

August 12, 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 93 Old Aminty Road, Bethany, CT 06524

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 93 Old Aminty Road, Bethany, CT 06524(the "Property"). The existing 338-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 Town of Killingly and ATC.

Background

The existing ATC facility consists of a 338-foot self-support tower located within an approximate 10,000 square foot compound positioned +/- 300-feet east of Old Aminty Road. There are existing carrier antennas located at 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 93 Old Aminty Road, Bethany, CT 06524 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 east 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 147-feet above ground level. They propose to add one (1) equipment cabinet within the adjacent ATC utility building. There are no batteries included in the SIGFOX cabinet, therefore, there is no back-up option for this site.



- 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.** <u>Technical Feasibility.</u> 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.** <u>Legal Feasibility</u>. 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 147-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.** <u>Economic Feasibility</u>. 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 93 Old Aminty Road, Bethany, CT 06524 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, 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 Land Use & Zoning Departments Exhibit-6: Proof of Mailing to Tower Owner/Property Owner

Ehhibit-7: Proof of Mailing to Chief Elected Official

Copies to:

Ms. Isabel Kerns, Land Use Administrator, Zoning Enforcement Officer, Wetlands Enforcement Officer Bethany Town Hall 40 Peck Road Bethany, CT 06524-3322

Mr. Jason Hastie Account Project Manager, Vertical Markets/Broadcast Repack American Tower Corporation 10 Presidential Way Woburn, MA 01801

Ms. Paula Cofrancesco, First Selectman Bethany Town Hall 40 Peck Road Bethany, CT 06524-3322



EXHIBIT 1:

Compound Plan and Elevation Depicting the Planned Changes



SITE NUMBER: CT9122

93 OLD AMINTY ROAD BETHANY, CT 06524 **NEW HAVEN COUNTY**





REVISIONS REVISED CD 7.3.19 KE B 01.25.19 JW A DESCRIPTION DATE BY REV

2500 HIGHLAND ROAD, SUITE 201 HERMITAGE, PA 16148 www.t-sqrd.com

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> One network A billion dream SIGFOX, INC.

> > 10TH FLOOR BOSTON, MA. 02116



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE INFORMATION

CT9122 93 OLD AMINTY ROAD BETHANY, CT 06524 **NEW HAVEN COUNTY**

SHEET TITLE

TITLE SHEET

SHEET NUMBER

SCALE: AS NOTED DRAWN BY: JW CHECKED BY: KE DATE: 7/2/19

SITE INFORMATION

PROJECT CONSISTS OF INSTALLING THE FOLLOWING:

- (1) PROCOM CXL-900-3LW OMNI ANTENNA
- (1) CAVITY FILTER
- (1) 1/2" COAX CABLE
- (1) RG6 CABLE
 (1) EQUIPMENT CABINET FOR BASE STATION

SIGFOX SITE NUMBER: CT9122

911 SITE ADDRESS

93 OLD AMINTY ROAD BETHANY, CT 06524

TOWER OWNER: AMERICAN TOWER CORP.

116 HUNTINGTON AVE. 11TH FLOOR

BOSTON, MA 02116

OWNER SITE NUMBER:

LATITUDE (NAD 83): LONGITUDE (NAD 83):

JURISDICTION:

ADDRESS:

SCOPE OF WORK:

NEW HAVEN COUNTY

PARCEL OWNER: AMERICAN TOWER CORP. 116 HUNTINGTON AVE. 11TH FLOOR ADDRESS:

BOSTON, MA 02116

GROUND ELEVATION: 620' AMSL

STRUCTURE TYPE: SELF SUPPORT

STRUCTURE HEIGHT: 339' (AGL)

PROJECT TEAM

APPLICANT:

