July 1, 2019

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

RE: **Request of Sigfox NIP LLC for an Order to Approve the Shared Use of an Existing Tower at 168 Catoona Lane, Stamford, CT 06902**

Dear Ms. Bachman:

Pursuant to Connecticut General Statutes ("C.G.S.") §16-50aa, as amended, Sigfox NIP LLC ("Sigfox") hereby requests an order from the Connecticut Siting Council ("Council") to approve the shared use by Sigfox of an existing telecommunication tower at 168 Catoona Lane, Stamford, CT 06902(the "Property"). The existing 300-foot self-support tower is owned by American Tower Corp. ("ATC"), the underlying property is also owned by ATC. Sigfox requests that the Council find that the proposed shared use of the ATC tower satisfies the criteria of C.G.S. §16-50aa and issue an order approving the proposed shared use. A copy of this filing is being mailed to the City of Bridgeport and ATC.

Background

The existing ATC facility consists of a 300-foot self-support tower located within an approximate 10,000 square foot compound positioned +/- 300-feet north of the Catoona Lane/Alvord Lane intersection. There are existing carrier antennas located various elevations throughout the tower (see Sheet C-1 of Exhibit 1 for more information). Equipment associated with these antennas is located at various positions within the tower compound.

Sigfox is licensed by the Federal Communications Commission ("FCC") to provide wireless services throughout the State of Connecticut. Sigfox and ATC have agreed to the proposed shared use of the 168 Catoona Lane, Stamford, CT 06902 tower pursuant to mutually acceptable terms and conditions. Likewise, Sigfox and ATC have agreed to the proposed installation of equipment cabinets within an existing adjacent utility building located south of the tower within the compound. ATC has authorized Sigfox to apply for all necessary permits and approvals that may be required to share the existing tower. (See the attached Letter of Authorization).

Sigfox proposes to add one (1) omni antenna, one (1) line of coaxial cable; one (1) filter, and one (1) TMA on the existing tower at 292-feet above ground level. They propose to add one (1) equipment cabinet within the adjacent utility building.

C.G.S. § 16-50aa(c)(1) provides that, upon written request for approval of a proposed shared use, "if the Council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns, the council shall issue an order approving such a shared use." Sigfox respectfully submits that the shared use of the tower satisfies these criteria.

A. Technical Feasibility. The existing ATC tower is structurally capable of supporting Sigfox's proposed improvements. The proposed shared use of this tower is, therefore, technically feasible. A Feasibility Structural Analysis Report ("Structural Report") prepared for this project confirms that this tower can support Sigfox's proposed loading. A copy of the Structural Report has been included in this application.

B. Legal Feasibility. Under C.G.S. § 16-50aa, the Council has been authorized to issue order approving the shared use of an existing tower such as the ATC tower. This authority complements the Council's prior-existing authority under C.G.S. § 16-50p to issue orders approving the construction of new towers that are subject to the Council's jurisdiction. In addition, § 16-50x(a) directs the Council to "give such consideration to the other state laws and municipal regulations as it shall deem appropriate" in ruling on requests for the shared use of existing tower facilities. Under the statutory authority vested in the Council, an order by the Council approving the requested shared use would permit the Applicant to obtain a building permit for the proposed installations.

C. Environmental Feasibility. The proposed shared use of the ATC tower would have a minimal environmental effect for the following reasons:

1. The proposed installation of one (1) omni antenna, one (1) line of coaxial cable; one (1) filter, and one (1) TMA on the existing tower at 292-feet above ground level, would have no visual impact on the area of the tower. Sigfox's cabinet will be installed within the facility compound. Sigfox's shared use of this tower therefore, does not cause any significant change or alteration in the physical or environmental characteristics of the existing site.

2. Operation of Sigfox's antennas at this site would not exceed the RF emissions standard adopted by the Federal Communications Commission ("FCC"). Included in the EME report of this filing are the approximation tables that demonstrate that Sigfox's proposed facility will operate well within the FCC RF emissions safety standards.

3. Under ordinary operating conditions, the proposed installation would not require the use of any water or sanitary facilities and would not generate air emissions or discharges to water bodies or sanitary facilities. After construction is complete the proposed installations would not generate any increased traffic to the ATC facility other

than periodic maintenance. The proposed shared use of the ATC tower, would, therefore, have a minimal environmental effect, and is environmentally feasible.

D. **Economic Feasibility.** As previously mentioned, Sigfox has entered into an agreement with ATC for the shared use of the existing facility subject to mutually agreeable terms. The proposed tower sharing is, therefore, economically feasible. (Please see included authorization.)

E. **Public Safety Concerns.** As discussed above, the tower is structurally capable of supporting Sigfox's full array of one (1) omni antenna, one (1) line of coaxial cable; one (1) filter, and one (1) TMA and all related equipment. Sigfox is not aware of any public safety concerns relative to the proposed sharing of the existing ATC tower.

Conclusion

For the reasons discussed above, the proposed shared use of the existing Crown Castle tower at 168 Catoona Lane, Stamford, CT 06902 satisfies the criteria state in C.G.S. §16-50aa and advances the Council's goal of preventing the unnecessary proliferation of towers in Connecticut. The Applicant, therefore, respectfully requests that the Council issue an order approving the prosed shared use.

Sincerely,

Craig A. Russo

Craig A. Russo, P.E.
Engineer
T-Squared Site Services
2500 Highland Road, Suite 201
Hermitage, PA 16148
724.308.7855
craig.r@t-sqrd.com

Attachments:

Exhibit-1: Compound Plan and Elevation Depicting the Planned Changes
Exhibit-2: Structural Modification Report
Exhibit-3: General Power Density Table report (RF Emissions Analysis Report)
Exhibit-4: Letter of Authorization
Exhibit-5: Proof of Mailing to Local Municipality
Exhibit-6: Proof of Mailing to Tower Owner/Property Owner

Copies to:

Mr. Thomas F. Gill
Director of OPED
Office of Planning and Economic Development
999 Broad Street
Bridgeport, CT 06604

Mr. Jason Hastie
Account Project Manager, Vertical Markets/Broadcast Repack
American Tower Corporation
10 Presidential Way
Woburn, MA 018901

EXHIBIT 1:

Compound Plan and Elevation Depicting the Planned Changes

T-SQUARED SITE SERVICES
2500 Highland Road | Suite 201
Hermitage, PA 16148 | 724.308.7855
www.t-sqrd.com

SIGFOX

One network A billion dreams

SITE NUMBER: CT9001

168 CATOONA LANE
STAMFORD, CT 06902
FAIRFIELD COUNTY

811 Know what's below. Call before you dig.

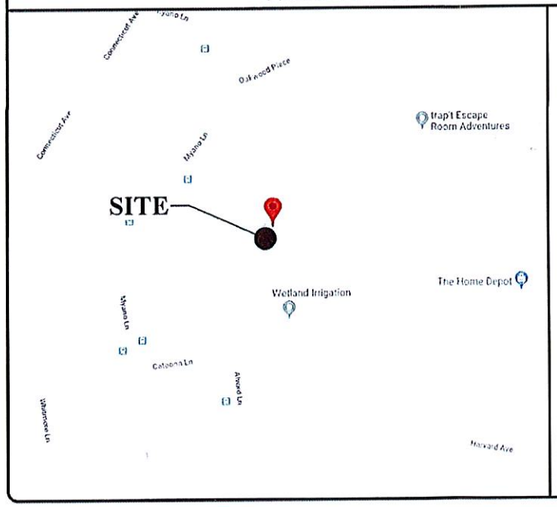
SITE INFORMATION

SCOPE OF WORK:	PROJECT CONSISTS OF INSTALLING THE FOLLOWING: • (1) PROCOM CXL-900-3LW OMNI ANTENNA • (1) LNA • (1) CAVITY FILTER • (1) 1/2" COAX CABLE • (1) RG6 CABLE • (1) EQUIPMENT CABINET FOR BASE STATION
SIGFOX SITE NUMBER:	CT9001
911 SITE ADDRESS	168 CATOONA LANE STAMFORD, CT 06902
TOWER OWNER: ADDRESS:	AMERICAN TOWER CORP. 116 HUNTINGTON AVE. 11TH FLOOR BOSTON, MA 02116
OWNER SITE NUMBER:	88018
LATITUDE (NAD 83): LONGITUDE (NAD 83):	41.05282° -73.56304°
JURISDICTION:	FAIRFIELD
PARCEL OWNER: ADDRESS:	AMERICAN TOWER CORP. 116 HUNTINGTON AVE. 11TH FLOOR BOSTON, MA 02116
GROUND ELEVATION:	50' AMSL
STRUCTURE TYPE:	SELF-SUPPORT
STRUCTURE HEIGHT:	301' (AGL)

