ITEMS TO REMAIN:
- (3) ANTENNAS (SBNH-1D6565B), (3) RRUS-12 B2, (3) RRUS 11 B5, (3) TMA'S (DTMABP7819VG12A), (6) DIPLEXERS (CM1007-DBPXBC-003), (12) TRIPLEXERS (TPX-070821), (18) COAX CABLES

SITE ADDRESS:	530 BUSHY HILL ROAD SIMSBURY, CT 06070
LATITUDE:	41.818111° N, 41° 49' 5.20" N
LONGITUDE:	72.863041° W, 72° 51' 46.95" W
TYPE OF SITE:	FLAGPOLE / EQUIPMENT SHELTER
STRUCTURE HEIGHT:	120'-0"±
RAD CENTER:	94'-0"± & 104'-4"±
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

DRAWING INDEX

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A-2	ANTENNA LAYOUTS & ELEVATION	1
A-3	DETAILS	1
SN-1	STRUCTURAL NOTES	1
S-1	MOUNT MODIFICATION DESIGN	1
G-1	GROUNDING DETAILS	1
RF-1	RF PLUMBING DIAGRAM	1

SITE NUMBER: CT1171

SITE NAME: SIMSBURY- BUSHY HILL ROAD

FA CODE: 10092202

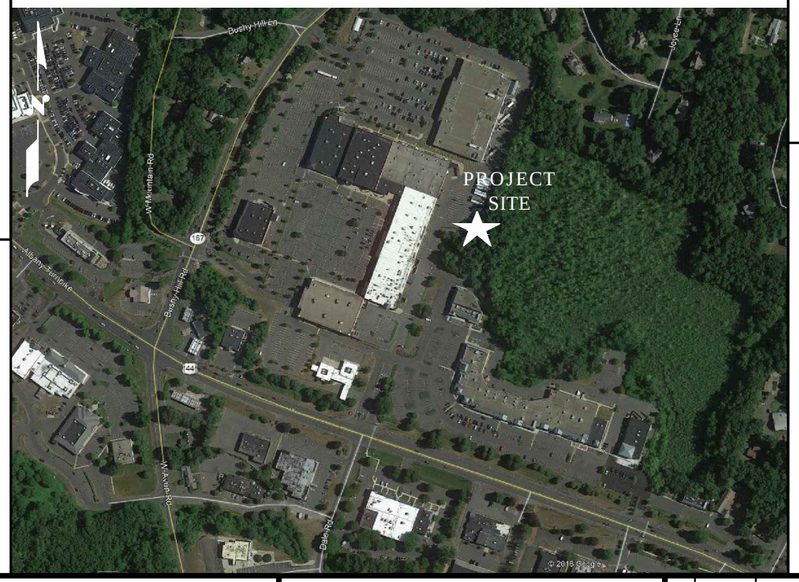
PACE ID: MRCTB040710/MRCTB040470/MRCTB040577

PROJECT: LTE BWE_3C_4C 2020 UPGRADE

VICINITY MAP

DIRECTIONS TO SITE:

TAKE I-91 SOUTH TO EXIT 22N ROUTE 9 TOWARD NEW BRITAIN. MERGE ONTO I-84 WEST/US 6 VIA EXIT 32 ON LEFT. MERGE ONTO FARMINGTON AVE./CT-4 WEST VIA EXIT 39 TOWARD FARMINGTON. TURN RIGHT ONTO CT-10/WATERVILLE ROAD. LEFT ONTO US-44W/CT - 10/E. MAIN STREET. FOLLOW US-44W/E. MAIN STREET. RIGHT ONTO CLIMAX ROAD. RIGHT ONTO CT-167 BUSHY HILL ROAD.FLAG POLE BEHIND THE FARMINGTON VALLEY MALL



GENERAL NOTES

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

72 HOURS

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

UNDERGROUND SERVICE ALERT

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

12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1171
SITE NAME: SIMSBURY- BUSHY HILL ROAD

530 BUSHY HILL ROAD
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500 ENTERPRISE DRIVE, SUITE 3A
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A	11/01/19	ISSUED FOR REVIEW	DJM	AT	DPH

SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: DJM

STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

AT&T

TITLE SHEET
LTE BWE_3C_4C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1171	T-1	1

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.

2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81 STANDARDS) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS AND #2 AWG STRANDED COPPER FOR OUTDOOR BTS.

6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.

9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.

10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.

11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.

12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

   CONTRACTOR – SAI
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T MOBILITY

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.

15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.

16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."

17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

20. **APPLICABLE BUILDING CODES:**
    SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

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

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

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

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

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

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

ABBREVIATIONS

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

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

12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1171
SITE NAME: SIMSBURY- BUSHY HILL ROAD

530 BUSHY HILL ROAD
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HARTFORD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
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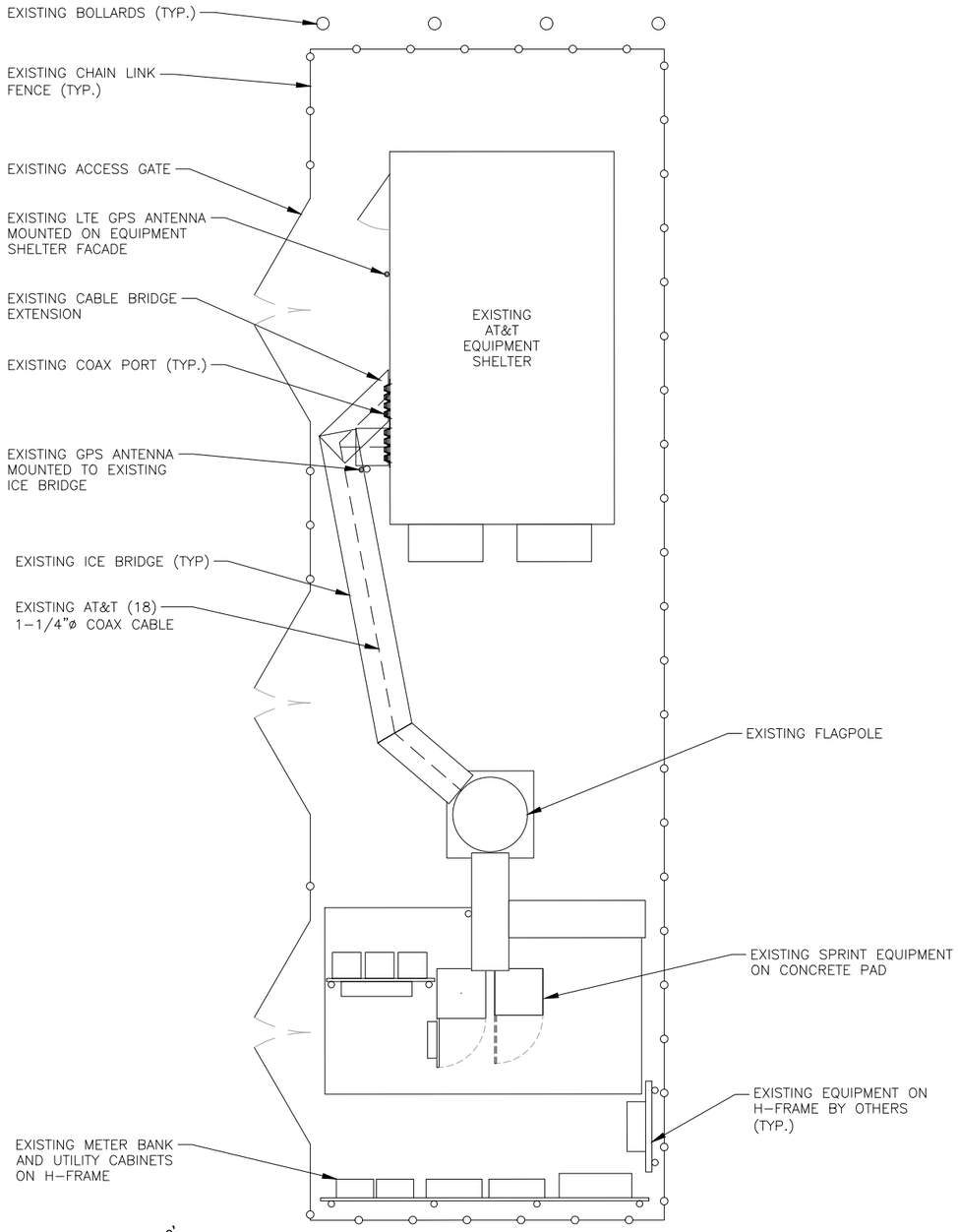
STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

AT&T

GENERAL NOTES
LTE BWE_3C_4C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1171	GN-1	1



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

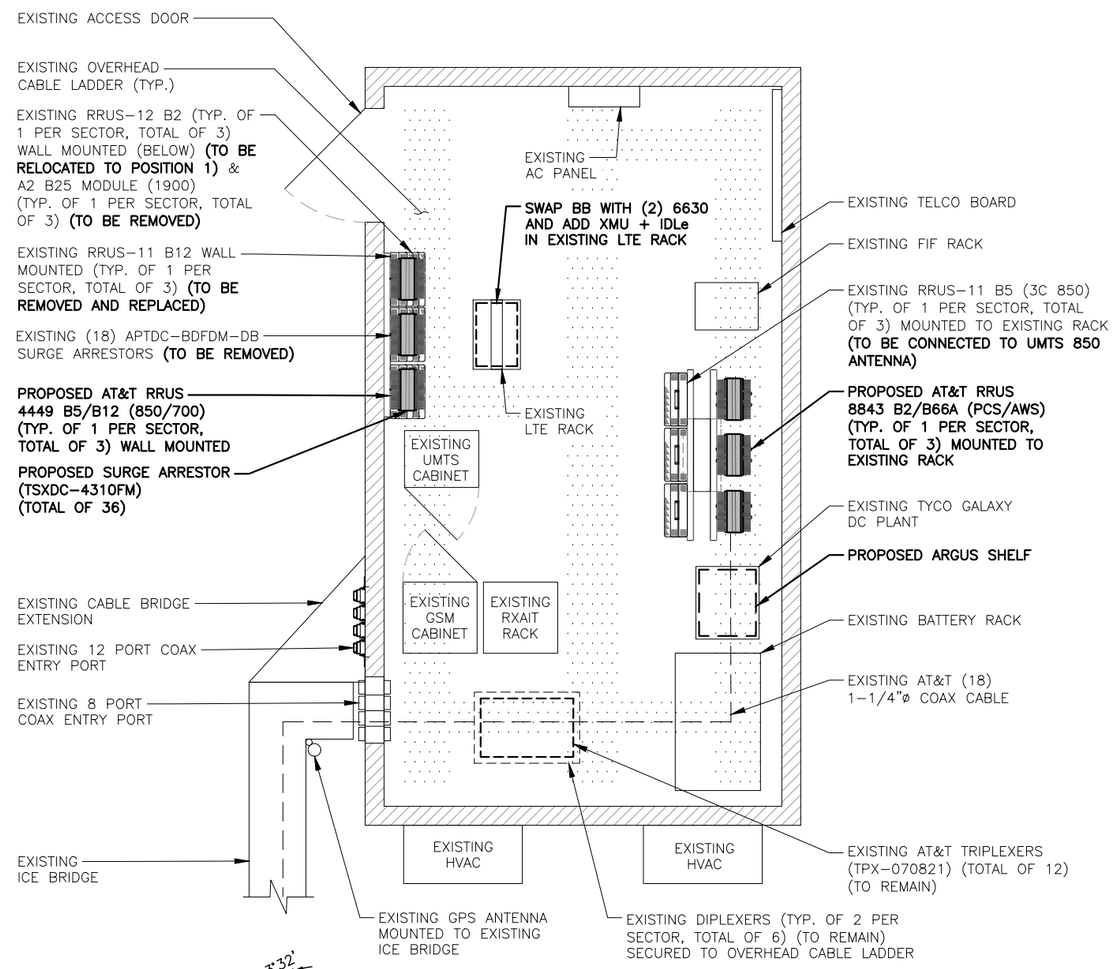
0 2'-0" 4'-0" 8'-0" 12'-0"

NOTE:

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

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: **JANUARY 16, 2020 (REV.1)**, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



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

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

HUDSON Design Group LLC
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FAX: (978) 336-5586

12 INDUSTRIAL WAY
SALEM, NH 03079

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SITE NAME: SIMSBURY- BUSHY HILL ROAD

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STATE OF CONNECTICUT DANIEL P. HAMM No. 24178 LICENSED PROFESSIONAL ENGINEER

AT&T

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LTE BWE_3C_4C 2020 UPGRADE

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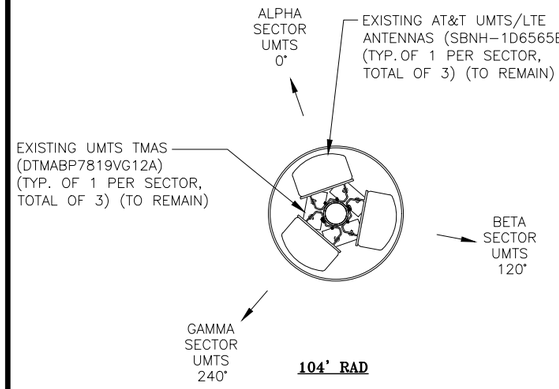
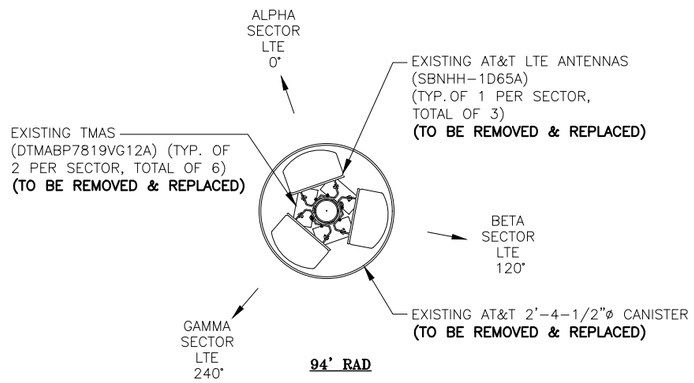
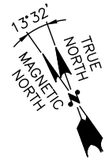
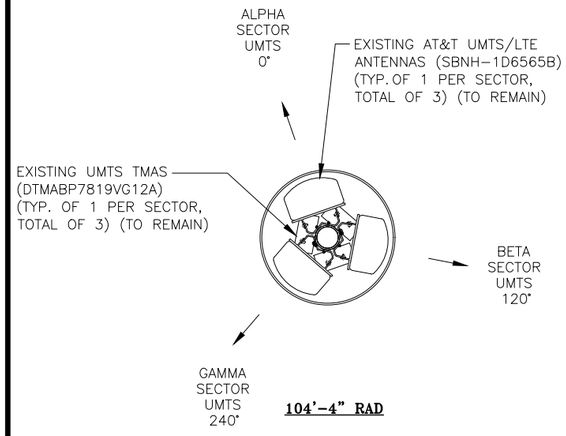
CT1171	A-1	1