SIGFOX, INC. 545 BOYLSTON STREET, 10TH FLOOR

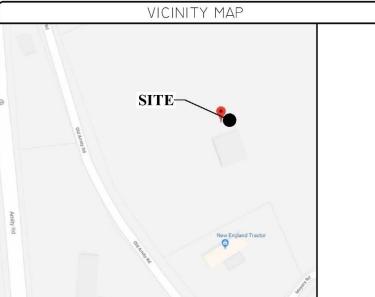
BOSTON, MA. 02116

PROJECT MANAGEMENT FIRM:

T-SQUARED SITE SERVICES, LLC 2500 HIGHLAND ROAD, SUITE 201

ENGINEERING FIRM:

T-SQUARED SITE SERVICES, LLC 2500 HIGHLAND ROAD, SUITE 201 HERMITAGE, PA. 16148



CODE COMPLIANCE

ALL WORK AND MATE CURRENT EDITIONS CONFORMING TO TH

| CINITY MAP | | DRAWING INDEX | | | | |
|--|---------------------------------|---|--|--|--|--|
| E | T-1 C-1 A-1 E-1 G-1 | TITLE SHEET COMPOUND PLAN & ELEVATION ANTENNA PLAN AND DETAILS ELECTRICAL DETAILS GROUNDING DETAILS | Digitally signed by Gary Clower DN: c=US, st=Pennsylvania, I=Hermitage, o=T-Squared Site Services, cn=Gary Clower, email=gary.c@t-sqrd.com Date: 2019.07.03 14:42:20 -04'00 | | | |
| New England Tractor | | DO NOT SCAL | E DRAWINGS | | | |
| A CONTRACTOR OF THE PROPERTY O | VERIFY A SHALL IM | LL PLANS AND EXISTING DIMENSIONS MEDIATELY NOTIFY THE DESIGNER / B | LL-SIZE AT 11"X17". CONTRACTOR SHALL 6 AND CONDITIONS ON THE JOB SITE AND ENGINEER IN WRITING OF ANY THE WORK OR MATERIAL ORDERS OR BE | | | |

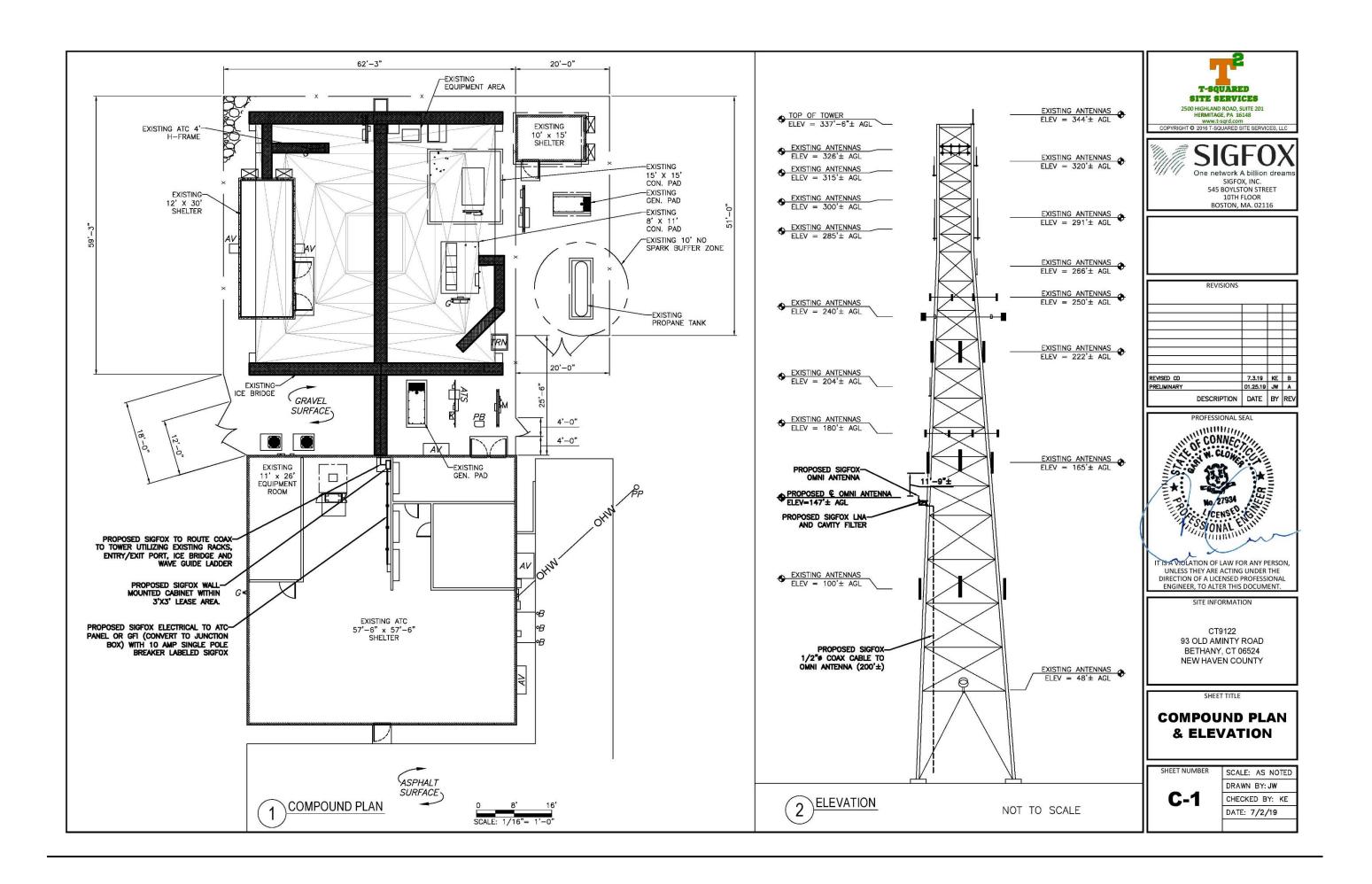
| RIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE | |
|---|--|
| OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING | |
| NG IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT | |
| LATEST EDITIONS OF THE FOLLOWING CODES. | |
| | |