PROJECT TEAM

APPLICANT:	SIGFOX, INC. 545 BOYLSTON STREET, 10TH FLOOR BOSTON, MA. 02116
PROJECT MANAGEMENT FIRM:	T-SQUARED SITE SERVICES, LLC 2500 HIGHLAND ROAD, SUITE 201 HERMITAGE, PA. 16148
ENGINEERING FIRM:	T-SQUARED SITE SERVICES, LLC 2500 HIGHLAND ROAD, SUITE 201 HERMITAGE, PA. 16148

VICINITY MAP



CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

- 2015 INTERNATIONAL BUILDING CODE
- 2017 NATIONAL ELECTRIC CODE
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE
- 2015 INTERNATIONAL EXISTING BUILDING CODE
- 2015 INTERNATIONAL FIRE CODE
- 2015 INTERNATIONAL MECHANICAL CODE
- 2015 INTERNATIONAL RESIDENTIAL CODE

DRAWING INDEX

Digitally signed by Gary Clower
DN: c=US, st=Pennsylvania, l=Hermitage, o=T-Squared Site Services, cn=Gary Clower, email=gary.c@t-sqrd.com
Date: 2019.01.29 15:40:30 -05'00'

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 11"X17". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

APPROVAL BLOCK

		APPROVED	APPROVED AS NOTED	DISAPPROVED REVISE
PROPERTY OWNER	DATE	☐	☐	☐
SITE ACQUISITION	DATE	☐	☐	☐
CONSTRUCTION MANAGER	DATE	☐	☐	☐
ZONING	DATE	☐	☐	☐
RF ENGINEER	DATE	☐	☐	☐

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REVISIONS

DESCRIPTION	DATE	BY	REV
FINAL CD	01.29.19	KE	C
REVISED CD	01.25.19	MNT	B
PRELIMINARY	12.03.18	KE	A

PROFESSIONAL SEAL

STATE OF CONNECTICUT · GARY W. CLOWER · No. 27934 · LICENSED PROFESSIONAL ENGINEER

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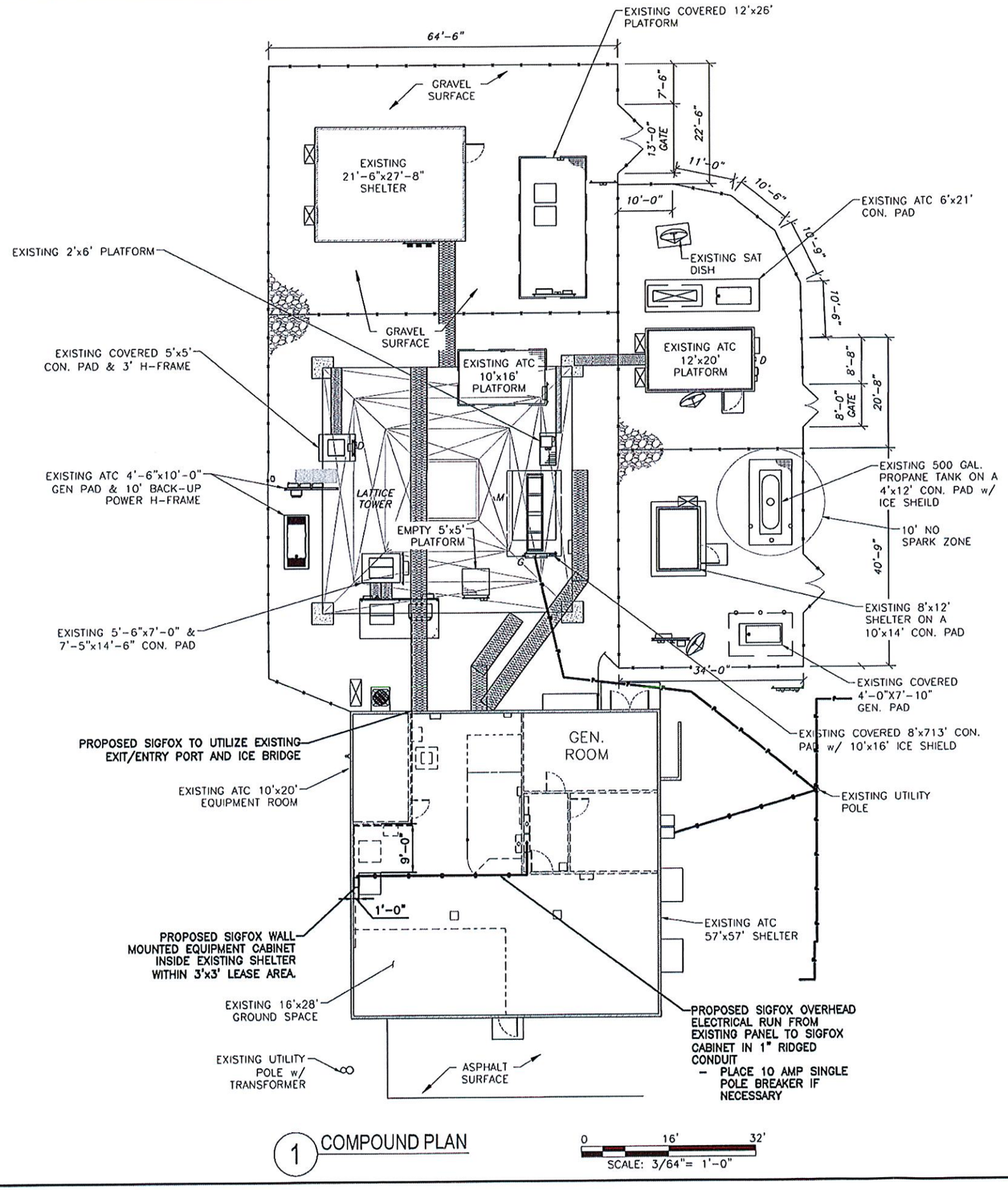
SITE INFORMATION