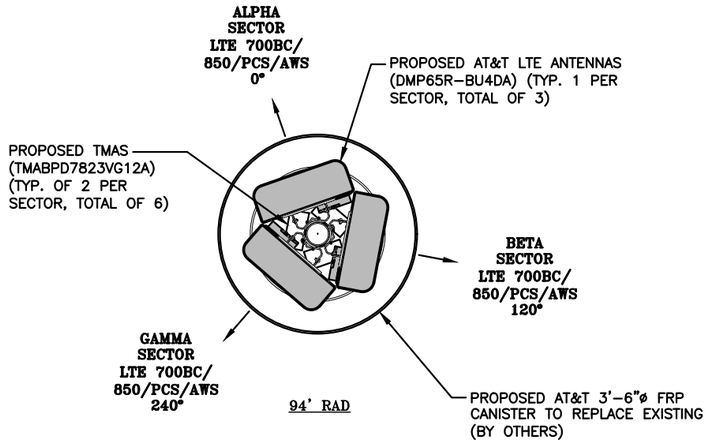


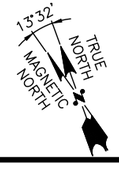




EXISTING ANTENNA LAYOUT (1 / A-2)
SCALE: N.T.S







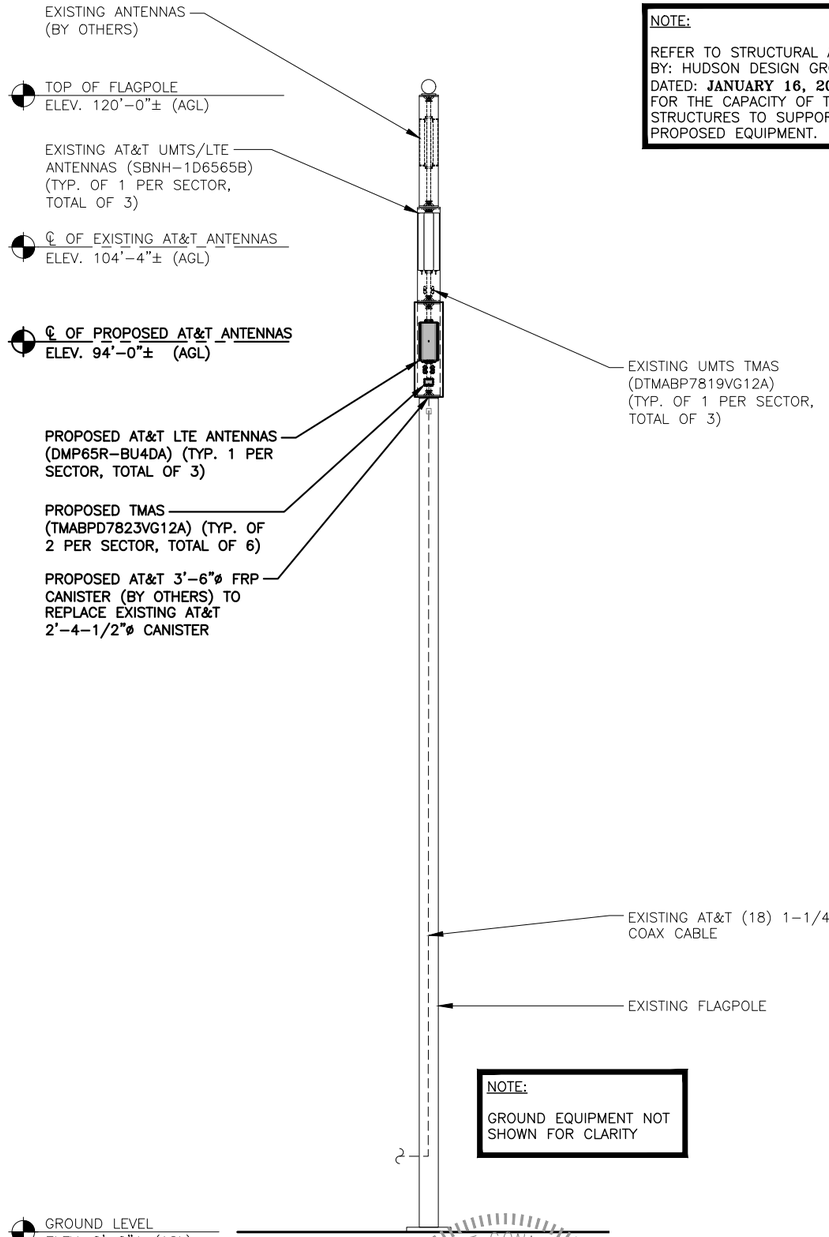
PROPOSED ANTENNA LAYOUT (2 / A-2)
SCALE: N.T.S

NOTE:

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

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: **JANUARY 16, 2020 (REV.1)**, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



NOTE:

GROUND EQUIPMENT NOT SHOWN FOR CLARITY

ELEVATION (3 / A-2)
22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"
0 4'-0" 8'-0" 16'-0" 24'-0"

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

SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1171
SITE NAME: SIMSBURY- BUSHY HILL ROAD

530 BUSHY HILL ROAD
SIMSBURY, CT 06070
HARTFORD COUNTY

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

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	01/22/20	ISSUED FOR CONSTRUCTION	RP/ET	AT	DPH
A	11/01/19	ISSUED FOR REVIEW	DJM	AT	DPH

SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: DJM

STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

AT&T

ANTENNA LAYOUTS & ELEVATION
LTE BWE_3C_4C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1171	A-2	1

ANTENNA SCHEDULE

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/ LTE PCS	SBNH-1D6565B	72.7X11.9X7.1	104'-4"±	0°	(1)(E) DTMABP7819VG12A (2)(E)(G) CM1007-DBPXBC-003	(E)(G) RRUS-11 B5 (850) (E)(G) RRUS-12 B2 (1900)	– –	(2)1-1/4 COAX	I
A2	**PROPOSED**	**LTE 700BC/ 850/PCS/AWS**	**DMP65R-BU4DA**	**48X20.7X7.7**	**94'-0"±**	**0°**	**(2)(P) TMABPD7823VG12A** (4)(E)(G) TPX-070821 TRIPLEXERS	**(P)(G) 4449 B5/B12 (850/700)** **(P)(G) 8843 B2/B66A (AWS/PCS)**	**14.9X13.2X10.4** **14.9X13.2X10.9**	(4)1-1/4 COAX	
B1	EXISTING	UMTS 850/ LTE PCS	SBNH-1D6565B	72.7X11.9X7.1	104'-4"±	120°	(1)(E) DTMABP7819VG12A (2)(E)(G) CM1007-DBPXBC-003	(E)(G) RRUS-11 B5 (850) (E)(G) RRUS-12 B2 (1900)	– –	(2)1-1/4 COAX	I
B2	**PROPOSED**	**LTE 700BC/ 850/PCS/AWS**	**DMP65R-BU4DA**	**48X20.7X7.7**	**94'-0"±**	**120°**	**(2)(P) TMABPD7823VG12A** (4)(E)(G) TPX-070821 TRIPLEXERS	**(P)(G) 4449 B5/B12 (850/700)** **(P)(G) 8843 B2/B66A (AWS/PCS)**	**14.9X13.2X10.4** **14.9X13.2X10.9**	(4)1-1/4 COAX	
C1	EXISTING	UMTS 850/ LTE PCS	SBNH-1D6565B	72.7X11.9X7.1	104'-4"±	240°	(1)(E) DTMABP7819VG12A (2)(E)(G) CM1007-DBPXBC-003	(E)(G) RRUS-11 B5 (850) (E)(G) RRUS-12 B2 (1900)	– –	(2)1-1/4 COAX	I
C2	**PROPOSED**	**LTE 700BC/ 850/PCS/AWS**	**DMP65R-BU4DA**	**48X20.7X7.7**	**94'-0"±**	**240°**	**(2)(P) TMABPD7823VG12A** (4)(E)(G) TPX-070821 TRIPLEXERS	**(P)(G) 4449 B5/B12 (850/700)** **(P)(G) 8843 B2/B66A (AWS/PCS)**	**14.9X13.2X10.4** **14.9X13.2X10.9**	(4)1-1/4 COAX	

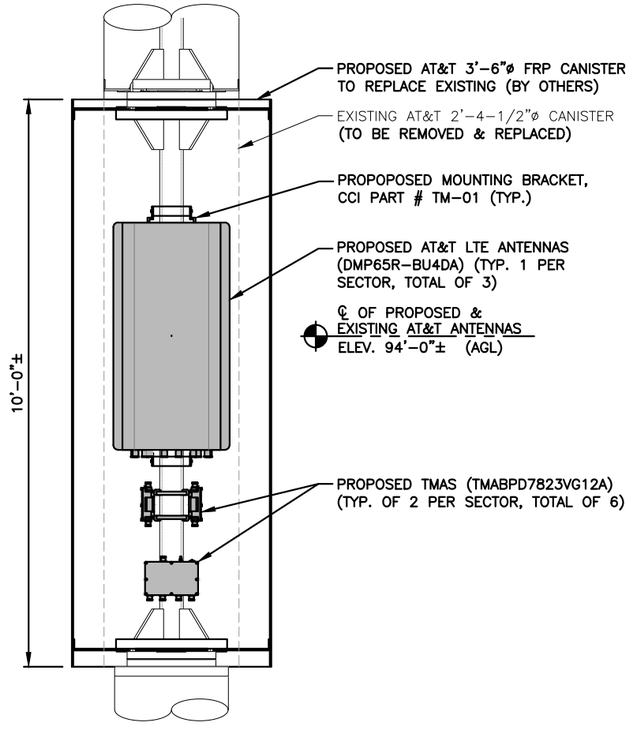
FINAL ANTENNA SCHEDULE (1 / A-3)
SCALE: N.T.S

NOTE:

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

NOTE:

REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: **JANUARY 16, 2020 (REV.1)**, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



PROPOSED LTE ANTENNA AND TMA MOUNTING DETAIL (3 / A-3)
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"

0 6" 1'-4" 2'-8" 4'-0"

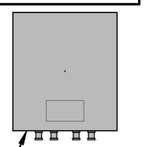
RRU CHART

QUANTITY	MODEL	SIZE (L x W x D)
P(3)	4449 (850/700)	14.9"x13.2"x10.4"
P(3)	8843 (AWS/PCS)	14.9"x13.2"x10.9"
E(3)	RRUS-11 B5 (850)	19.7"x17.0"x7.2"
E(3)	RRUS-12 B2 (1900)	20.4"x18.5"x7.5"

NOTE:
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

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

PROPOSED RRUS DETAIL (2 / A-3)
SCALE: N.T.S

HUDSON Design Group LLC
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FAX: (978) 336-5586

12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1171
SITE NAME: SIMSBURY- BUSHY HILL ROAD

530 BUSHY HILL ROAD
SIMSBURY, CT 06070
HARTFORD COUNTY

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

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

STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

AT&T

DETAILS
LTE BWE_3C_4C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1171	A-3	1

STRUCTURAL NOTES:

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

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

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

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

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

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

NOTES:

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

NOTES:

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

SPECIAL INSPECTION CHECKLIST

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

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SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: DJM

STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

AT&T

STRUCTURAL NOTES
LTE BWE_3C_4C 2020 UPGRADE

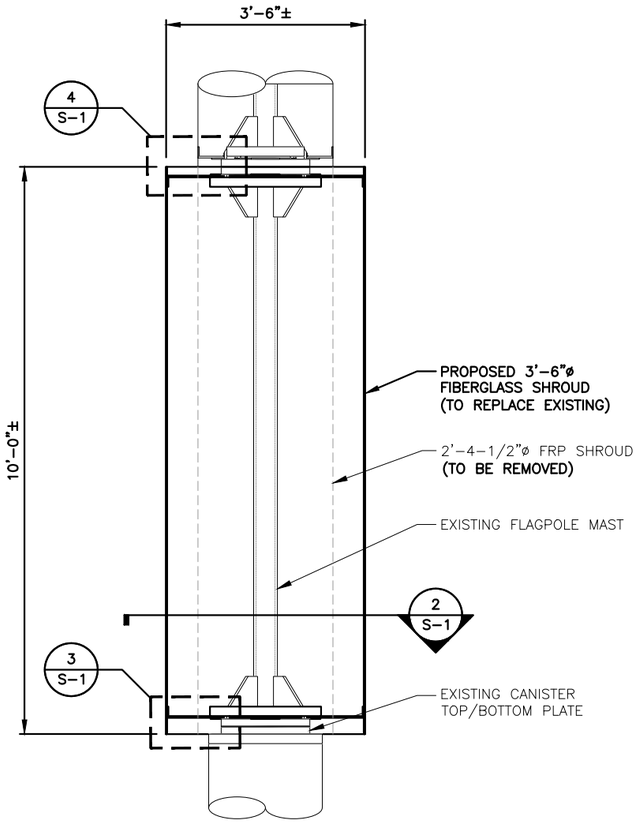
SITE NUMBER	DRAWING NUMBER	REV
CT1171	SN-1	1

NOTE:

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

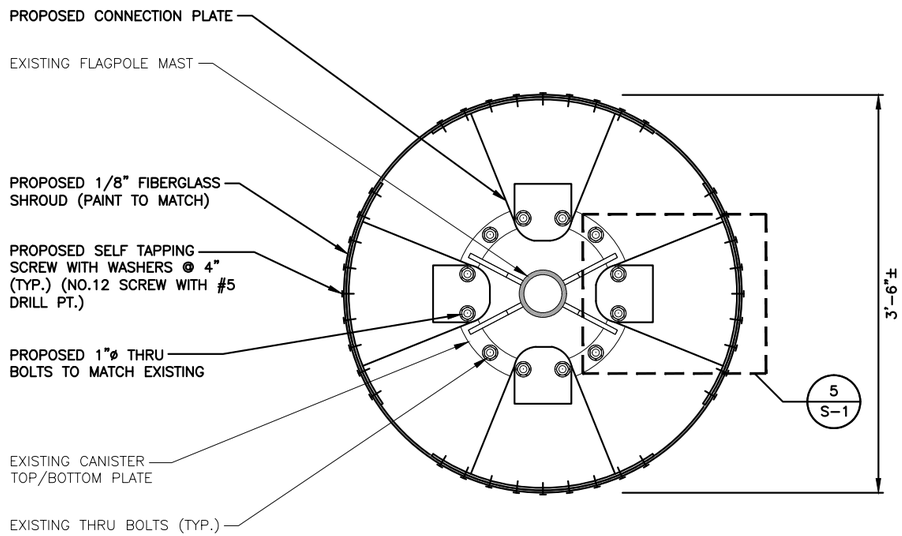
NOTE:

REFER TO STRUCTURAL ANALYSIS BY: HUDSON DESIGN GROUP, LLC, DATED: **JANUARY 16, 2020 (REV.1)**, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.



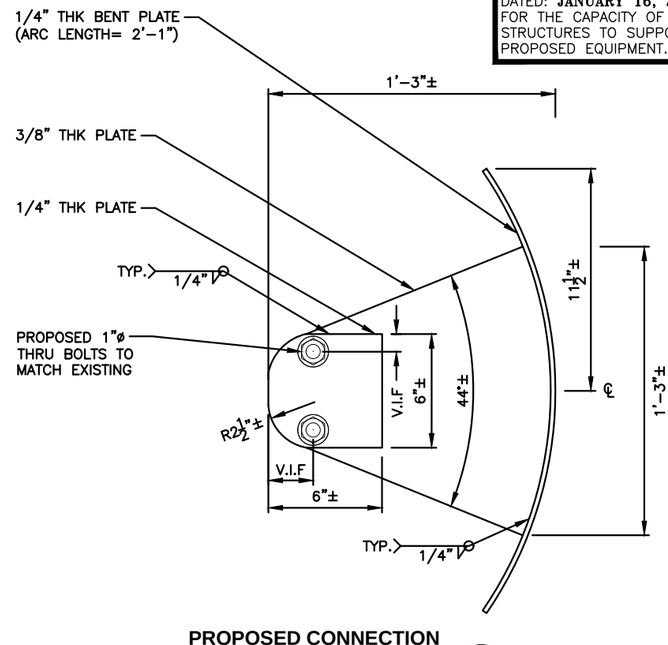
PROPOSED MOUNT MODIFICATIONS PLAN (1 / S-1)
22x34 SCALE: 3/4"=1'-0"
11x17 SCALE: 3/8"=1'-0"

0 8" 1'-4" 2'-8" 4'-0"



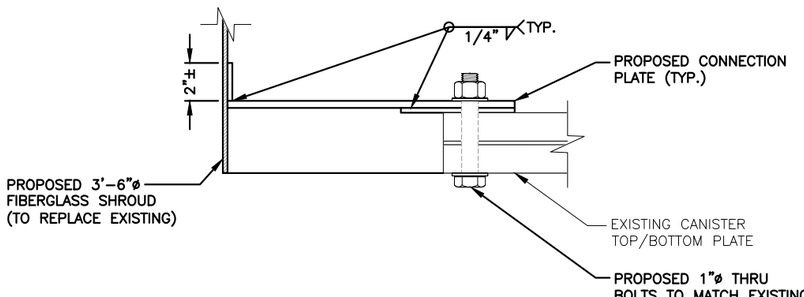
PROPOSED MOUNT MODIFICATIONS PLAN (2 / S-1)
22x34 SCALE: 1-1/2"=1'-0"
11x17 SCALE: 3/4"=1'-0"

0 0'-4" 0'-8" 1'-4" 2'-0"



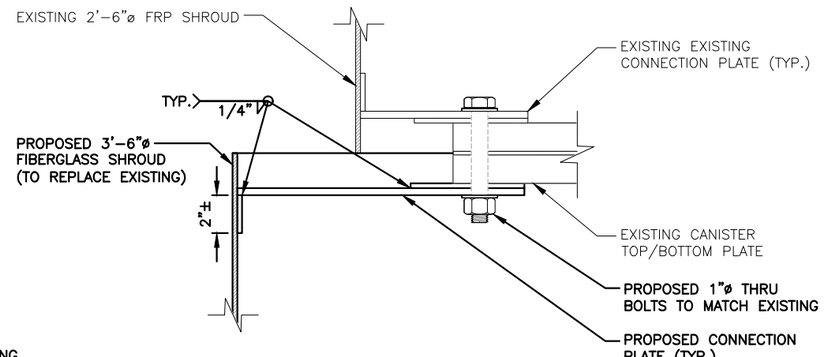
PROPOSED CONNECTION PLATE DETAIL (5 / S-1)
22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"

0 0'-2" 0'-4" 0'-8" 1'-0"



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

0 0'-2" 0'-4" 0'-8" 1'-0"



CONNECTION DETAIL (4 / S-1)
22x34 SCALE: 3"=1'-0"
11x17 SCALE: 1-1/2"=1'-0"

0 0'-2" 0'-4" 0'-8" 1'-0"

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

12 INDUSTRIAL WAY
SALEM, NH 03079

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

SITE NUMBER: CT1171
SITE NAME: SIMSBURY- BUSHY HILL ROAD

530 BUSHY HILL ROAD
SIMSBURY, CT 06070
HARTFORD COUNTY

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	01/22/20	ISSUED FOR CONSTRUCTION	RP/ET	AT	DPH
A	11/01/19	ISSUED FOR REVIEW	DJM	AT	DPH

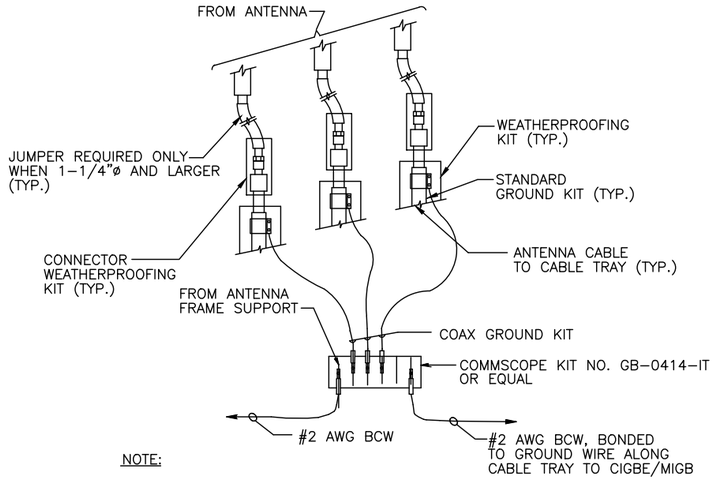
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: DJM

STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

MOUNT MODIFICATION DESIGN
LTE BWE_3C_4C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1171	S-1	1

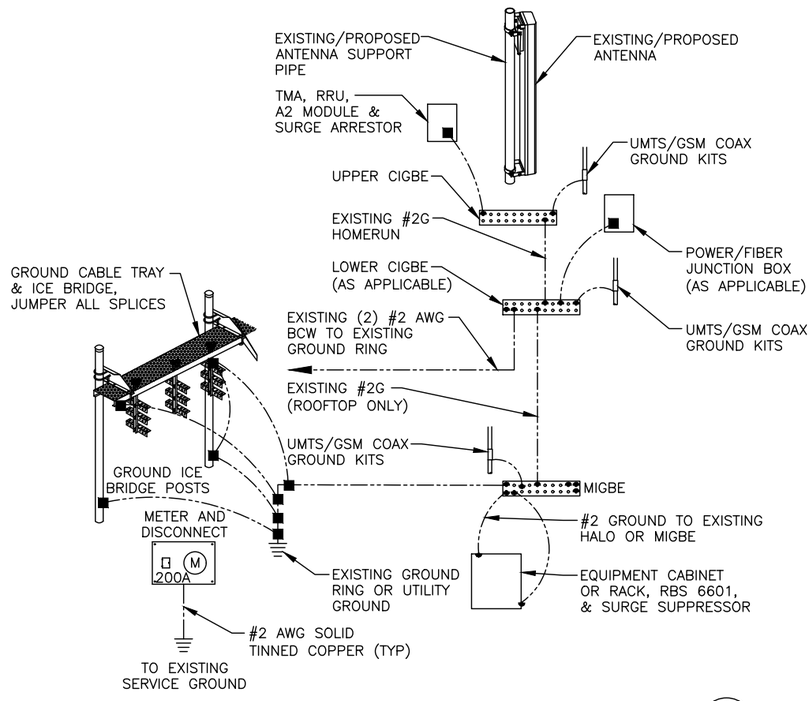


NOTE:

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

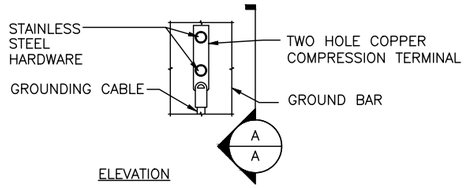
GROUND WIRE TO GROUND BAR CONNECTION DETAIL (1 / G-1)

SCALE: N.T.S



GROUNDING RISER DIAGRAM (2 / G-1)

SCALE: N.T.S



NOTES:

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

TYPICAL GROUND BAR CONNECTION DETAIL (3 / G-1)

SCALE: N.T.S

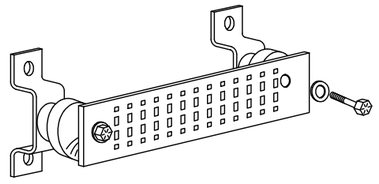
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PRODUCERS

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

SECTION "A" – SURGE ABSORBERS

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



GROUND BAR - DETAIL (AS REQUIRED) (4 / G-1)

SCALE: N.T.S

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SAI
12 INDUSTRIAL WAY
SALEM, NH 03079

SITE NUMBER: CT1171
SITE NAME: SIMSBURY- BUSHY HILL ROAD

530 BUSHY HILL ROAD
SIMSBURY, CT 06070
HARTFORD COUNTY

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

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	01/22/20	ISSUED FOR CONSTRUCTION	RP/ET	AT	DPH
A	11/01/19	ISSUED FOR REVIEW	DJM	AT	DPH

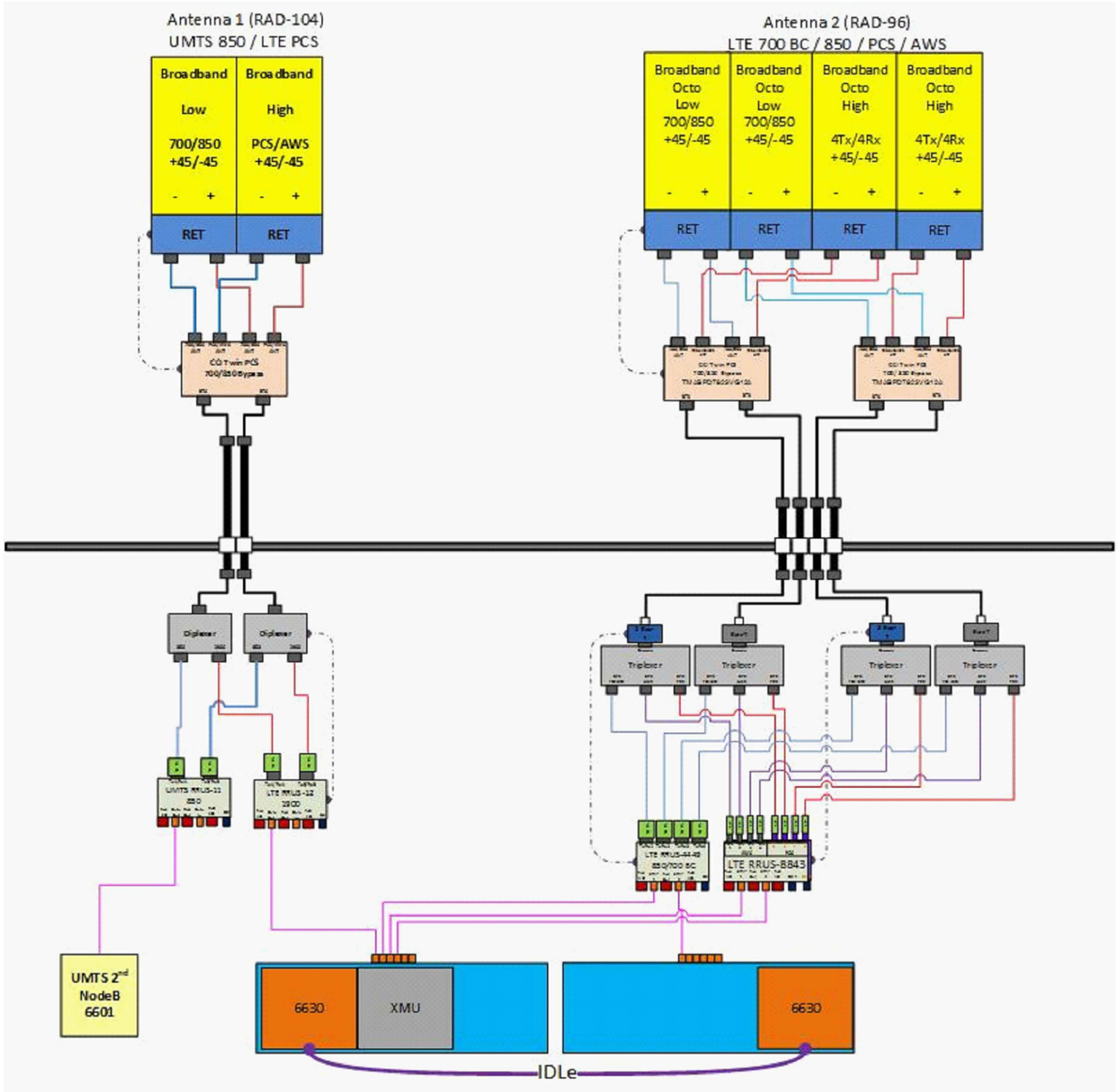
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: DJM

STATE OF CONNECTICUT · DANIEL P. HAMM · No. 24178 · LICENSED PROFESSIONAL ENGINEER

AT&T

GROUNDING DETAILS
LTE BWE_3C_4C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1171	G-1	1



RF PLUMBING DIAGRAM (1 / RF–1)
SCALE: N.T.S

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

NOTE:

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

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SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: DJM

AT&T

RF PLUMBING DIAGRAM
LTE BWE_3C_4C 2020 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CT1171	RF–1	1

(REVISED)
STRUCTURAL ANALYSIS REPORT

For

SITE NUMBER: CT1171 (LTE BWE/3C/4C)
SITE NAME: SIMSBURY – BUSHY HILL ROAD

530 Bushy Hill Road
Simsbury, CT 06070

Antennas Mounted on the Tower

Prepared for:

SAI at&t

Dated: January 16, 2020 (Rev.1)
October 24, 2019

Prepared by:

HDG | HUDSON Design Group LLC

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

HUDSON
Design Group LLC

SCOPE OF WORK:

Hudson Design Group, LLC (HDG) has been authorized by AT&T to conduct a structural evaluation of the 120' flagpole supporting the proposed AT&T's antennas located at elevation 93.75'-105.5' above the ground level.