CT9001
168 CATOONA LANE
STAMFORD, CT 06902
FAIRFIELD COUNTY

SHEET TITLE

TITLE SHEET

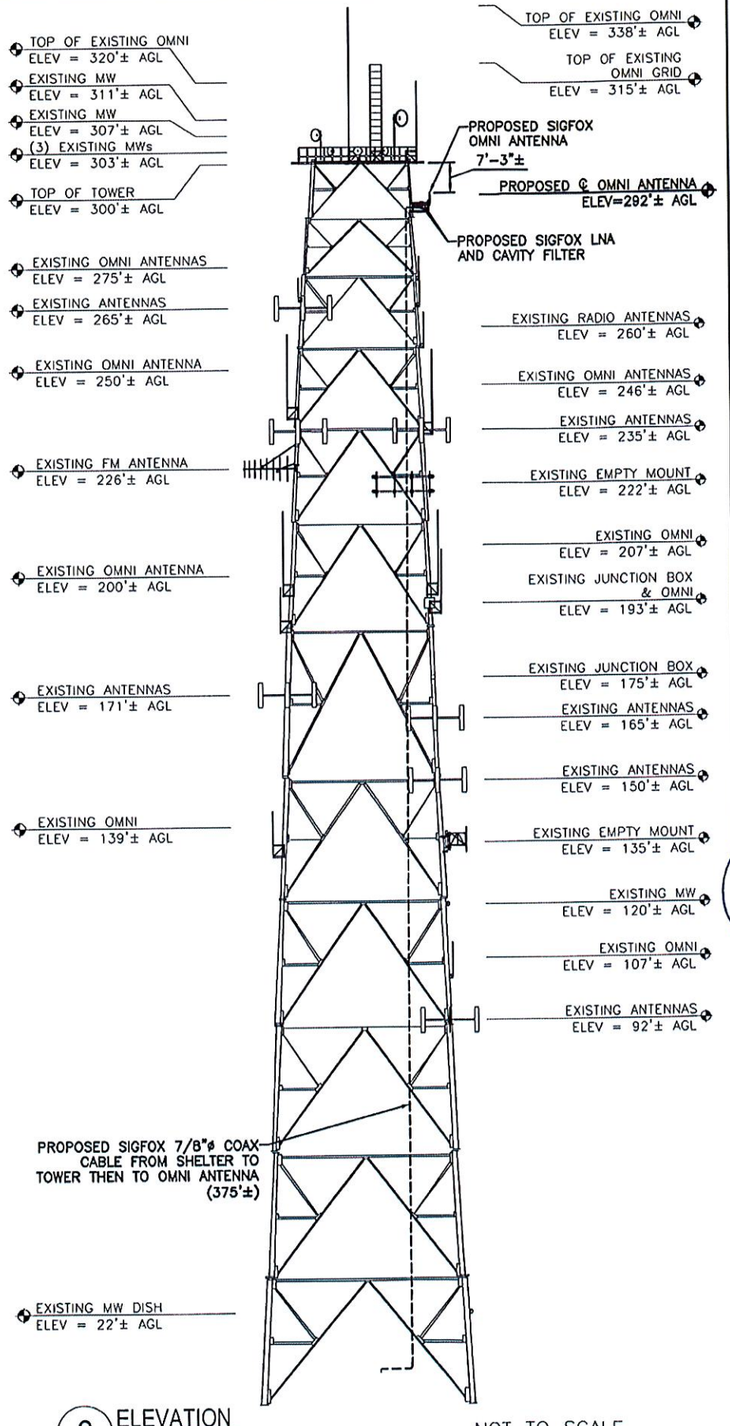
SHEET NUMBER	
T-1	SCALE: AS NOTED
	DRAWN BY: KE
	CHECKED BY: KE
	DATE: 1/21/19



1 COMPOUND PLAN

0 16' 32'

SCALE: 3/64"= 1'-0"



2 ELEVATION

NOT TO SCALE

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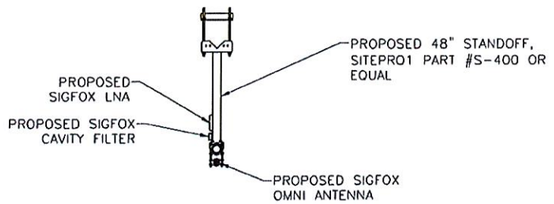
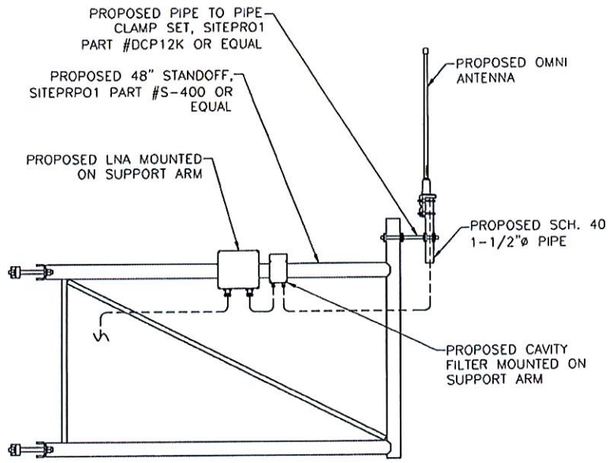
SHEET TITLE

COMPOUND PLAN & ELEVATION

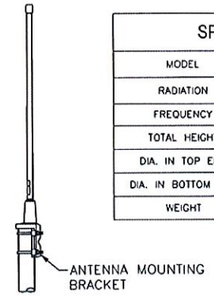
SHEET NUMBER	SCALE: AS NOTED
C-1	DRAWN BY: KE
	CHECKED BY: KE
	DATE: 1/21/19



1 PROPOSED ANTENNA PLAN
N.T.S.

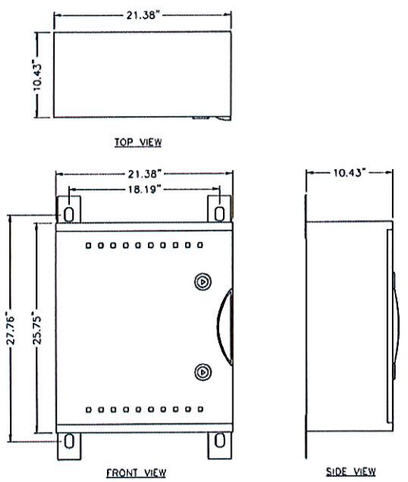


2 ANTENNA MOUNTING DETAIL
N.T.S.



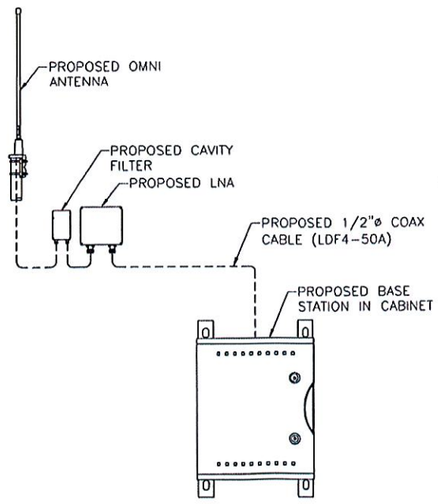
SPECIFICATIONS	
MODEL	CXL 900-3LW/...
RADIATION	OMNIDIRECTIONAL
FREQUENCY	WITHIN 824-960 MHz
TOTAL HEIGHT	700 MM (27.5")
DIA. IN TOP END	12 MM (0.47")
DIA. IN BOTTOM END	16 MM (0.63"
WEIGHT	660 G (1.5 LBS)

3 OMNI ANTENNA DETAIL
N.T.S.

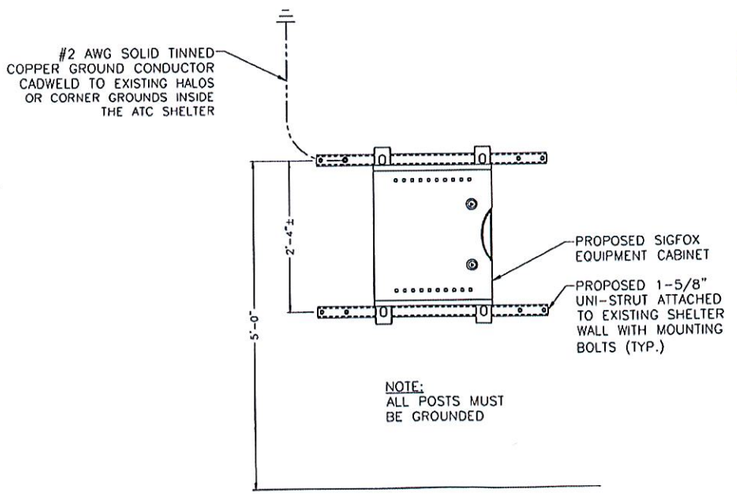


4 SIGFOX EQUIPMENT CABINET
N.T.S.

5 NOT USED
N.T.S.



6 EQUIPMENT SCHEMATIC
N.T.S.



7 WALL MOUNT DETAIL
N.T.S.

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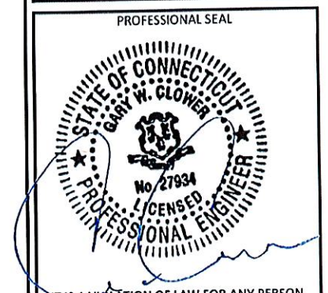
BOSTON, MA. 02116

REVISIONS

DESCRIPTION	DATE	BY	REV
FINAL CD	01.29.19	KE	C
REVISED CD	01.25.19	MNT	B
PRELIMINARY	12.03.18	KE	A

PROFESSIONAL SEAL



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SITE INFORMATION

CT9001
168 CATOONA LANE
STAMFORD, CT 06902
FAIRFIELD COUNTY

SHEET TITLE

ANTENNA PLAN AND DETAILS

SHEET NUMBER	
A-1	SCALE: AS NOTED
	DRAWN BY: KE
	CHECKED BY: KE
	DATE: 1/21/19

ELECTRICAL NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING AT EXPOSED INDOOR LOCATIONS SHALL BE IN ELECTRICAL METALLIC TUBING OR RIGID NONMETALLIC TUBING (RIGID SCHEDULE 40 PVC OR RIGID SCHEDULE 80 PVC FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) (AS PERMITTED BY CODE).
6. ELECTRICAL AND TELCO WIRING AT CONCEALED INDOOR LOCATIONS SHALL BE IN ELECTRICAL METALLIC TUBING, ELECTRICAL NONMETALLIC TUBING, OR RIGID NONMETALLIC TUBING (RIGID SCHEDULE 40 PVC AS PERMITTED BY CODE).
7. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING, ABOVE GRADE AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS (RGS) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
8. BURIED CONDUIT SHALL BE RIGID NONMETALLIC CONDUIT (RIGID SCHEDULE 40 PVC); DIRECT BURIED IN AREAS OF OCCASIONAL LIGHT TRAFFIC, ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY TRAFFIC.
9. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED INDOORS AND OUTDOORS IN AREAS WHERE VIBRATION OCCURS AND FLEXIBILITY IS NEEDED.
10. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE THHN,THWN-2, OR THIN INSULATION.