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

Record drawings of the existing flagpole and foundation prepared by Engineered Endeavors Inc., dated August 12, 2004, were available for our use. Geotechnical study prepared by Dr. Clarence Welti, PE, P.C., dated July 18, 2003, was also available and obtained for our use.

CONCLUSION SUMMARY:

Based on our evaluation, we have determined that the existing tower **is in conformance** with the ANSI/TIA-222-G Standard for the loading considered under the criteria listed in this report. The tower structure is rated at **58.3 %** - (Base Plate Controlling).

FOUNDATION SUMMARY:

Based on our evaluation, we have determined that the existing tower foundation **is in conformance** with the ANSI/TIA-222-G Standard for the loading considered under the criteria listed in this report. The foundation is rated at **67.9 %** - (Bearing Capacity Controlling).

HUDSON Design Group LLC

APPURTENANCES CONFIGURATION:

Tenant	Appurtenances	Elev.	Mount
Sprint	(3) Panel Antennas	115'	Shroud
Sprint	(3) Generic TMA's	115'	Shroud
AT&T	(3) SBNH-1D6565A Antennas	104.33'	Shroud
AT&T	(3) DTMABP7819VG12A TMA's	104.33'	Shroud
AT&T	***(3) DMP65R-BU4DA Antennas***	94'	Shroud
AT&T	***(6) TMABPD7823VG12A TMA's***	94'	Shroud

Proposed AT&T Appurtenances shown in Bold.

AT&T EXISTING/PROPOSED COAX CABLES:

Tenant	Coax Cables	Elev.	Mount
AT&T	(9) 1-1/4" Coax Cables	105.5'	Inside Flagpole
AT&T	(9) 1-1/4" Coax Cables	94'	Inside Flagpole

Proposed AT&T Coax Cables shown in Bold.

ANALYSIS RESULTS SUMMARY:

Component	Max. Stress Ratio	Elev. of Component (ft)	Pass/Fail	Comments
Pole Section – L1	26.0 %	108.0 – 118.0	PASS	
Pole Section – L2	43.9 %	98.0 – 108.0	PASS	
Pole Section – L3	50.4 %	88.0 – 98.0	PASS	
Pole Section – L4	24.9 %	48.7 – 88.0	PASS	
Pole Section – L5	49.4 %	1.5 – 48.7	PASS	
Base Plate	58.3 %	1.5	PASS	**Controlling**

FOUNDATION COMPARISON SUMMARY:

	Stress Ratio	Pass/Fail	Comments
Bearing	**67.9 %**	PASS	**Controlling**
Overturning	64.7 %	PASS	
Shear	7.0 %	PASS	

HUDSON
Design Group LLC

DESIGN CRITERIA:

1. EIA/TIA-222-G Structural Standards for Steel Antenna Towers and Antenna Supporting Structures

   County: Hartford
   Wind Load: 105 mph (3 second gust)
   Structural Class: II
   Exposure Category: B
   Topographic Category: 1
   Nominal Ice Thickness: 1 inch

2. Approximate height above grade to proposed antennas: 94'

***Calculations and referenced documents are attached.**

ASSUMPTIONS:

1. The appurtenances configuration is as stated in this report. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.

2. The flagpole and foundation are properly constructed and maintained. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.

3. The support mounts and platforms are not analyzed and are considered adequate to support the loading. The analysis is limited to the primary support structure itself.

SUPPORT RECOMMENDATIONS:

HDG recommends that the proposed antennas and TMA's be mounted inside the proposed shroud supported by the flagpole.

Reference HDG's Latest Construction Drawings for all component and connection requirements (attached).

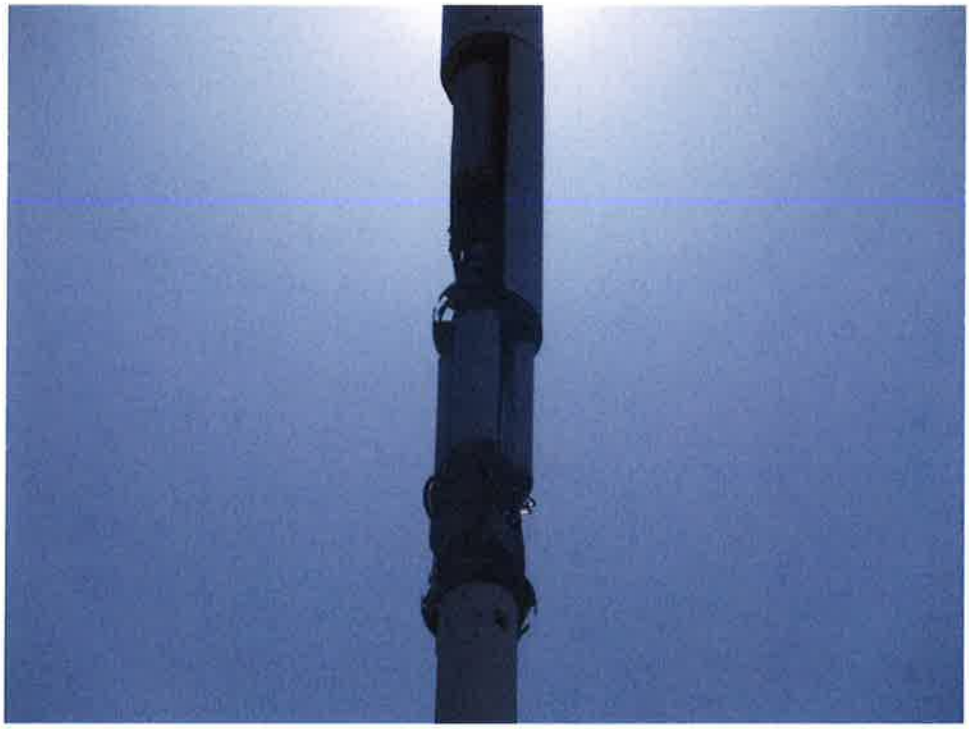
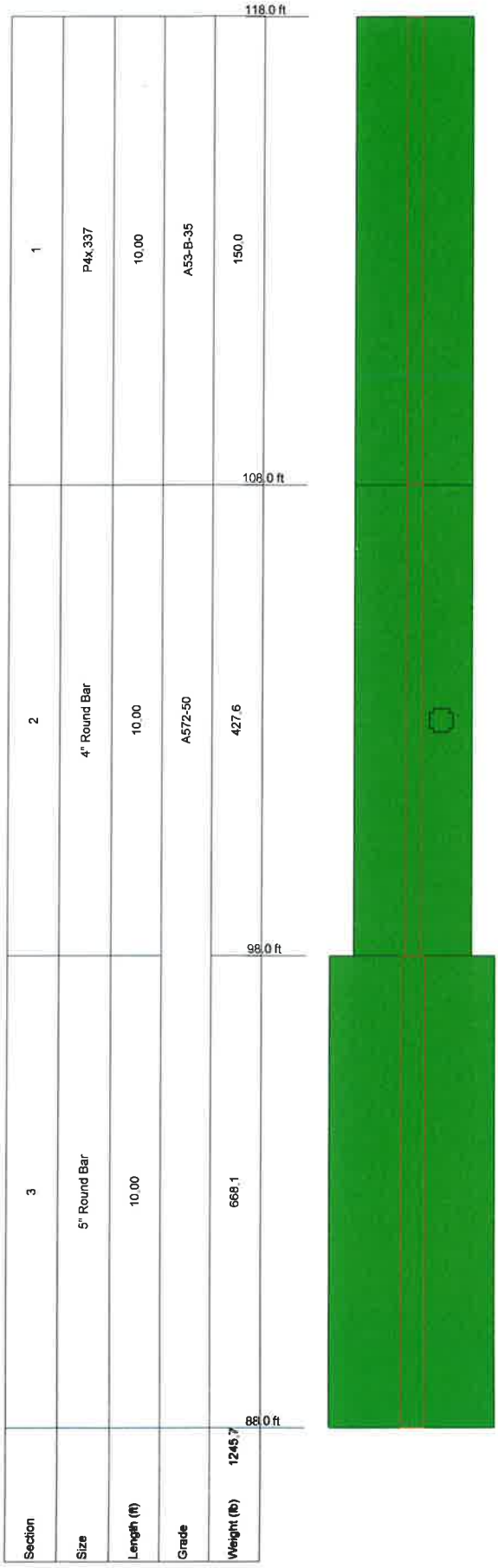


Photo 1: Photo illustrating the Tower with Appurtenances shown.

HUDSON
Design Group LLC

CALCULATIONS



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Panel Antenna (within Shroud) (Sprint)	115	30"x10' Shroud (ATI)	103
Panel Antenna (within Shroud) (Sprint)	115	DMP65R-BU4DA Antenna (within Shroud) (ATI)	95.5
Panel Antenna (within Shroud) (Sprint)	115	DMP65R-BU4DA Antenna (within Shroud) (ATI)	95.5
Generic TMA (within Shroud) (Sprint)	115	DMP65R-BU4DA Antenna (within Shroud) (ATI)	95.5
Generic TMA (within Shroud) (Sprint)	115	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
Generic TMA (within Shroud) (Sprint)	115	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
30"x10' Shroud (Sprint)	113	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
SBNH-1D6565A Antenna (within Shroud) (ATI)	107	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
SBNH-1D6565A Antenna (within Shroud) (ATI)	107	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
SBNH-1D6565A Antenna (within Shroud) (ATI)	107	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
DTMABP7819VG12A TMA (within Shroud) (ATI)	107	42"x10' Shroud (ATI)	93
DTMABP7819VG12A TMA (within Shroud) (ATI)	107		
DTMABP7819VG12A TMA (within Shroud) (ATI)	107		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-35	35 ksi	63 ksi	A572-50	50 ksi	65 ksi

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 105.0 mph basic wind in accordance with the TIA-222-G Standard.
4. Deflections are based upon a 60.0 mph wind.
5. Tower Structure Class I.
6. Topographic Category 1 with Crest Height of 0.00 ft

Hudson Design Group LLC
45 Beechwood Drive
North Andover, MA 01845
Phone: (978) 557-5553
FAX: (978) 336-5586

Job: *CT 1171 Simsbury, CT*		
Project: *120 ft Flagpole*		
Client: AT&T	Drawn by: jnash	App'd:
Code: TIA-222-G	Date: 10/24/19	Scale: NTS
Path:		Dwg No. E-1

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

Tower is located in Hartford County, Connecticut.
Basic wind speed of 105.0 mph.
Structure Class I.
Exposure Category B.
Topographic Category 1.
Crest Height 0.00 ft.
Deflections calculated using a wind speed of 60.0 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Pole Section Geometry

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade	Socket Length ft
L1	118.00-108.00	10.00	P4x.337	A53-B-35 (35 ksi)	
L2	108.00-98.00	10.00	4" Round Bar	A572-50 (50 ksi)	
L3	98.00-88.00	10.00	5" Round Bar	A572-50 (50 ksi)	

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
1 5/8 (Sprint)	A	No	No	Inside Pole	113.00 - 88.00	6	No Ice	0.00	1.04
1 1/4 (AT&T)	A	No	No	Inside Pole	103.00 - 88.00	9	No Ice	0.00	0.66
1 1/4 (AT&T)	A	No	No	Inside Pole	93.00 - 88.00	9	No Ice	0.00	0.66

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	118.00-108.00	A	0.000	0.000	0.000	0.000	31.20
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L2	108.00-98.00	A	0.000	0.000	0.000	0.000	92.10
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L3	98.00-88.00	A	0.000	0.000	0.000	0.000	151.50
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	118.00-108.00	0.0000	0.0000	0.0000	0.0000
L2	108.00-98.00	0.0000	0.0000	0.0000	0.0000
L3	98.00-88.00	0.0000	0.0000	0.0000	0.0000