ELECTRICAL PANEL

PANEL NAME: N/A 120/240 VOLTS 3 WIRE 1 PHASE MAIN BREAKER: 100A

CCT NO	LOAD DESCRIPTION	LOAD (VA)	POLE	AMP	AMP	POLE	LOAD (VA)	LOAD DESCRIPTION	CCT NO
1	SIGFOX BASE UNIT	1440	1	10					2
3									4
5									6
7									8
9									10
11									12

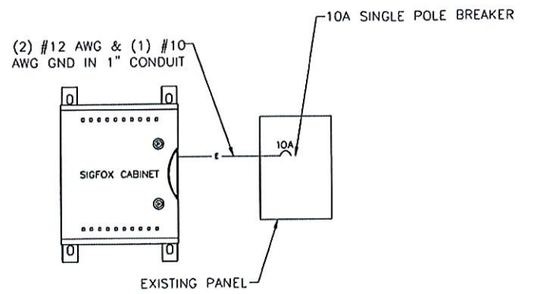
TOTAL CONNECTED LOAD (VA): 1,440
MAXIMUM LOAD CURRENT (A): 6
PANEL CAPACITY (A): 100
SPARE CAPACITY (A): 95

1 PANEL SCHEDULE
N.T.S.

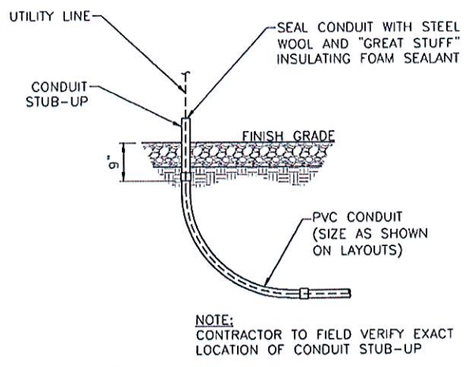
ELECTRICAL NOTES

ISOLATION OF SIGFOX POWER MUST BE MAINTAINED USING A 10 AMP SINGLE POLE BREAKER, LABELED SIGFOX, BETWEEN POWER SOURCE AND SIGFOX EQUIPMENT.

SUPPLY NEW BREAKER IN EXISTING PANELS AND/OR NEW BREAKERS IN DISCONNECT IF NEEDED.