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
Panel Antenna (within Shroud) (Sprint)	A	None		0.0000	115.00	No Ice	0.00	0.00	50.00
Panel Antenna (within Shroud) (Sprint)	B	None		0.0000	115.00	No Ice	0.00	0.00	50.00
Panel Antenna (within Shroud) (Sprint)	C	None		0.0000	115.00	No Ice	0.00	0.00	50.00
Generic TMA (within Shroud) (Sprint)	A	None		0.0000	115.00	No Ice	0.00	0.00	25.00
Generic TMA (within Shroud) (Sprint)	B	None		0.0000	115.00	No Ice	0.00	0.00	25.00
Generic TMA (within Shroud) (Sprint)	C	None		0.0000	115.00	No Ice	0.00	0.00	25.00
30"x10' Shroud	A	None		0.0000	113.00	No Ice	13.33	13.33	175.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
(Sprint)									
**********									
SBNH-1D6565A Antenna (within Shroud) (AT&T)	A	None		0.0000	107.00	No Ice	0.00	0.00	32.00
SBNH-1D6565A Antenna (within Shroud) (AT&T)	B	None		0.0000	107.00	No Ice	0.00	0.00	32.00
SBNH-1D6565A Antenna (within Shroud) (AT&T)	C	None		0.0000	107.00	No Ice	0.00	0.00	32.00
DTMABP7819VG12A TMA (within Shroud) (AT&T)	A	None		0.0000	107.00	No Ice	0.00	0.00	20.00
DTMABP7819VG12A TMA (within Shroud) (AT&T)	B	None		0.0000	107.00	No Ice	0.00	0.00	20.00
DTMABP7819VG12A TMA (within Shroud) (AT&T)	C	None		0.0000	107.00	No Ice	0.00	0.00	20.00
30"x10' Shroud (AT&T)	A	None		0.0000	103.00	No Ice	13.33	13.33	175.00
**********									
DMP65R-BU4DA Antenna (within Shroud) (AT&T)	A	None		0.0000	95.50	No Ice	0.00	0.00	68.00
DMP65R-BU4DA Antenna (within Shroud) (AT&T)	B	None		0.0000	95.50	No Ice	0.00	0.00	68.00
DMP65R-BU4DA Antenna (within Shroud) (AT&T)	C	None		0.0000	95.50	No Ice	0.00	0.00	68.00
TMABPD7823VG12A TMA (within Shroud) (AT&T)	A	None		0.0000	95.50	No Ice	0.00	0.00	25.00
TMABPD7823VG12A TMA (within Shroud) (AT&T)	B	None		0.0000	95.50	No Ice	0.00	0.00	25.00
TMABPD7823VG12A TMA (within Shroud) (AT&T)	C	None		0.0000	95.50	No Ice	0.00	0.00	25.00
TMABPD7823VG12A TMA (within Shroud) (AT&T)	A	None		0.0000	95.50	No Ice	0.00	0.00	25.00
TMABPD7823VG12A TMA (within Shroud) (AT&T)	B	None		0.0000	95.50	No Ice	0.00	0.00	25.00
TMABPD7823VG12A TMA (within Shroud) (AT&T)	C	None		0.0000	95.50	No Ice	0.00	0.00	25.00
42"x10' Shroud (AT&T)	A	None		0.0000	93.00	No Ice	17.78	17.78	244.00

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	Dead+Wind 0 deg - Service
27	Dead+Wind 30 deg - Service
28	Dead+Wind 60 deg - Service
29	Dead+Wind 90 deg - Service
30	Dead+Wind 120 deg - Service
31	Dead+Wind 150 deg - Service
32	Dead+Wind 180 deg - Service
33	Dead+Wind 210 deg - Service
34	Dead+Wind 240 deg - Service
35	Dead+Wind 270 deg - Service
36	Dead+Wind 300 deg - Service
37	Dead+Wind 330 deg - Service

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	8	3419.42	-2294.15	0.00
	Max. H_x	20	3419.42	2294.15	0.00
	Max. H_z	2	3419.42	0.00	2294.15
	Max. M_x	2	34542.79	0.00	2294.15
	Max. M_z	8	34542.79	-2294.15	0.00
	Max. Torsion	6	0.00	-1986.80	1147.08
	Min. Vert	5	2564.57	-1147.08	1986.80
	Min. H_x	8	3419.42	-2294.15	0.00
	Min. H_z	14	3419.42	0.00	-2294.15
	Min. M_x	14	-34542.79	0.00	-2294.15
	Min. M_z	20	-34542.79	2294.15	0.00
	Min. Torsion	10	-0.00	-1986.80	-1147.08

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb

Tower Mast Reaction Summary

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x lb-ft	Overturning Moment, M_z lb-ft	Torque lb-ft
Dead Only	2849.52	0.00	0.00	0.00	0.00	0.00
1.2 Dead+1.6 Wind 0 deg - No Ice	3419.42	0.00	-2294.15	-34542.79	0.00	0.00
0.9 Dead+1.6 Wind 0 deg - No Ice	2564.57	0.00	-2294.15	-34129.48	0.00	0.00
1.2 Dead+1.6 Wind 30 deg - No Ice	3419.42	1147.08	-1986.80	-29914.94	-17271.40	0.00
0.9 Dead+1.6 Wind 30 deg - No Ice	2564.57	1147.08	-1986.80	-29557.07	-17064.78	0.00
1.2 Dead+1.6 Wind 60 deg - No Ice	3419.42	1986.80	-1147.08	-17271.40	-29914.94	-0.00
0.9 Dead+1.6 Wind 60 deg - No Ice	2564.57	1986.80	-1147.08	-17064.78	-29557.07	-0.00
1.2 Dead+1.6 Wind 90 deg - No Ice	3419.42	2294.15	0.00	0.00	-34542.79	0.00
0.9 Dead+1.6 Wind 90 deg - No Ice	2564.57	2294.15	0.00	0.00	-34129.48	0.00
1.2 Dead+1.6 Wind 120 deg - No Ice	3419.42	1986.80	1147.08	17271.40	-29914.94	0.00
0.9 Dead+1.6 Wind 120 deg - No Ice	2564.57	1986.80	1147.08	17064.78	-29557.07	0.00
1.2 Dead+1.6 Wind 150 deg - No Ice	3419.42	1147.08	1986.80	29914.94	-17271.40	-0.00
0.9 Dead+1.6 Wind 150 deg - No Ice	2564.57	1147.08	1986.80	29557.07	-17064.78	-0.00
1.2 Dead+1.6 Wind 180 deg - No Ice	3419.42	0.00	2294.15	34542.79	0.00	0.00
0.9 Dead+1.6 Wind 180 deg - No Ice	2564.57	0.00	2294.15	34129.48	0.00	0.00
1.2 Dead+1.6 Wind 210 deg - No Ice	3419.42	-1147.08	1986.80	29914.94	17271.40	0.00
0.9 Dead+1.6 Wind 210 deg - No Ice	2564.57	-1147.08	1986.80	29557.07	17064.78	0.00
1.2 Dead+1.6 Wind 240 deg - No Ice	3419.42	-1986.80	1147.08	17271.40	29914.94	-0.00
0.9 Dead+1.6 Wind 240 deg - No Ice	2564.57	-1986.80	1147.08	17064.78	29557.07	-0.00
1.2 Dead+1.6 Wind 270 deg - No Ice	3419.42	-2294.15	0.00	0.00	34542.79	0.00
0.9 Dead+1.6 Wind 270 deg - No Ice	2564.57	-2294.15	0.00	0.00	34129.48	0.00
1.2 Dead+1.6 Wind 300 deg - No Ice	3419.42	-1986.80	-1147.08	-17271.40	29914.94	0.00
0.9 Dead+1.6 Wind 300 deg - No Ice	2564.57	-1986.80	-1147.08	-17064.78	29557.07	0.00
1.2 Dead+1.6 Wind 330 deg - No Ice	3419.42	-1147.08	-1986.80	-29914.94	17271.40	-0.00
0.9 Dead+1.6 Wind 330 deg - No Ice	2564.57	-1147.08	-1986.80	-29557.07	17064.78	-0.00
Dead+Wind 0 deg - Service	2849.52	0.00	-496.10	-7396.09	0.00	0.00
Dead+Wind 30 deg - Service	2849.52	248.05	-429.63	-6405.20	-3698.05	0.00

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Dead+Wind 60 deg - Service	2849.52	429.63	-248.05	-3698.05	-6405.20	-0.00
Dead+Wind 90 deg - Service	2849.52	496.10	0.00	0.00	-7396.09	0.00
Dead+Wind 120 deg - Service	2849.52	429.63	248.05	3698.05	-6405.20	0.00
Dead+Wind 150 deg - Service	2849.52	248.05	429.63	6405.20	-3698.05	-0.00
Dead+Wind 180 deg - Service	2849.52	0.00	496.10	7396.09	0.00	0.00
Dead+Wind 210 deg - Service	2849.52	-248.05	429.63	6405.20	3698.05	0.00
Dead+Wind 240 deg - Service	2849.52	-429.63	248.05	3698.05	6405.20	-0.00
Dead+Wind 270 deg - Service	2849.52	-496.10	0.00	0.00	7396.09	0.00
Dead+Wind 300 deg - Service	2849.52	-429.63	-248.05	-3698.05	6405.20	0.00
Dead+Wind 330 deg - Service	2849.52	-248.05	-429.63	-6405.20	3698.05	-0.00

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX lb	PY lb	PZ lb	PX lb	PY lb	PZ lb	% Error
1	0.00	-2849.52	0.00	0.00	2849.52	0.00	0.000%
2	0.00	-3419.42	-2294.15	0.00	3419.42	2294.15	0.000%
3	0.00	-2564.57	-2294.15	0.00	2564.57	2294.15	0.000%
4	1147.08	-3419.42	-1986.80	-1147.08	3419.42	1986.80	0.000%
5	1147.08	-2564.57	-1986.80	-1147.08	2564.57	1986.80	0.000%
6	1986.80	-3419.42	-1147.08	-1986.80	3419.42	1147.08	0.000%
7	1986.80	-2564.57	-1147.08	-1986.80	2564.57	1147.08	0.000%
8	2294.15	-3419.42	0.00	-2294.15	3419.42	0.00	0.000%
9	2294.15	-2564.57	0.00	-2294.15	2564.57	0.00	0.000%
10	1986.80	-3419.42	1147.08	-1986.80	3419.42	-1147.08	0.000%
11	1986.80	-2564.57	1147.08	-1986.80	2564.57	-1147.08	0.000%
12	1147.08	-3419.42	1986.80	-1147.08	3419.42	-1986.80	0.000%
13	1147.08	-2564.57	1986.80	-1147.08	2564.57	-1986.80	0.000%
14	0.00	-3419.42	2294.15	0.00	3419.42	-2294.15	0.000%
15	0.00	-2564.57	2294.15	0.00	2564.57	-2294.15	0.000%
16	-1147.08	-3419.42	1986.80	1147.08	3419.42	-1986.80	0.000%
17	-1147.08	-2564.57	1986.80	1147.08	2564.57	-1986.80	0.000%
18	-1986.80	-3419.42	1147.08	1986.80	3419.42	-1147.08	0.000%
19	-1986.80	-2564.57	1147.08	1986.80	2564.57	-1147.08	0.000%
20	-2294.15	-3419.42	0.00	2294.15	3419.42	0.00	0.000%
21	-2294.15	-2564.57	0.00	2294.15	2564.57	0.00	0.000%
22	-1986.80	-3419.42	-1147.08	1986.80	3419.42	1147.08	0.000%
23	-1986.80	-2564.57	-1147.08	1986.80	2564.57	1147.08	0.000%
24	-1147.08	-3419.42	-1986.80	1147.08	3419.42	1986.80	0.000%
25	-1147.08	-2564.57	-1986.80	1147.08	2564.57	1986.80	0.000%
26	0.00	-2849.52	-496.10	0.00	2849.52	496.10	0.000%
27	248.05	-2849.52	-429.63	-248.05	2849.52	429.63	0.000%
28	429.63	-2849.52	-248.05	-429.63	2849.52	248.05	0.000%
29	496.10	-2849.52	0.00	-496.10	2849.52	0.00	0.000%
30	429.63	-2849.52	248.05	-429.63	2849.52	-248.05	0.000%
31	248.05	-2849.52	429.63	-248.05	2849.52	-429.63	0.000%
32	0.00	-2849.52	496.10	0.00	2849.52	-496.10	0.000%
33	-248.05	-2849.52	429.63	248.05	2849.52	-429.63	0.000%
34	-429.63	-2849.52	248.05	429.63	2849.52	-248.05	0.000%
35	-496.10	-2849.52	0.00	496.10	2849.52	0.00	0.000%
36	-429.63	-2849.52	-248.05	429.63	2849.52	248.05	0.000%
37	-248.05	-2849.52	-429.63	248.05	2849.52	429.63	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	5	0.00000001	0.00000001
3	Yes	4	0.00000001	0.00098770
4	Yes	5	0.00000001	0.00030795
5	Yes	5	0.00000001	0.00014287
6	Yes	5	0.00000001	0.00030795
7	Yes	5	0.00000001	0.00014287
8	Yes	5	0.00000001	0.00000001
9	Yes	4	0.00000001	0.00098770
10	Yes	5	0.00000001	0.00030795
11	Yes	5	0.00000001	0.00014287
12	Yes	5	0.00000001	0.00030795
13	Yes	5	0.00000001	0.00014287
14	Yes	5	0.00000001	0.00000001
15	Yes	4	0.00000001	0.00098770
16	Yes	5	0.00000001	0.00030795
17	Yes	5	0.00000001	0.00014287
18	Yes	5	0.00000001	0.00030795
19	Yes	5	0.00000001	0.00014287
20	Yes	5	0.00000001	0.00000001
21	Yes	4	0.00000001	0.00098770
22	Yes	5	0.00000001	0.00030795
23	Yes	5	0.00000001	0.00014287
24	Yes	5	0.00000001	0.00030795
25	Yes	5	0.00000001	0.00014287
26	Yes	4	0.00000001	0.00010330
27	Yes	4	0.00000001	0.00011203
28	Yes	4	0.00000001	0.00011203
29	Yes	4	0.00000001	0.00010330
30	Yes	4	0.00000001	0.00011203
31	Yes	4	0.00000001	0.00011203
32	Yes	4	0.00000001	0.00010330
33	Yes	4	0.00000001	0.00011203
34	Yes	4	0.00000001	0.00011203
35	Yes	4	0.00000001	0.00010330
36	Yes	4	0.00000001	0.00011203
37	Yes	4	0.00000001	0.00011203

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	118 - 108	4.1162	26	0.9727	0.0000
L2	108 - 98	2.1072	26	0.9042	0.0000
L3	98 - 88	0.5649	26	0.4759	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
115.00	Panel Antenna (within Shroud)	26	3.4973	0.9775	0.0000	6743
113.00	30"x10' Shroud	26	3.0894	0.9732	0.0000	6743
107.00	SBNH-1D6565A Antenna (within Shroud)	26	1.9201	0.8762	0.0000	2467
103.00	30"x10' Shroud	26	1.2277	0.7206	0.0000	1385
95.50	DMP65R-BU4DA Antenna (within Shroud)	26	0.3484	0.3532	0.0000	1191
93.00	42"x10' Shroud	27	0.1964	0.2337	0.0000	1743

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	118 - 108	19.2199	2	4.5412	0.0000
L2	108 - 98	9.8466	2	4.2246	0.0000
L3	98 - 88	2.6413	2	2.2261	0.0000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
115.00	Panel Antenna (within Shroud)	2	16.3331	4.5645	0.0000	1474
113.00	30"x10' Shroud	2	14.4305	4.5454	0.0000	1474
107.00	SBNH-1D6565A Antenna (within Shroud)	2	8.9731	4.0937	0.0000	536
103.00	30"x10' Shroud	2	5.7390	3.3685	0.0000	299
95.50	DMP65R-BU4DA Antenna (within Shroud)	2	1.6290	1.6527	0.0000	255
93.00	42"x10' Shroud	4	0.9185	1.0938	0.0000	373