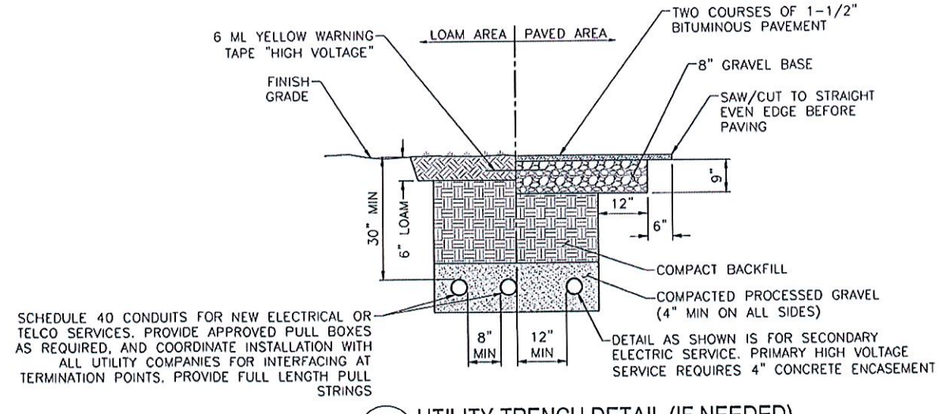


2 ELECTRICAL ONE-LINE DIAGRAM
N.T.S.



NOTE:
CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF CONDUIT STUB-UP

3 CONDUIT STUB-UP DETAIL (IF NEEDED)
N.T.S.



4 UTILITY TRENCH DETAIL (IF NEEDED)
N.T.S.

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PROFESSIONAL SEAL

STATE OF CONNECTICUT · GARY W. CLOWER · No. 27934 · LICENSED PROFESSIONAL ENGINEER

SITE INFORMATION

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168 CATOONA LANE
STAMFORD, CT 06902
FAIRFIELD COUNTY

SHEET TITLE

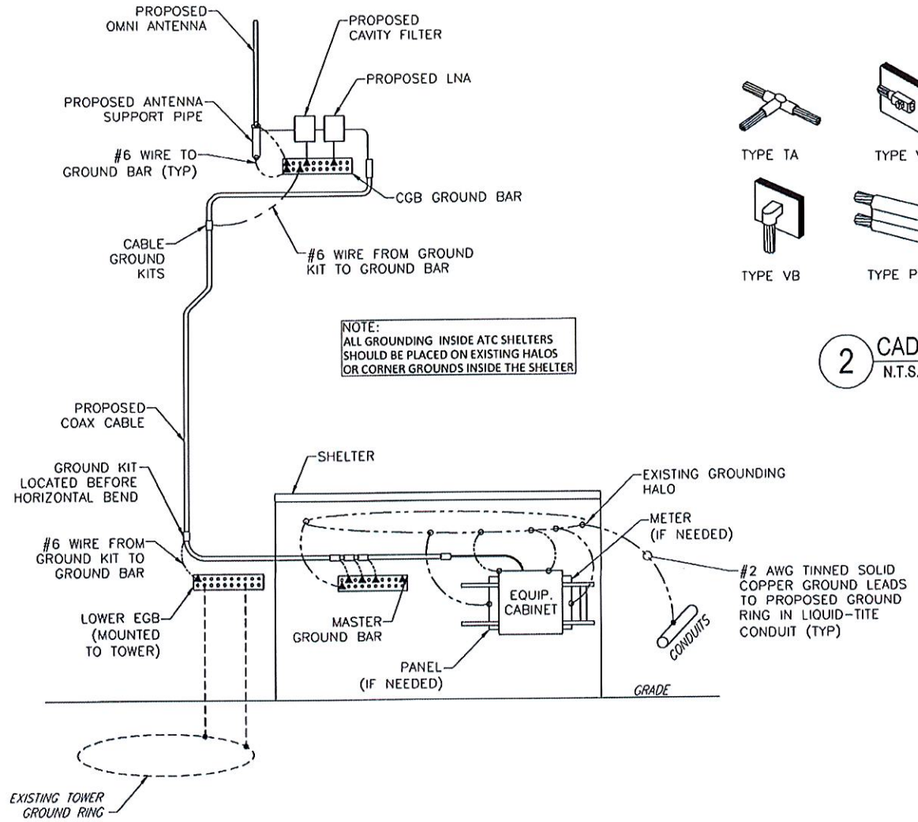
ELECTRICAL DETAILS

SHEET NUMBER	
E-1	SCALE: AS NOTED
	DRAWN BY: KE
	CHECKED BY: KE
	DATE: 1/21/19

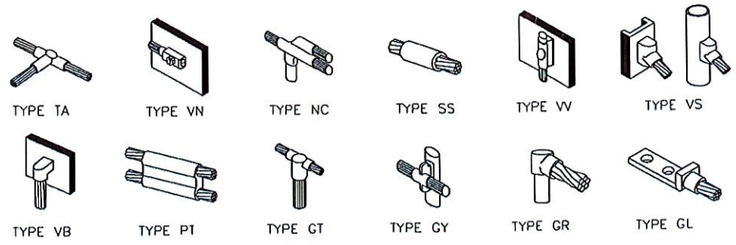
GROUNDING NOTES

1. GROUNDING SHALL COMPLY WITH BED ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTING PROTECTION SHALL BE DONE IN ACCORDANCE WITH METRO MOD CELL SITE GROUNDING STANDARDS.
2. GROUND CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
3. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING
4. ALL POWER AND GROUND CONNECTIONS TO BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND NUTS BY HARGER (OR APPROVED EQUAL) RATED FOR OPERATION AT NO LESS THAN 75'C OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
5. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
6. CONNECTIONS TO BE GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
7. APPLY OXIDE INHIBITING COMPOUND TO ALL MECHANICAL GROUND CONNECTIONS.
8. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MAKER SYSTEM (EMS) CALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
9. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMNS MINIMUM RESISTANCE REQUIRED.
10. CONTRACTOR SHALL CONDUCT ANTENNA, CABLE, AND LNA RETURN-LOSS AND DISTANCE-TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

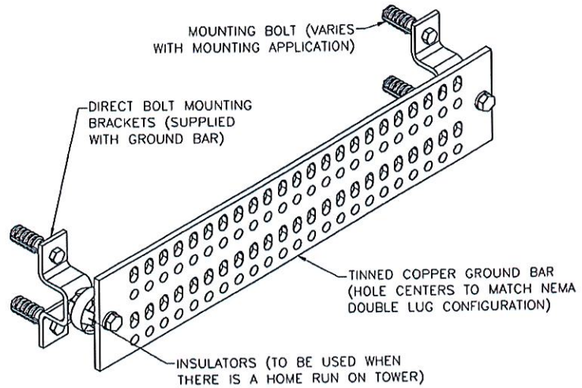
GROUNDING LEGEND	
▲	COMPRESSION FITTING CONNECTION
•	EXOTHERMIC WELD CONNECTION
— — —	PROPOSED GROUND WIRING
———	EXISTING GROUND WIRING



1 GROUNDING RISER DIAGRAM
N.T.S.



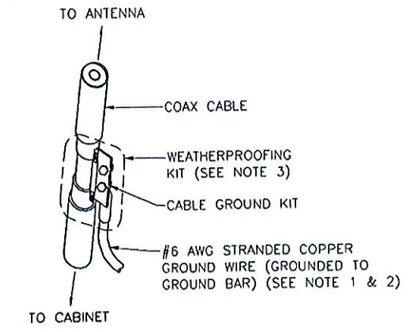
2 CADWELD GROUNDING CONNECTION DETAILS
N.T.S.



GROUND BAR SCHEDULE				
TYPE	QTY	MANUFACTURER	PART NO.	REMARKS
MGB	2	COMMSCOPE	UGBKIT-0120-T	OR EQUAL
CBG	1	COMMSCOPE	UGBKIT-0412	OR EQUAL

3 GROUND BAR DETAIL
N.T.S.

NOTES
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER,
3. WEATHER PROOFING SHALL BE TWO-PART TAPE SUPPLIED WITH KIT. COLD SHRINK SHALL NOT BE USED.



6 COAXIAL CABLE GROUNDING
N.T.S.

4 NOT USED
N.T.S.

5 NOT USED
N.T.S.

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SIGFOX
One network A billion dreams
SIGFOX, INC.
545 BOYLSTON STREET
10TH FLOOR
BOSTON, MA. 02116

REVISIONS

DESCRIPTION	DATE	BY	REV
FINAL CD	01.29.19	KE	C
REVISED CD	01.25.19	MNT	B
PRELIMINARY	12.03.18	KE	A

PROFESSIONAL SEAL

SITE INFORMATION

CT9001
168 CATOONA LANE
STAMFORD, CT 06902
FAIRFIELD COUNTY

SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER	
G-1	SCALE: AS NOTED
	DRAWN BY: KE
	CHECKED BY: KE
	DATE: 12/3/18

EXHIBIT 2:

Structural Modification Report

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AMERICAN TOWER CORPORATION

226.0	226.0	2	Shively 6025-1-1	Pole Mount	(1) 7/8" Coax	Geo-broadcast Solutions
222.0	222.0	1	Empty Mount	Sector Frame	-	Other
207.0	207.0	1	Sinclair SC281-L	Side Arm	(1) 7/8" Coax	US Dept Of Homeland Security
200.0	200.0	2	TX RX Systems 101-68-10-X-03N	Side Arm	(2) 1 1/4" Coax	Marcus Comm.
193.0	193.0	2	Antel BCD-87010___	Side Arm	(3) 7/8" Coax	Spok Holdings
		1	30" x 30" Reflector	Leg		
175.0	175.0	1	12" x 12" Junction Box	Leg	-	Clearwire
171.0	171.0	3	NextNet BTS-2500	T-Arm	(6) 5/16" Coax (2) 2" conduit	
		3	Argus LLPX310R			
165.0	165.0	15	RCU	Leg	(12) 1 5/8" Coax (1) 3/8" Coax (1) 3/8" RET Control Cable	Metro PCS
		6	Kathrein 800 10504			
150.0	150.0	3	Alcatel-Lucent ALU 800MHz External Notch Filter	Sector Frame	(3) 1 1/4" Hybriflex (1) 1.7" Hybrid	Sprint Nextel
		3	RFS IBC1900HB-2			
		3	Alcatel-Lucent 800MHz RRH			
		6	Alcatel-Lucent 1900MHz RRH			
		3	Nokia 2.5G MAA - AAHC			
		3	RFS APXVSPP18-C-A20			
139.0	139.0	1	Antel BCD-87010___4°	Side Arm	(1) 7/8" Coax	Sensus USA
135.0	135.0	1	Blank Exhibit	Side Arm	(1) 1/2" Coax	Senet
120.0	120.0	1	Channel Master Type 120	Stand-Off	(1) 1/2" Coax	Spok Holdings
107.0	107.0	1	TX RX Systems 101-68-10-X-03N	Side Arm	(1) 1 1/4" Coax	Marcus Comm.
92.0	92.0	3	Alcatel-Lucent RRH2X60-1900A-4R	Sector Frame	(3) 1 1/4" Hybriflex	Verizon
		3	Alcatel-Lucent RRH2x60 700			
		3	Alcatel-Lucent RRH4x45-B66 w/o Solar Shield			
		3	RFS DB-T1-6Z-8AB-0Z			
		6	Andrew SBNHH-1D65B			
		6	72" x 14" Panel			
22.0	22.0	1	Til-Tek TA-2324-LHCP	Leg	(1) 7/8" Coax	Sirius XM Radio
6.0	6.0	1	Trimble Acutime 2000	Leg	(1) 1/2" Coax (1) 1/4" Coax	Spok Holdings
		1	Channel Master Type 120			

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
No loading considered as to be removed						

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Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
292.0	292.0	1	Procom CXL 900-3LW	Side Arm	(1) 7/8" Coax	SigfoxS.A.
		1	5" x 3" x 2" Cavity Filter			
		1	Low Noise Amplifier			

[1] Mount elevation is defined as height above bottom of steel structure to bottom of mount, RAD elevation is defined as center of antenna above grade level (AGL).

Install proposed coax anywhere on the tower.

The existing and proposed loads listed in the tables above are compared to the tower's current design capacity or previous structural analysis. The tower should be re-evaluated as future loads are added or if actual loads are found different from those listed in the tables. The subject tower and foundation *are adequate* to support the above stated loads in conformance with specified requirements.