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
L1	118 - 108 (1)	P4x.337	10.00	0.00	0.0	4.4074	-641.53	138834.00	0.005
L2	108 - 98 (2)	4" Round Bar	10.00	0.00	0.0	12.5664	-1657.04	565487.00	0.003
L3	98 - 88 (3)	5" Round Bar	10.00	0.00	0.0	19.6350	-3413.14	883573.00	0.004

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} lb-ft	ϕM_{nx} lb-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} lb-ft	ϕM_{ny} lb-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	118 - 108 (1)	P4x.337	3916.26	15364.58	0.255	0.00	15364.58	0.000
L2	108 - 98 (2)	4" Round Bar	15401.00	35342.92	0.436	0.00	35342.92	0.000
L3	98 - 88 (3)	5" Round Bar	34542.83	69029.17	0.500	0.00	69029.17	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	118 - 108 (1)	P4x.337	773.09	69417.10	0.011	0.00	22424.50	0.000
L2	108 - 98 (2)	4" Round Bar	1499.85	282743.00	0.005	0.00	47123.92	0.000
L3	98 - 88 (3)	5" Round Bar	2303.49	441786.00	0.005	0.00	92039.17	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	118 - 108 (1)	0.005	0.255	0.000	0.011	0.000	0.260 ✔	1.000	4.8.2 ✔
L2	108 - 98 (2)	0.003	0.436	0.000	0.005	0.000	0.439 ✔	1.000	4.8.2 ✔
L3	98 - 88 (3)	0.004	0.500	0.000	0.005	0.000	0.504 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	118 - 108	Pole	P4x.337	1	-641.53	138834.00	26.0	Pass
L2	108 - 98	Pole	4" Round Bar	2	-1657.04	565487.00	43.9	Pass
L3	98 - 88	Pole	5" Round Bar	3	-3413.14	883573.00	50.4	Pass
							Summary	
						Pole (L3)	50.4	Pass
						RATING =	**50.4**	**Pass**

Section	1	2
Length (ft)	39.32	50.82
Number of Sides	18	18
Thickness (in)	0.1875	0.1875
Socket Length (ft)	3.64	
Top Dia (in)	19.5000	24.1794
Bot Dia (in)	25.0700	31.2500
Grade	A572-65	
Weight (lb)	1759.5	2833.0
4592.5		

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Panel Antenna (within Shroud) (Sprint)	115	30"x10' Shroud (ATI)	103
Panel Antenna (within Shroud) (Sprint)	115	DMP65R-BU4DA Antenna (within Shroud) (ATI)	95.5
Panel Antenna (within Shroud) (Sprint)	115	DMP65R-BU4DA Antenna (within Shroud) (ATI)	95.5
Generic TMA (within Shroud) (Sprint)	115	DMP65R-BU4DA Antenna (within Shroud) (ATI)	95.5
Generic TMA (within Shroud) (Sprint)	115	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
Generic TMA (within Shroud) (Sprint)	115	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
30"x10' Shroud (Sprint)	113	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
SBNH-1D6565A Antenna (within Shroud) (ATI)	107	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
SBNH-1D6565A Antenna (within Shroud) (ATI)	107	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
SBNH-1D6565A Antenna (within Shroud) (ATI)	107	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
DTMABP7819VG12A TMA (within Shroud) (ATI)	107	TMABPD7823VG12A TMA (within Shroud) (ATI)	95.5
DTMABP7819VG12A TMA (within Shroud) (ATI)	107	42"x10' Shroud (ATI)	93
DTMABP7819VG12A TMA (within Shroud) (ATI)	107		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 105.0 mph basic wind in accordance with the TIA-222-G Standard.
4. Deflections are based upon a 60.0 mph wind.
5. Tower Structure Class I.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. TOWER RATING: 58.3%

Hudson Design Group LLC
45 Beechwood Drive
North Andover, MA 01845
Phone: (978) 557-5553
FAX: (978) 336-5586

Job: CT 1171 Simsbury, CT		
Project: 120 ft Flagpole		
Client: AT&T	Drawn by: jnash	App'd:
Code: TIA-222-G	Date: 10/24/19	Scale: NTS
Path:		Dwg No. E-1

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

Tower is located in Hartford County, Connecticut.
Basic wind speed of 105.0 mph.
Structure Class I.
Exposure Category B.
Topographic Category 1.
Crest Height 0.00 ft.
Deflections calculated using a wind speed of 60.0 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	88.00-48.68	39.32	3.64	18	19.5000	25.0700	0.1875	0.7500	A572-65 (65 ksi)
L2	48.68-1.50	50.82		18	24.1794	31.2500	0.1875	0.7500	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	19.7719	11.4934	541.5782	6.8559	9.9060	54.6717	1083.8689	5.7478	3.1020	16.544
	25.4278	14.8082	1158.3177	8.8333	12.7356	90.9515	2318.1595	7.4055	4.0823	21.772
L2	25.0377	14.2782	1038.3353	8.5171	12.2831	84.5335	2078.0369	7.1404	3.9256	20.936
	31.7032	18.4861	2253.4860	11.0272	15.8750	141.9519	4509.9372	9.2448	5.1700	27.573

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 88.00-48.68				1	1	1			
L2 48.68-1.50				1	1	1			

Monopole Base Plate Data

Base Plate Data	
Base plate is square	
Base plate is grouted	
Anchor bolt grade	A615-75
Anchor bolt size	2.2500 in
Number of bolts	4
Embedment length	84.0000 in
f'_c	4.0 ksi
Grout space	3.2500 in
Base plate grade	A572-60
Base plate thickness	1.5000 in
Bolt circle diameter	39.0000 in
Outer diameter	45.0000 in
Inner diameter	21.2500 in
Base plate type	Plain Plate

Feed Line/Linear Appurtenances - Entered As Area

Description	*Face or Leg*	*Allow Shield*	*Exclude From Torque Calculation*	*Component Type*	*Placement* *ft*	*Total Number*		*C_AA_A* *ft^2/ft*	*Weight* *plf*
1 5/8	A	No	No	Inside Pole	88.00 - 8.00	6	No Ice	0.00	1.04
1 1/4 (AT&T - proposed)	A	No	No	Inside Pole	88.00 - 8.00	9	No Ice	0.00	0.66
1 1/4 (AT&T - proposed)	A	No	No	Inside Pole	88.00 - 8.00	9	No Ice	0.00	0.66

Feed Line/Linear Appurtenances Section Areas

Tower Section	*Tower Elevation* *ft*	*Face*	*A_R* *ft^2*	*A_F* *ft^2*	*C_AA_A In Face* *ft^2*	*C_AA_A Out Face* *ft^2*	*Weight* *lb*
L1	88.00-48.68	A	0.000	0.000	0.000	0.000	712.48
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L2	48.68-1.50	A	0.000	0.000	0.000	0.000	737.12
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00

Feed Line Center of Pressure

Section	*Elevation* *ft*	*CP_X* *in*	*CP_Z* *in*	*CP_X Ice* *in*	*CP_Z Ice* *in*
L1	88.00-48.68	0.0000	0.0000	0.0000	0.0000
L2	48.68-1.50	0.0000	0.0000	0.0000	0.0000

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
Panel Antenna (within Shroud) (Sprint)	A	None		0.0000	115.00	No Ice	0.00	0.00	50.00
Panel Antenna (within Shroud) (Sprint)	B	None		0.0000	115.00	No Ice	0.00	0.00	50.00
Panel Antenna (within Shroud) (Sprint)	C	None		0.0000	115.00	No Ice	0.00	0.00	50.00
Generic TMA (within Shroud) (Sprint)	A	None		0.0000	115.00	No Ice	0.00	0.00	25.00
Generic TMA (within Shroud) (Sprint)	B	None		0.0000	115.00	No Ice	0.00	0.00	25.00
Generic TMA (within Shroud) (Sprint)	C	None		0.0000	115.00	No Ice	0.00	0.00	25.00
30"x10' Shroud (Sprint)	A	None		0.0000	113.00	No Ice	13.33	13.33	175.00
**********									
SBNH-1D6565A Antenna (within Shroud) (AT&T)	A	None		0.0000	107.00	No Ice	0.00	0.00	32.00
SBNH-1D6565A Antenna (within Shroud) (AT&T)	B	None		0.0000	107.00	No Ice	0.00	0.00	32.00
SBNH-1D6565A Antenna (within Shroud) (AT&T)	C	None		0.0000	107.00	No Ice	0.00	0.00	32.00
DTMABP7819VG12A TMA (within Shroud) (AT&T)	A	None		0.0000	107.00	No Ice	0.00	0.00	20.00
DTMABP7819VG12A TMA (within Shroud) (AT&T)	B	None		0.0000	107.00	No Ice	0.00	0.00	20.00
DTMABP7819VG12A TMA (within Shroud) (AT&T)	C	None		0.0000	107.00	No Ice	0.00	0.00	20.00
30"x10' Shroud (AT&T)	A	None		0.0000	103.00	No Ice	13.33	13.33	175.00
**********									
DMP65R-BU4DA Antenna (within Shroud) (AT&T)	A	None		0.0000	95.50	No Ice	0.00	0.00	68.00
DMP65R-BU4DA Antenna (within Shroud)	B	None		0.0000	95.50	No Ice	0.00	0.00	68.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
(AT&T) DMP65R-BU4DA Antenna (within Shroud)	C	None		0.0000	95.50	No Ice	0.00	0.00	68.00
(AT&T) TMABPD7823VG12A TMA (within Shroud)	A	None		0.0000	95.50	No Ice	0.00	0.00	25.00
(AT&T) TMABPD7823VG12A TMA (within Shroud)	B	None		0.0000	95.50	No Ice	0.00	0.00	25.00
(AT&T) TMABPD7823VG12A TMA (within Shroud)	C	None		0.0000	95.50	No Ice	0.00	0.00	25.00
(AT&T) TMABPD7823VG12A TMA (within Shroud)	A	None		0.0000	95.50	No Ice	0.00	0.00	25.00
(AT&T) TMABPD7823VG12A TMA (within Shroud)	B	None		0.0000	95.50	No Ice	0.00	0.00	25.00
(AT&T) TMABPD7823VG12A TMA (within Shroud)	C	None		0.0000	95.50	No Ice	0.00	0.00	25.00
(AT&T) 42"x10' Shroud	A	None		0.0000	93.00	No Ice	17.78	17.78	244.00

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice

Comb. No.	Description
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	Dead+Wind 0 deg - Service
27	Dead+Wind 30 deg - Service
28	Dead+Wind 60 deg - Service
29	Dead+Wind 90 deg - Service
30	Dead+Wind 120 deg - Service
31	Dead+Wind 150 deg - Service
32	Dead+Wind 180 deg - Service
33	Dead+Wind 210 deg - Service
34	Dead+Wind 240 deg - Service
35	Dead+Wind 270 deg - Service
36	Dead+Wind 300 deg - Service
37	Dead+Wind 330 deg - Service

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	2	8845.32	0.00	5696.31
	Max. H_x	20	8845.32	5696.31	0.00
	Max. H_z	2	8845.32	0.00	5696.31
	Max. M_x	2	357278.36	0.00	5696.31
	Max. M_z	8	357278.36	-5696.31	0.00
	Max. Torsion	12	0.00	-2848.15	-4933.15
	Min. Vert	7	6633.99	-4933.15	2848.15
	Min. H_x	8	8845.32	-5696.31	0.00
	Min. H_z	14	8845.32	0.00	-5696.31
	Min. M_x	14	-357278.36	0.00	-5696.31
	Min. M_z	20	-357278.36	5696.31	0.00
	Min. Torsion	4	-0.00	-2848.15	4933.15

Tower Mast Reaction Summary

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x lb-ft	Overturning Moment, M_z lb-ft	Torque lb-ft
Dead Only	7371.10	0.00	0.00	0.00	0.00	0.00
1.2 Dead+1.6 Wind 0 deg - No Ice	8845.32	0.00	-5696.31	-357278.36	0.00	0.00
0.9 Dead+1.6 Wind 0 deg - No Ice	6633.99	0.00	-5696.31	-354733.06	0.00	0.00
1.2 Dead+1.6 Wind 30 deg - No Ice	8845.32	2848.15	-4933.15	-309412.42	-178639.34	0.00
0.9 Dead+1.6 Wind 30 deg - No Ice	6633.99	2848.15	-4933.15	-307207.93	-177366.58	0.00
1.2 Dead+1.6 Wind 60 deg - No Ice	8845.32	4933.15	-2848.15	-178639.34	-309412.42	-0.00
0.9 Dead+1.6 Wind 60 deg - No Ice	6633.99	4933.15	-2848.15	-177366.58	-307207.93	-0.00
1.2 Dead+1.6 Wind 90 deg - No Ice	8845.32	5696.31	0.00	0.00	-357278.36	0.00
0.9 Dead+1.6 Wind 90 deg - No	6633.99	5696.31	0.00	0.00	-354733.06	0.00