TK/ANG

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32595
LICENSED
PROFESSIONAL ENGINEER

Authorized by "EOR"
Dec 7 2018 4:52 PM cosign

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EXHIBIT 3:

General Power Density Table report (RF Emissions Analysis Report)

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RF EMISSIONS COMPLIANCE REPORT

T-Squared Site Services on Behalf of SIGFOX

Site: Stamford (katoona), CT
Site ID: CT9001
ATC Site ID: 88018
168 CATOONA LANE
STAMFORD, CT
2/8/2019

Report Status:

SIGFOX Is Compliant

sealed 10feb2019 mike@h2dc.com
H2DC PLLC Ct CoA#: 0001714

Prepared By:

Sitesafe, LLC

8618 Westwood Center Drive,
Suite 315

Vienna, VA 22182

Voice 703-276-1100
Fax 703-276-1169

Engineering Statement in Re:
Electromagnetic Energy Analysis
T-Squared Site Services
STAMFORD, CT

My signature on the cover of this document indicates:

That I, Michael A McGuire, am currently and actively licensed to provide (in this state/jurisdiction as indicated within the professional electrical engineering seal on the cover of this document) professional electrical engineering services, as an employee of Hurricane Hill Development Company, PLLC , a duly authorized/registered engineering firm (in this state, as applicable) on behalf of SiteSafe, LLC; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission ("the FCC" and "the FCC Rules") both in general and specifically as they apply to the FCC's Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; and

That the technical information serving as the basis for this report was supplied by T-Squared Site Services (See attached Site Summary and Carrier documents), and that SIGFOX's installations involve communications equipment, antennas and associated technical equipment at a location referred to as the "Stamford (katoona), CT" ("the site"); and

That SIGFOX proposes to operate at the site with transmit antennas listed in the carrier summary and with a maximum effective radiated power as specified by SIGFOX and shown on the worksheet, and that worst-case 100% duty cycle have been assumed; and

That in addition to the emitters specified in the worksheet, there are additional collocated point-to-point microwave facilities on this structure and, the antennas used are highly directional oriented at angles at or just below the horizontal and, that the energy present at ground level is typically so low as to be considered insignificant and have not been included in this analysis; and

That this analysis has been performed with the assumption that the ground immediately surrounding the tower is primarily flat or falling; and

That at this time, the FCC requires that certain licensees address specific levels of radio-frequency energy to which workers or members of the public might possibly be exposed (at §1.1307(b) of the FCC Rules); and

That such consideration of possible exposure of humans to radio-frequency radiation must utilize the standards set by the FCC, which is the Federal Agency having jurisdiction over communications facilities; and

That the FCC rules define two tiers of permissible exposure guidelines: 1) "uncontrolled environments," defined as situations in which persons may not be aware of (the "general public"), or may not be able to control their exposure to a transmission facility; and (2) "controlled environments," which defines situations in which persons are aware of their potential for exposure (industry personnel); and

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That this statement specifically addresses the uncontrolled environment (which is more conservative than the controlled environment) and the limit set forth in the FCC rules for licensees of SIGFOX's operating frequency as shown on the attached antenna worksheet; and

That when applying the uncontrolled environment standards, the predicted Maximum Power Density at two meters above ground level from the proposed SIGFOX operation is no more than 0% of the maximum in any accessible area on the ground and

That it is understood per FCC Guidelines and OET65 Appendix A, that regardless of the existent radio-frequency environment, only those licenses whose contributions exceed five percent of the exposure limit pertinent to their operation(s) bear any responsibility for bringing any non-compliant area(s) into compliance; and

That when applying the uncontrolled environment standards, the cumulative predicted energy density from the proposed operation is no more than 6.17% of the maximum in any accessible area up to two meters above the ground per OET-65; and

That the calculations provided in this report are based on data provided by the client and antenna pattern data supplied by the antenna manufacturer, in accordance with FCC guidelines listed in OET-65. Horizontal and vertical antenna patterns are combined for modeling purposes to accurately reflect the energy two meters above ground level where on-axis energy refers to maximum energy two meters above the ground along the azimuth of the antenna and where area energy refers to the maximum energy anywhere two meters above the ground regardless of the antenna azimuth, accounting for cumulative energy from multiple antennas for the carrier and frequency range indicated; and

That the Occupational Safety and Health Administration has policies in place which address worker safety in and around communications sites, thus individual companies will be responsible for their employees' training regarding Radio Frequency Safety.

In summary, it is stated here that the proposed operation at the site would not result in exposure of the Public to excessive levels of radio-frequency energy as defined in the FCC Rules and Regulations, specifically 47 CFR 1.1307 and that SIGFOX's proposed operation is completely compliant.

Finally, it is stated that access to the tower should be restricted to communication industry professionals, and approved contractor personnel trained in radio-frequency safety; and that the instant analysis addresses exposure levels at two meters above ground level and does not address exposure levels on the tower, or in the immediate proximity of the antennas.

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SIGFOX
Stamford (katoona), CT
Site Summary

Carrier	Area Maximum Percentage MPE
AT&T Mobility, LLC	0.115 %
AT&T Mobility, LLC	0.075 %
AT&T Mobility, LLC	0.159 %
AT&T Mobility, LLC	0.029 %
Sirius XM Radio	0.055 %
Clearwire	0.079 %
Sensus USA	0.089 %
SIGFOX (Proposed)	0 %
MetroPCS	0.09 %
MetroPCS	0.076 %
Marcus Comm	0.037 %
Spok Holdings	0.123 %
Geo Broadcast Solutions	0.099 %
Sprint	0.126 %
Sprint	0.328 %
Sprint	0.124 %
T-Mobile	0.074 %
T-Mobile	0.07 %
T-Mobile	0.023 %
US Dept. of Homeland Security	0.036 %
US Dept. of Homeland Security	0.312 %
Unknown	0.248 %
Verizon Wireless	1.413 %
Verizon Wireless	1.385 %
Verizon Wireless	0.534 %
Verizon Wireless	0.471 %
Composite Site MPE:	**6.17 %**

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AT&T Mobility, LLC
Stamford (katoona), CT
Carrier Summary

Frequency:	2300	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	1.14727	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.11473	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
KMW	EPBQ-654L8H6	235	0	2209	0.898255	0.089825	0.898255	0.089825
KMW	EPBQ-654L8H6	235	120	2209	0.898255	0.089825	0.898255	0.089825
KMW	EPBQ-654L8H6	235	240	2209	0.893752	0.089375	0.898176	0.089818

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AT&T Mobility, LLC
Stamford (katoona), CT
Carrier Summary

Frequency:	1900	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.75117	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.07512	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
CCI Antennas	OPA-65R-LCUU-H6	235	0	1755	0.579304	0.05793	0.743571	0.074357
CCI Antennas	OPA-65R-LCUU-H6	235	120	1755	0.580196	0.05802	0.743571	0.074357
CCI Antennas	OPA-65R-LCUU-H6	235	240	1755	0.585031	0.058503	0.743571	0.074357

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T-Mobile
Stamford (katoona), CT
Carrier Summary

Frequency:	700	MHz
Maximum Permissible Exposure (MPE):	466.67	µW/cm^2
Maximum power density at ground level:	0.34623	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.07419	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
ANDREW	LNX-6515DS-VTM	265	0	1854	0.343907	0.073694	0.345416	0.074018
ANDREW	LNX-6515DS-VTM	265	120	1854	0.343798	0.073671	0.345416	0.074018
ANDREW	LNX-6515DS-VTM	265	240	1854	0.343907	0.073694	0.345416	0.074018

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AT&T Mobility, LLC
Stamford (katoona), CT
Carrier Summary

Frequency:	737	MHz
Maximum Permissible Exposure (MPE):	491.33	µW/cm^2
Maximum power density at ground level:	0.78283	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.15933	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
ANDREW	SBNHH-1D65A	235	0	2148	0.549152	0.111768	0.740165	0.150644
ANDREW	SBNHH-1D65A	235	120	2148	0.549152	0.111768	0.740165	0.150644
ANDREW	SBNHH-1D65A	235	240	2148	0.532713	0.108422	0.740165	0.150644

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AT&T Mobility, LLC
Stamford (katoona), CT
Carrier Summary

Frequency:	850	MHz
Maximum Permissible Exposure (MPE):	566.67	µW/cm^2
Maximum power density at ground level:	0.16611	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.02931	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Powerwave	7770	235	0	547	0.091895	0.016217	0.142048	0.025067
Powerwave	7770	235	120	547	0.091895	0.016217	0.142048	0.025067
Powerwave	7770	235	240	547	0.092012	0.016237	0.142048	0.025067

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Sirius XM Radio
Stamford (katoona), CT
Carrier Summary