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x lb-ft	Overturning Moment, M_z lb-ft	Torque lb-ft
Ice						
1.2 Dead+1.6 Wind 120 deg - No Ice	8845.32	4933.15	2848.15	178639.34	-309412.42	0.00
0.9 Dead+1.6 Wind 120 deg - No Ice	6633.99	4933.15	2848.15	177366.58	-307207.93	0.00
1.2 Dead+1.6 Wind 150 deg - No Ice	8845.32	2848.15	4933.15	309412.42	-178639.34	-0.00
0.9 Dead+1.6 Wind 150 deg - No Ice	6633.99	2848.15	4933.15	307207.93	-177366.58	-0.00
1.2 Dead+1.6 Wind 180 deg - No Ice	8845.32	0.00	5696.31	357278.36	0.00	0.00
0.9 Dead+1.6 Wind 180 deg - No Ice	6633.99	0.00	5696.31	354733.06	0.00	0.00
1.2 Dead+1.6 Wind 210 deg - No Ice	8845.32	-2848.15	4933.15	309412.42	178639.34	0.00
0.9 Dead+1.6 Wind 210 deg - No Ice	6633.99	-2848.15	4933.15	307207.93	177366.58	0.00
1.2 Dead+1.6 Wind 240 deg - No Ice	8845.32	-4933.15	2848.15	178639.34	309412.42	-0.00
0.9 Dead+1.6 Wind 240 deg - No Ice	6633.99	-4933.15	2848.15	177366.58	307207.93	-0.00
1.2 Dead+1.6 Wind 270 deg - No Ice	8845.32	-5696.31	0.00	0.00	357278.36	0.00
0.9 Dead+1.6 Wind 270 deg - No Ice	6633.99	-5696.31	0.00	0.00	354733.06	0.00
1.2 Dead+1.6 Wind 300 deg - No Ice	8845.32	-4933.15	-2848.15	-178639.34	309412.42	0.00
0.9 Dead+1.6 Wind 300 deg - No Ice	6633.99	-4933.15	-2848.15	-177366.58	307207.93	0.00
1.2 Dead+1.6 Wind 330 deg - No Ice	8845.32	-2848.15	-4933.15	-309412.42	178639.34	-0.00
0.9 Dead+1.6 Wind 330 deg - No Ice	6633.99	-2848.15	-4933.15	-307207.93	177366.58	-0.00
Dead+Wind 0 deg - Service	7371.10	0.00	-1195.57	-74656.86	0.00	0.00
Dead+Wind 30 deg - Service	7371.10	597.78	-1035.39	-64654.73	-37328.43	0.00
Dead+Wind 60 deg - Service	7371.10	1035.39	-597.78	-37328.43	-64654.73	-0.00
Dead+Wind 90 deg - Service	7371.10	1195.57	0.00	0.00	-74656.86	0.00
Dead+Wind 120 deg - Service	7371.10	1035.39	597.78	37328.43	-64654.73	0.00
Dead+Wind 150 deg - Service	7371.10	597.78	1035.39	64654.73	-37328.43	-0.00
Dead+Wind 180 deg - Service	7371.10	0.00	1195.57	74656.86	0.00	0.00
Dead+Wind 210 deg - Service	7371.10	-597.78	1035.39	64654.73	37328.43	0.00
Dead+Wind 240 deg - Service	7371.10	-1035.39	597.78	37328.43	64654.73	-0.00
Dead+Wind 270 deg - Service	7371.10	-1195.57	0.00	0.00	74656.86	0.00
Dead+Wind 300 deg - Service	7371.10	-1035.39	-597.78	-37328.43	64654.73	0.00
Dead+Wind 330 deg - Service	7371.10	-597.78	-1035.39	-64654.73	37328.43	-0.00

Solution Summary

Load Comb.	Sum of Applied Forces PX lb	PY lb	PZ lb	Sum of Reactions PX lb	PY lb	PZ lb	% Error
1	0.00	-7371.10	0.00	0.00	7371.10	0.00	0.000%
2	0.00	-8845.32	-5696.31	0.00	8845.32	5696.31	0.000%
3	0.00	-6633.99	-5696.31	0.00	6633.99	5696.31	0.000%
4	2848.15	-8845.32	-4933.15	-2848.15	8845.32	4933.15	0.000%
5	2848.15	-6633.99	-4933.15	-2848.15	6633.99	4933.15	0.000%
6	4933.15	-8845.32	-2848.15	-4933.15	8845.32	2848.15	0.000%
7	4933.15	-6633.99	-2848.15	-4933.15	6633.99	2848.15	0.000%

Load Comb.	Sum of Applied Forces PX lb	PY lb	PZ lb	Sum of Reactions PX lb	PY lb	PZ lb	% Error
8	5696.31	-8845.32	0.00	-5696.31	8845.32	0.00	0.000%
9	5696.31	-6633.99	0.00	-5696.31	6633.99	0.00	0.000%
10	4933.15	-8845.32	2848.15	-4933.15	8845.32	-2848.15	0.000%
11	4933.15	-6633.99	2848.15	-4933.15	6633.99	-2848.15	0.000%
12	2848.15	-8845.32	4933.15	-2848.15	8845.32	-4933.15	0.000%
13	2848.15	-6633.99	4933.15	-2848.15	6633.99	-4933.15	0.000%
14	0.00	-8845.32	5696.31	0.00	8845.32	-5696.31	0.000%
15	0.00	-6633.99	5696.31	0.00	6633.99	-5696.31	0.000%
16	-2848.15	-8845.32	4933.15	2848.15	8845.32	-4933.15	0.000%
17	-2848.15	-6633.99	4933.15	2848.15	6633.99	-4933.15	0.000%
18	-4933.15	-8845.32	2848.15	4933.15	8845.32	-2848.15	0.000%
19	-4933.15	-6633.99	2848.15	4933.15	6633.99	-2848.15	0.000%
20	-5696.31	-8845.32	0.00	5696.31	8845.32	0.00	0.000%
21	-5696.31	-6633.99	0.00	5696.31	6633.99	0.00	0.000%
22	-4933.15	-8845.32	-2848.15	4933.15	8845.32	2848.15	0.000%
23	-4933.15	-6633.99	-2848.15	4933.15	6633.99	2848.15	0.000%
24	-2848.15	-8845.32	-4933.15	2848.15	8845.32	4933.15	0.000%
25	-2848.15	-6633.99	-4933.15	2848.15	6633.99	4933.15	0.000%
26	0.00	-7371.10	-1195.57	0.00	7371.10	1195.57	0.000%
27	597.78	-7371.10	-1035.39	-597.78	7371.10	1035.39	0.000%
28	1035.39	-7371.10	-597.78	-1035.39	7371.10	597.78	0.000%
29	1195.57	-7371.10	0.00	-1195.57	7371.10	0.00	0.000%
30	1035.39	-7371.10	597.78	-1035.39	7371.10	-597.78	0.000%
31	597.78	-7371.10	1035.39	-597.78	7371.10	-1035.39	0.000%
32	0.00	-7371.10	1195.57	0.00	7371.10	-1195.57	0.000%
33	-597.78	-7371.10	1035.39	597.78	7371.10	-1035.39	0.000%
34	-1035.39	-7371.10	597.78	1035.39	7371.10	-597.78	0.000%
35	-1195.57	-7371.10	0.00	1195.57	7371.10	0.00	0.000%
36	-1035.39	-7371.10	-597.78	1035.39	7371.10	597.78	0.000%
37	-597.78	-7371.10	-1035.39	597.78	7371.10	1035.39	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00003176
3	Yes	4	0.00000001	0.00000001
4	Yes	5	0.00000001	0.00006470
5	Yes	5	0.00000001	0.00003097
6	Yes	5	0.00000001	0.00006470
7	Yes	5	0.00000001	0.00003097
8	Yes	4	0.00000001	0.00003176
9	Yes	4	0.00000001	0.00000001
10	Yes	5	0.00000001	0.00006470
11	Yes	5	0.00000001	0.00003097
12	Yes	5	0.00000001	0.00006470
13	Yes	5	0.00000001	0.00003097
14	Yes	4	0.00000001	0.00003176
15	Yes	4	0.00000001	0.00000001
16	Yes	5	0.00000001	0.00006470
17	Yes	5	0.00000001	0.00003097
18	Yes	5	0.00000001	0.00006470
19	Yes	5	0.00000001	0.00003097
20	Yes	4	0.00000001	0.00003176
21	Yes	4	0.00000001	0.00000001

22	Yes	5	0.00000001	0.00006470
23	Yes	5	0.00000001	0.00003097
24	Yes	5	0.00000001	0.00006470
25	Yes	5	0.00000001	0.00003097
26	Yes	4	0.00000001	0.00000001
27	Yes	4	0.00000001	0.00000001
28	Yes	4	0.00000001	0.00000001
29	Yes	4	0.00000001	0.00000001
30	Yes	4	0.00000001	0.00000001
31	Yes	4	0.00000001	0.00000001
32	Yes	4	0.00000001	0.00000001
33	Yes	4	0.00000001	0.00000001
34	Yes	4	0.00000001	0.00000001
35	Yes	4	0.00000001	0.00000001
36	Yes	4	0.00000001	0.00000001
37	Yes	4	0.00000001	0.00000001

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	88 - 48.68	6.2388	26	0.5925	0.0000
L2	52.32 - 1.5	2.3866	26	0.4158	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
115.00	Panel Antenna (within Shroud)	26	6.2388	0.5925	0.0000	40481
113.00	30"x10' Shroud	26	6.2388	0.5925	0.0000	40481
107.00	SBNH-1D6565A Antenna (within Shroud)	26	6.2388	0.5925	0.0000	40481
103.00	30"x10' Shroud	26	6.2388	0.5925	0.0000	40481
95.50	DMP65R-BU4DA Antenna (within Shroud)	26	6.2388	0.5925	0.0000	40481
93.00	42"x10' Shroud	26	6.2388	0.5925	0.0000	40481

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	88 - 48.68	29.8737	2	2.8373	0.0000
L2	52.32 - 1.5	11.4292	2	1.9915	0.0000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
115.00	Panel Antenna (within Shroud)	2	29.8737	2.8373	0.0000	8483
113.00	30"x10' Shroud	2	29.8737	2.8373	0.0000	8483
107.00	SBNH-1D6565A Antenna (within Shroud)	2	29.8737	2.8373	0.0000	8483
103.00	30"x10' Shroud	2	29.8737	2.8373	0.0000	8483
95.50	DMP65R-BU4DA Antenna (within Shroud)	2	29.8737	2.8373	0.0000	8483
93.00	42"x10' Shroud	2	29.8737	2.8373	0.0000	8483

Base Plate Design Data

Plate Thickness in	Number of Anchor Bolts	Anchor Bolt Size in	Actual / Allowable Ratio Bolt Tension lb	Actual / Allowable Ratio Bolt Compression lb	Actual / Allowable Ratio Plate Stress ksi	Actual / Allowable Ratio Stiffener Stress ksi	Controlling Condition	Ratio
1.5000	4	2.2500	107721.97 223654.40 0.48	112141.84 371266.30 0.30	31.476 54.000 0.58		Plate	0.58 ✔

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
L1	88 - 48.68 (1)	TP25.07x19.5x0.1875	39.32	0.00	0.0	14.5013	-4142.25	996612.00	0.004
L2	48.68 - 1.5 (2)	TP31.25x24.1794x0.1875	50.82	0.00	0.0	18.4861	-8839.73	1147480.00	0.008

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} lb-ft	ϕM_{nx} lb-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} lb-ft	ϕM_{ny} lb-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	88 - 48.68 (1)	TP25.07x19.5x0.1875	122121.67	499446.67	0.245	0.00	499446.67	0.000
L2	48.68 - 1.5 (2)	TP31.25x24.1794x0.1875	357278.33	734278.33	0.487	0.00	734278.33	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	88 - 48.68 (1)	TP25.07x19.5x0.1875	3531.95	498306.00	0.007	0.00	1001275.00	0.000
L2	48.68 - 1.5 (2)	TP31.25x24.1794x0.1875	5704.98	573740.00	0.010	0.00	1471691.67	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	88 - 48.68 (1)	0.004	0.245	0.000	0.007	0.000	0.249 ✔	1.000	4.8.2 ✔
L2	48.68 - 1.5 (2)	0.008	0.487	0.000	0.010	0.000	0.494 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	88 - 48.68	Pole	TP25.07x19.5x0.1875	1	-4142.25	996612.00	24.9	Pass
L2	48.68 - 1.5	Pole	TP31.25x24.1794x0.1875	2	-8839.73	1147480.00	49.4	Pass
							Summary	
						Pole (L2)	49.4	Pass
						Base Plate	58.3	Pass
						RATING =	**58.3**	**Pass**

Monopole Pier and Pad Foundation

Site Name: CT1171

TIA-222 Revision: G

Design Reactions		
Shear, **S**:	5.7	kips
Moment, **M**:	357.3	ft-kips
Tower Height, **H**:	120	ft
Tower Weight, **Wt**:	8.9	kips
Base Diameter, **BD**:	2.60	ft

Foundation Dimensions		
Depth, **D**:	6.5	ft
Pad Width, **W**:	12.5	ft
Neglected Depth, **N**:	0	ft
Thickness, **T**:	3.00	ft
Pier Diameter, **Pd**:	5.00	ft
Ext. Above Grade, **E**:	1.00	ft
BP Dist. Above Pier:	3	in.
Clear Cover, **Cc**:	3.0	in

Soil Properties		
Soil Unit Weight, **γ**:	0.125	kcf
Ult. Bearing Capacity, Bc:	4.0	ksf
Angle of Friction, **Φ**:	34	deg
Cohesion, **Co**:	0.000	ksf
Passive Pressure, **Pp**:	0.000	ksf
Base Friction, **μ**:	0.60	

Material Properties		
Rebar Yield Strength, **Fy**:	60000	psi
Concrete Strength, **F'c**:	3000	psi
Concrete Unit Weight, **δc**:	0.150	kcf
Seismic Zone, **z**:	1	

Rebar Properties		
Pier Rebar Size, **Sp**:	8	
Pier Rebar Quanity, **mp**:	24	18
Pad Rebar Size, **Spad**:	8	
Pad Rebar Quanity, **mpad**:	52	7
Pier Tie Size, **St**:	4	3
Tie Quanity, **mt**:	5	6

Design Checks	Capacity/ Availability	Demand/ Limits	Check
Req'd Pier Diam.(ft)	5	4.1	**OK**
Overturning (ft-kips)	552.00	357.30	**64.7%**
Shear Capacity (kips)	81.59	5.70	**7.0%**
Bearing (ksf)	3.00	2.04	**67.9%**
Pad Shear - 1-way (kips)	400.52	29.80	**7.4%**
Pad Shear - 2-way (kips)	1551.88	30.99	**2.0%**
Pad Moment Capacity (k-ft)	5412.34	91.54	**1.7%**
Pier Moment Capacity (k-ft)	9815.92	382.95	**3.9%**

Town of Simsbury
Property Listing Report

Parcel ID B20 508 001-B

Account 31116200

Property Information

Owner	E AND A/ I AND G SIMSBURY COMMONS LP
Address	530 BUSHY HILL ROAD
Mailing Address	PO BOX 528 COLUMBIA , SC 29202
Land Use	- Community Shopping Center
Land Class	Commercial

Census Tract	4661020
Neighborhood	0238
Zoning	B-3
Acreage	16.4
Utilities	
Lot Setting/ Desc	/

Photo

B20-508-001-B 05/17/2012

PARCEL VALUATIONS (Assessed value = 70% of Appraised Value)