Frequency:	2350	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.54666	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.05467	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
TIL-TEK	TA-2350-T0	270	0	1222	0.27333	0.027333	0.27333	0.027333
TIL-TEK	TA-2350-T0	270	0	1222	0.27333	0.027333	0.27333	0.027333

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Clearwire
Stamford (katoona), CT
Carrier Summary

Frequency:	2500	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.78697	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.0787	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
ARGUS	LLPX310R	171	0	1542	0.399273	0.039927	0.739197	0.07392
ARGUS	LLPX310R	171	120	1542	0.402094	0.040209	0.739197	0.07392
ARGUS	LLPX310R	171	240	1542	0.399273	0.039927	0.739197	0.07392

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Sensus USA
Stamford (katoona), CT
Carrier Summary

Frequency:	900	MHz
Maximum Permissible Exposure (MPE):	600	µW/cm^2
Maximum power density at ground level:	0.53559	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.08927	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Antel	BCD-87010-5	139	0	1000	0.531692	0.088615	0.535591	0.089265

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SIGFOX (Proposed)
Stamford (katoona), CT
Carrier Summary

Frequency:	905.2	MHz
Maximum Permissible Exposure (MPE):	603.47	µW/cm^2
Maximum power density at ground level:	0.00045	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.00007	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Amphenol	CXL 900-3LW	292	0	1	0.000448	0.000074	0.000448	0.000074

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MetroPCS
Stamford (katoona), CT
Carrier Summary

Frequency:	2100	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.89774	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.08977	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Kathrein-Scala	80010504	165	0	2245	0.404136	0.040414	0.613107	0.061311
Kathrein-Scala	80010504	165	120	2245	0.404136	0.040414	0.613107	0.061311
Kathrein-Scala	80010504	165	240	2245	0.404577	0.040458	0.613107	0.061311

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MetroPCS
Stamford (katoona), CT
Carrier Summary

Frequency:	1900	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.76139	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.07614	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Kathrein-Scala	80010504	165	0	2114	0.400446	0.040045	0.457407	0.045741
Kathrein-Scala	80010504	165	120	2114	0.400446	0.040045	0.457407	0.045741
Kathrein-Scala	80010504	165	240	2114	0.400446	0.040045	0.457407	0.045741

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Marcus Comm
Stamford (katoona), CT
Carrier Summary

Frequency:	456	MHz
Maximum Permissible Exposure (MPE):	304	µW/cm^2
Maximum power density at ground level:	0.11391	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.03747	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Generic	Omni	324	0	100	0.053611	0.017635	0.053611	0.017635
Generic	Omni	320	0	100	0.060302	0.019836	0.060302	0.019836

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Spok Holdings
Stamford (katoona), CT
Carrier Summary

Frequency:	900	MHz
Maximum Permissible Exposure (MPE):	600	µW/cm^2
Maximum power density at ground level:	0.73797	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.123	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Antel	BCD-87010-5	193	0	1000	0.368987	0.061498	0.368987	0.061498
Antel	BCD-87010-5	193	0	1000	0.368987	0.061498	0.368987	0.061498

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Geo Broadcast Solutions
Stamford (katoona), CT
Carrier Summary

Frequency:	108	MHz
Maximum Permissible Exposure (MPE):	200	µW/cm^2
Maximum power density at ground level:	0.19851	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.09925	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Shively Labs	6025	226	0	100	0.098238	0.049119	0.099255	0.049627
Shively Labs	6025	226	0	100	0.098238	0.049119	0.099255	0.049627

T-SQUARED SITE SERVICES
2500 Highland Road | Suite 201
Hermitage, PA 16148 | 724.308.7855
www.t-sqrd.com

Sprint
Stamford (katoona), CT
Carrier Summary

Frequency:	2500	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	1.25531	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.12553	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Nokia	2.5G MAA - AAHC	150	0	3389	0.982627	0.098263	1.243418	0.124342
Nokia	2.5G MAA - AAHC	150	120	3389	0.982627	0.098263	1.243418	0.124342
Nokia	2.5G MAA - AAHC	150	240	3389	0.986391	0.098639	1.243418	0.124342

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Sprint
Stamford (katoona), CT
Carrier Summary

Frequency:	1900	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	3.27842	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.32784	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
RFS	APXVSPP18-C-A20	150	0	3804	0.832096	0.08321	1.516412	0.151641
RFS	APXVSPP18-C-A20	150	120	3804	0.832096	0.08321	1.516412	0.151641
RFS	APXVSPP18-C-A20	150	240	3804	0.835716	0.083572	1.516412	0.151641
RFS	APXVSPP18-C-A20	150	0	3804	0.832096	0.08321	1.516412	0.151641
RFS	APXVSPP18-C-A20	150	120	3804	0.832096	0.08321	1.516412	0.151641
RFS	APXVSPP18-C-A20	150	240	3804	0.835716	0.083572	1.516412	0.151641

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Sprint
Stamford (katoona), CT
Carrier Summary

Frequency:	862	MHz
Maximum Permissible Exposure (MPE):	574.67	µW/cm^2
Maximum power density at ground level:	0.71106	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.12373	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
RFS	APXVSPP18-C-A20	150	0	2168	0.686134	0.119397	0.699536	0.121729
RFS	APXVSPP18-C-A20	150	120	2168	0.686134	0.119397	0.699536	0.121729
RFS	APXVSPP18-C-A20	150	240	2168	0.68818	0.119753	0.699536	0.121729

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T-Mobile
Stamford (katoona), CT
Carrier Summary

Frequency:	2100	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.70305	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.0703	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Ericsson	AIR 32 B2A/B66Aa	265	0	2313	0.658844	0.065884	0.658844	0.065884
Ericsson	AIR 32 B2A/B66Aa	265	120	2313	0.658844	0.065884	0.658844	0.065884
Ericsson	AIR 32 B2A/B66Aa	265	240	2313	0.65491	0.065491	0.657702	0.06577

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T-Mobile
Stamford (katoona), CT
Carrier Summary

Frequency:	1900	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.22861	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.02286	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Ericsson	AIR 21 B2A B4P	265	0	2061	0.135462	0.013546	0.155748	0.015575
Ericsson	AIR 21 B2A B4P	265	120	2061	0.135462	0.013546	0.155748	0.015575
Ericsson	AIR 21 B2A B4P	265	240	2061	0.135503	0.01355	0.155748	0.015575

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US Dept. of Homeland Security
Stamford (katoona), CT
Carrier Summary

Frequency:	150	MHz
Maximum Permissible Exposure (MPE):	200	µW/cm^2
Maximum power density at ground level:	0.07253	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.03626	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
SINCLAIR	SC281	250	0	100	0.029262	0.014631	0.029729	0.014865
SINCLAIR	SC281	207	0	100	0.042971	0.021486	0.043673	0.021836

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US Dept. of Homeland Security
Stamford (katoona), CT
Carrier Summary

Frequency:	450	MHz
Maximum Permissible Exposure (MPE):	300	µW/cm^2
Maximum power density at ground level:	0.9364	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.31213	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Rohde & Schwarz	ADD090	275	0	100	0.102918	0.034306	0.102918	0.034306
Rohde & Schwarz	ADD090	275	0	100	0.102918	0.034306	0.102918	0.034306
Rohde & Schwarz	ADD090	275	0	100	0.102918	0.034306	0.102918	0.034306
Rohde & Schwarz	ADD090	275	0	100	0.102918	0.034306	0.102918	0.034306
Rohde & Schwarz	ADD090	275	0	100	0.102918	0.034306	0.102918	0.034306
Rohde & Schwarz	ADD090	275	0	100	0.102918	0.034306	0.102918	0.034306
Rohde & Schwarz	ADD090	275	0	100	0.102918	0.034306	0.102918	0.034306
Rohde & Schwarz	ADD090	275	0	100	0.102918	0.034306	0.102918	0.034306
Rohde & Schwarz	ADD090	275	0	100	0.102918	0.034306	0.102918	0.034306
SINCLAIR	SC381-HL	246	0	100	0.029822	0.009941	0.029822	0.009941

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Unknown
Stamford (katoona), CT
Carrier Summary

Frequency:	470	MHz
Maximum Permissible Exposure (MPE):	313.33	µW/cm^2
Maximum power density at ground level:	0.77602	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.24767	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Dielectric	TLP-08M-2E	270	0	1000	0.776021	0.247666	0.776021	0.247666

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Verizon Wireless
Stamford (katoona), CT
Carrier Summary

Frequency:	850	MHz
Maximum Permissible Exposure (MPE):	566.67	µW/cm^2
Maximum power density at ground level:	8.00593	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	1.41281	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
ANDREW	SBNHH-1D65B	92	0	2892	4.392171	0.775089	4.807162	0.848323
ANDREW	SBNHH-1D65B	92	120	2892	4.392171	0.775089	4.807162	0.848323
ANDREW	SBNHH-1D65B	92	240	2892	4.276637	0.754701	4.807162	0.848323

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Verizon Wireless
Stamford (katoona), CT
Carrier Summary

Frequency:	2100	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	13.85044	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	1.38504	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Generic	6 Foot	92	0	4277	12.203756	1.220376	12.251038	1.225104
Generic	6 Foot	92	120	4277	12.203756	1.220376	12.251038	1.225104
Generic	6 Foot	92	240	4277	12.130371	1.213037	12.251038	1.225104

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Verizon Wireless
Stamford (katoona), CT
Carrier Summary

Frequency:	1900	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	5.33901	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.5339	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
Generic	6 Foot	92	0	5060	2.406006	0.240601	5.149232	0.514923
Generic	6 Foot	92	120	5060	2.406357	0.240636	5.149232	0.514923
Generic	6 Foot	92	240	5060	2.406006	0.240601	5.149231	0.514923

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Verizon Wireless
Stamford (katoona), CT
Carrier Summary

Frequency:	751	MHz
Maximum Permissible Exposure (MPE):	500.67	µW/cm^2
Maximum power density at ground level:	2.35812	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.471	%

					On Axis		Area	
Antenna Make	Model	Height (feet)	Orientation (degrees true)	ERP (Watts)	Max Power Density (µW/cm^2)	Percent of MPE	Max Power Density (µW/cm^2)	Percent of MPE
ANDREW	SBNHH-1D65B	92	0	1362	1.229924	0.245657	1.993586	0.398186
ANDREW	SBNHH-1D65B	92	120	1362	1.229925	0.245657	1.993586	0.398186
ANDREW	SBNHH-1D65B	92	240	1362	1.228313	0.245335	1.993586	0.398186

T-SQUARED SITE SERVICES
2500 Highland Road | Suite 201
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EXHIBIT 4:

Letter of Authorization

T-SQUARED SITE SERVICES
2500 Highland Road | Suite 201
Hermitage, PA 16148 | 724.308.7855
www.t-sqrd.com

AMERICAN TOWER
CORPORATION

LETTER OF AUTHORIZATION

SITE NO: See Site List Below **SITE NAME: See Site List Below**

ADDRESS: See Site List Below

I, Margaret Robinson, Senior Counsel, US Tower Division on behalf of American Tower*, owner of the tower facility located at the address identified below (the "Tower Facilities"), do hereby authorize SIGFOX NIP LLC dba SIGFOX S.A., its successors and assigns, to act as American Tower's non-exclusive agent for the purpose of filing and securing any zoning, land-use, building permit and/or electrical permit application(s) and approvals of the applicable jurisdiction for and to conduct the construction of the installation of antennas and related telecommunications equipment on the Tower Facility located at the above address. This installation shall not affect adjoining lands and will occur only within the area leased by American Tower.

American Tower understands that the application may be denied, modified or approved with conditions. The above authorization is limited to the acceptance by American Tower of conditions related to American Tower's installation. Any such conditions of approval or modifications will not be effective unless approved in writing by American Tower.

The above authorization does not permit SIGFOX NIP LLC dba SIGFOX S.A to modify or alter any existing permit(s) and/or zoning or land-use conditions or impose any additional conditions unrelated to American Tower's installation of telecommunications equipment without the prior written approval of American Tower.

Sites Authorized (continued on the next page):

CT9000	ATC 302469
CT9001	ATC 88018
CT9081	ATC 88017
CT9122	ATC 88008
CT9123	ATC 88011
CT9184	ATC 88010

T-SQUARED SITE SERVICES
2500 Highland Road | Suite 201
Hermitage, PA 16148 | 724.308.7855
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AMERICAN TOWER[1]
CORPORATION

Asset Number	Site Name	Site Address	Site City	Site State	Site Zip
302469	Bridgeport CT 2	1069 Connecticut Avenue	Bridgeport	Connecticut	06607-1226
88018	STAMFORD (KATOONA)	168 Catoona Lane	Stamford	Connecticut	06902-4573
88017	SHELTON-TRUMBULL	14 OXFORD DRIVE/BOOTH HILL RD	SHELTON	Connecticut	06484-3455
88008	BETHANY CT	93 Old Amity Road	Bethany	Connecticut	06524-3400
88011	EAST KILLINGLY NORTH	1375 North Road	Killingly	Connecticut	06241-1404
88010	DURHAM CT	373 CHAMBERLAIN HILL RD	Higganum	Connecticut	06441-4062

Signature: _____

Margaret Robinson, Senior Counsel
US Tower Division

NOTARY BLOCK

COMMONWEALTH OF MASSACHUSETTS
County of Middlesex

This instrument was acknowledged before me by Margaret Robinson, Senior Counsel of American Tower (Tower Facility owner), personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same.

WITNESS my hand and official seal, this 18th day of June, 2019.

NOTARY SEAL: MELISSA ANN METZLER
Notary Public
Commonwealth of Massachusetts
My Commission Expires March 14, 2025

Notary Public _____
My Commission Expires: March 14, 2025

[1] American Tower as used herein is defined as American Tower Corporations and any of its affiliates or subsidiaries.

T-SQUARED SITE SERVICES
2500 Highland Road | Suite 201
Hermitage, PA 16148 | 724.308.7855
www.t-sqrd.com

EXHIBIT 5:

Proof of Mailing to Local Municipality

T-SQUARED SITE SERVICES
2500 Highland Road | Suite 201
Hermitage, PA 16148 | 724.308.7855
www.t-sqrd.com

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

FedEx Shipment Receipt

Address Information

Ship to:	**Ship from:**
Mr. Thomas F. Gill	T-Squared Site Services, LLC
City of Bridgeport	
999 Broad Street	2500 Highland Rd
Office of Planning & Economic Devp.	Suite 201
BRIDGEPORT, CT	Hermitage, PA
06604	16148
US	US
203-576-7221	7243087855

Shipment Information:
Tracking no.: 775606569248
Ship date: 07/01/2019
Estimated shipping charges: 8.65 USD

Package Information
Pricing option: FedEx One Rate
Service type: FedEx Express Saver
Package type: FedEx Envelope
Number of packages: 1
Total weight:
Declared Value: 0.00 USD
Special Services:
Pickup/Drop-off: Drop off package at FedEx location

Billing Information:
Bill transportation to: My Account - 350-350
Your reference:
P.O. no.:
Invoice no.:
Department no.:

Thank you for shipping online with FedEx ShipManager at fedex.com.

Please Note

EXHIBIT 6:

Proof of Mailing to Tower Owner/Property Owner

T-SQUARED SITE SERVICES
2500 Highland Road | Suite 201
Hermitage, PA 16148 | 724.308.7855
www.t-sqrd.com

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

FedEx Shipment Receipt

Address Information

Ship to:	**Ship from:**
Mr. Jason Hastie	T-Squared Site Services, LLC
American Tower Corp.	
10 Presidential Way	2500 Highland Rd
	Suite 201
WOBURN, MA	Hermitage, PA
01801	16148
US	US
781-926-7845	7243087855

Shipment Information:
Tracking no.: 775606658840
Ship date: 07/01/2019
Estimated shipping charges: 8.65 USD

Package Information
Pricing option: FedEx One Rate
Service type: FedEx Express Saver
Package type: FedEx Envelope
Number of packages: 1
Total weight:
Declared Value: 0.00 USD
Special Services:
Pickup/Drop-off: Drop off package at FedEx location

Billing Information:
Bill transportation to: My Account - 350-350
Your reference:
P.O. no.:
Invoice no.:
Department no.:

Thank you for shipping online with FedEx ShipManager at fedex.com.

Please Note