	Appraised	Assessed
Buildings		
Outbuildings		
Improvements		
Extras		
Land		
Total	33500000	23450000
Previous		

Construction Details

Year Built	
Stories	1
Building Style	
Building Use	
Building Condition	Very Good/Good
Total Rooms	0
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	
Bath Style	
Kitchen Style	
Roof Style	
Roof Cover	Compo_Built-Up

EXTERIOR WALLS:	
Primary	Concrete Block
Secondary	
INTERIOR WALLS:	
Primary	Dry Wall
Secondary	
FLOORS:	
Primary	Carpet
Secondary	
HEATING/AC:	
Heating Type	FHA
Heating Fuel	Heat Pump
AC Type	Central

BUILDING AREA:	
Effective Building Area	
Gross Building Area	
Total Living Area	173538

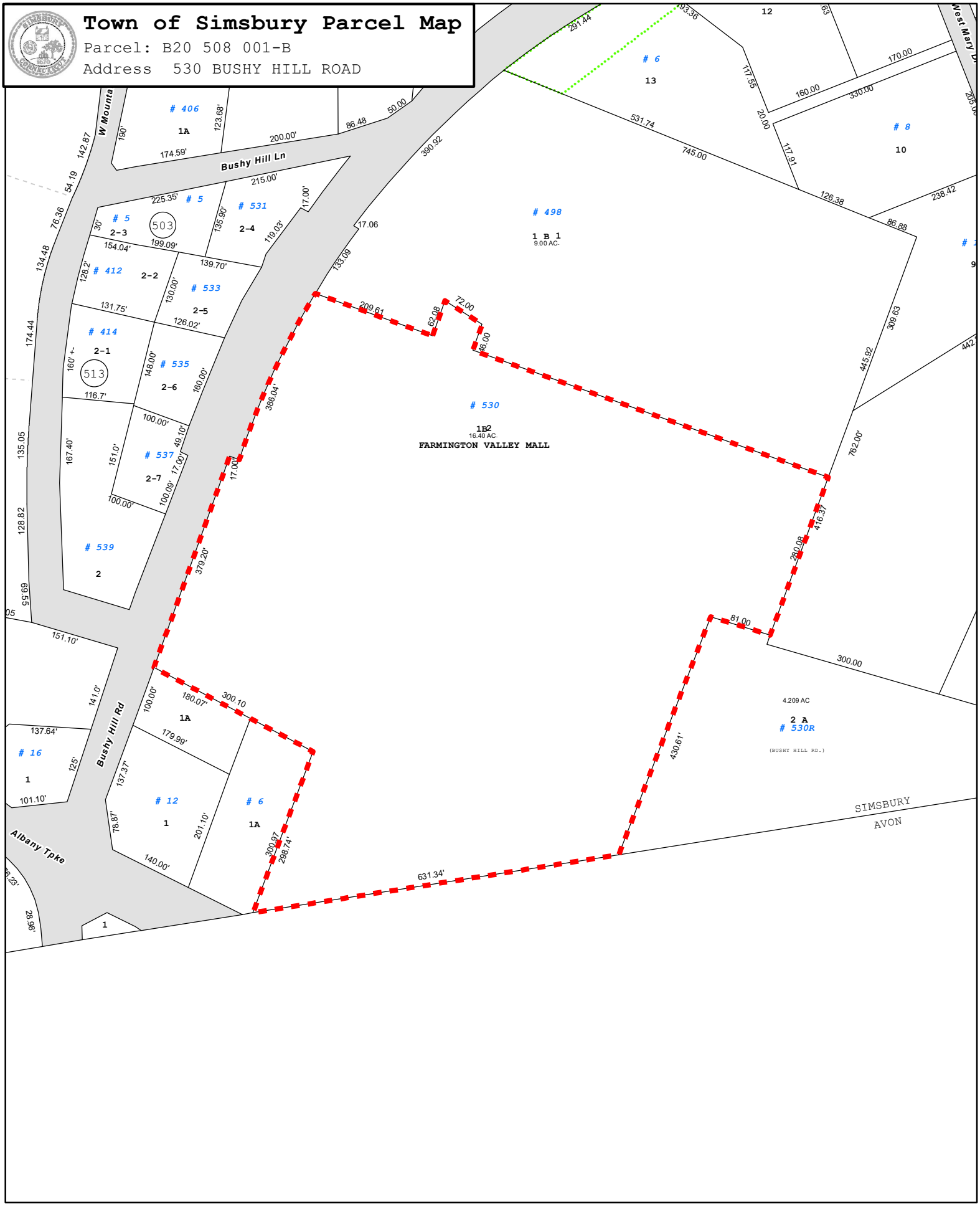
SALES HISTORY:	
Sale Date	11/10/2004
Sale Price	0
Book/ Page	0676/0582

Report Created On 1/19/2018

Town of Simsbury Parcel Map

Parcel: B20 508 001-B

Address 530 BUSHY HILL ROAD



1 inch = 200 feet

0 100 200 300 400 Feet

Disclaimer: This map is for informational purposes only All information is subject to verification by any user. The Town of Simsbury and its mapping contractors assume no legal responsibility for the information contained herein.

Map Produced: March 2019

Connecticut Siting Council
Decisions

DOCKET NO. 279 – Sprint Spectrum, L.P. d/b/a Sprint PCS application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a wireless telecommunications facility at 530 Bushy Hill Road, Simsbury, Connecticut.	} } }	Connecticut Siting Council June 23, 2004

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Sprint Spectrum, L.P. for the construction, maintenance and operation of a wireless telecommunications facility at 530 Bushy Hill Road, Simsbury, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be designed as a flagpole and shall be constructed no taller than 120 feet above ground level to provide the proposed telecommunications services to both public and private entities.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Simsbury and all parties and intervenors, as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:

    a. a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment building, access, utility line, and landscaping; and

    b) construction plans for site preparation, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base,
consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of electromagnetic radio frequency power density is submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any municipal antennas, provided such antennas are compatible with the structural integrity of the tower.

7. If the facility does not initially provide wireless services within one year of completion of construction or ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

8. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.

9. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved. Any request for extensions of the period shall be filed with the Council not later than sixty days prior to expiration date of the Certificate and shall be served on all parties and intervenors, as listed in the service list. Any proposed modifications to this Decision and Order shall likewise be so served.

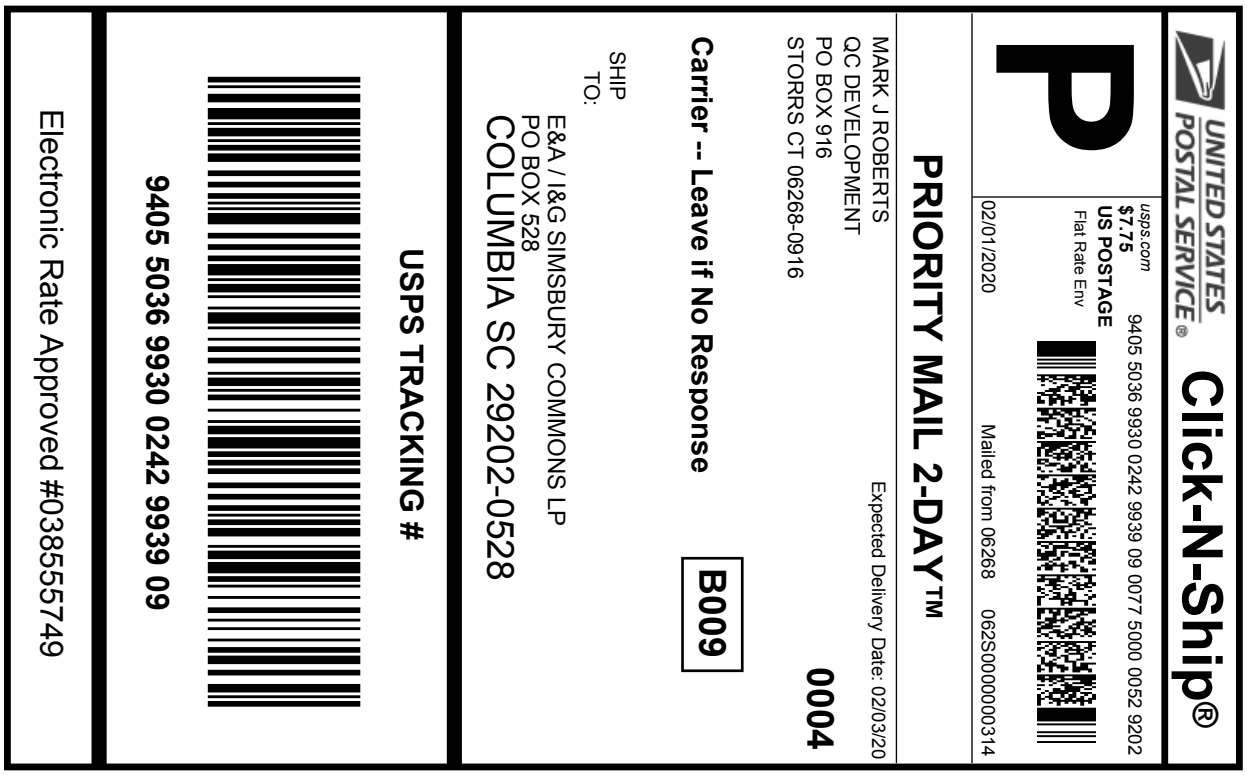
Pursuant to General Statutes § 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Hartford Courant, Valley News, and The Farmington Valley Post.

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

The parties and intervenors to this proceeding are:

Applicant	**Its Representative**
Sprint Spectrum L.P. d/b/a Sprint PCS	Thomas J. Regan Brown, Rudnick, Berlack, Israels, LLP City Place I 185 Asylum Avenue Hartford, CT 06103-3402 (860) 509-6500
Intervenor	**Its Representative**
AT&T Wireless PCS, LLC d/b/a AT&T Wireless	Christopher B. Fisher, Esq. Cuddy & Feder, LLP 90 Maple Avenue White Plains, NY 10601

Content Last Modified on 7/1/2004 8:11:17 AM



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2. **Place your label so it does not wrap around the edge of the package.**
3. **Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.**
4. **To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.**
5. **Mail your package on the "Ship Date" you selected when creating this label.**

Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0242 9939 09

Trans. #:	483019680
Print Date:	01/29/2020
Ship Date:	02/01/2020
Expected Delivery Date:	02/03/2020

Priority Mail® Postage:	**$7.75**
Total:	**$7.75**

From: MARK J ROBERTS
QC DEVELOPMENT
PO BOX 916
STORRS CT 06268-0916

To: E&A / I&G SIMSBURY COMMONS LP
PO BOX 528
COLUMBIA SC 29202-0528

* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

Thank you for shipping with the United States Postal Service!
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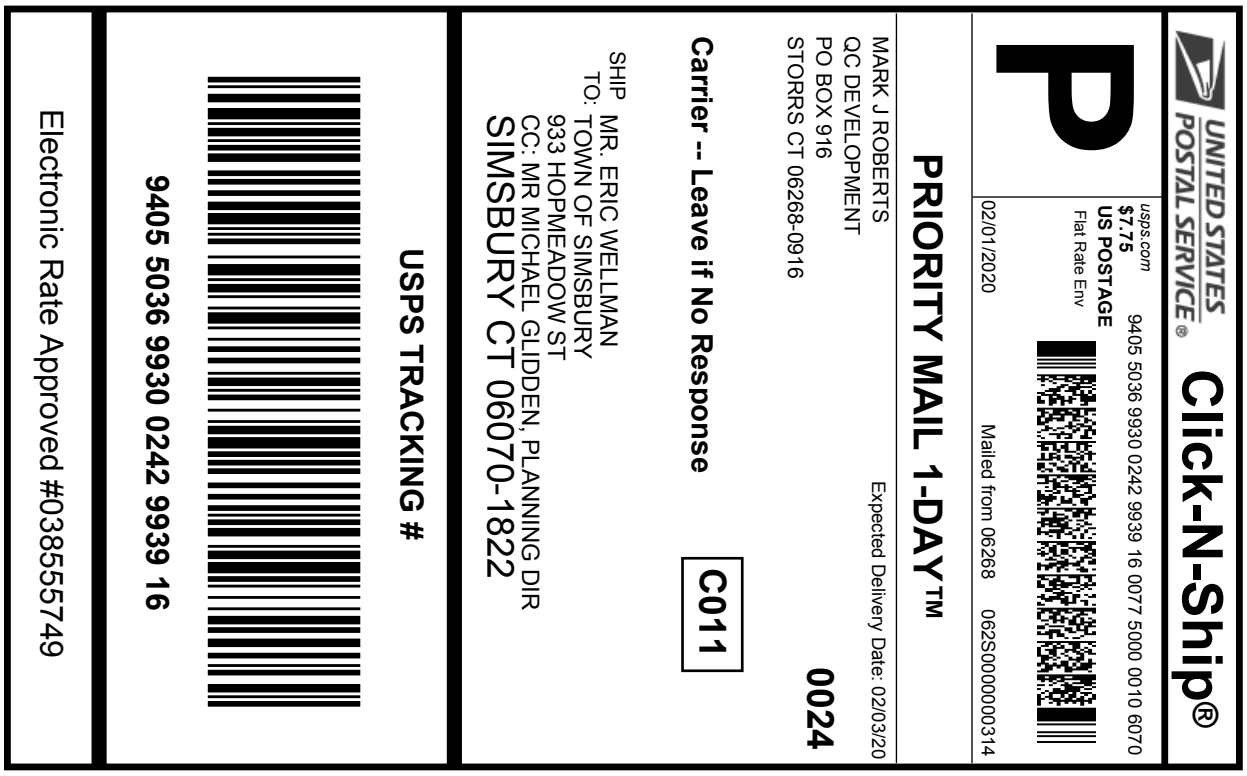

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Click-N-Ship® Label Record

USPS TRACKING # :
9405 5036 9930 0242 9939 16

Trans. #:	483019680
Print Date:	01/29/2020
Ship Date:	02/01/2020
Expected Delivery Date:	02/03/2020

Priority Mail® Postage:	**$7.75**
Total:	**$7.75**

From: MARK J ROBERTS
QC DEVELOPMENT
PO BOX 916
STORRS CT 06268-0916

To: MR. ERIC WELLMAN
TOWN OF SIMSBURY
933 HOPMEADOW ST
CC: MR MICHAEL GLIDDEN, PLANNING DIR
SIMSBURY CT 06070-1822

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