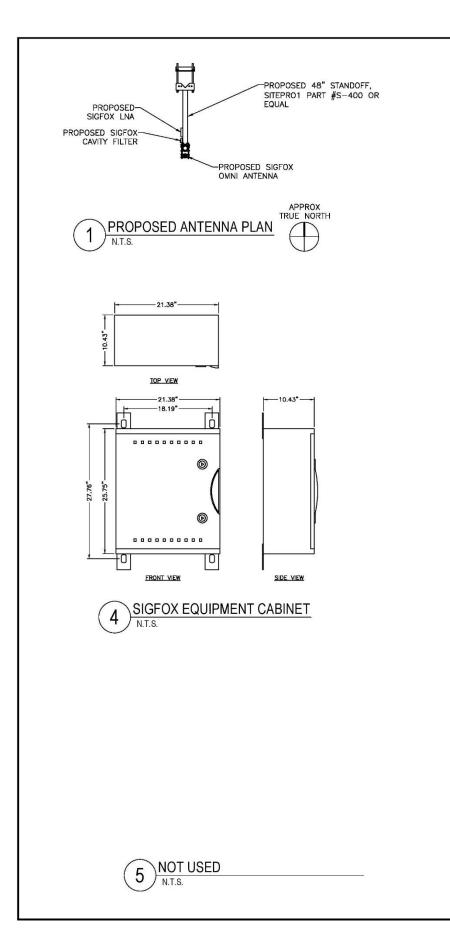
- 2015 INTERNATIONAL BUILDING CODE
- 2018 CONNECTICUT BUILDING CODE
- 2017 NATIONAL ELECTRIC CODE
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE
- 2015 INTERNATIONAL EXISTING BUILDING CODE
- 2015 INTERNATIONAL FIRE CODE
- 2015 INTERNATIONAL MECHANICAL CODE
- 2015 INTERNATIONAL RESIDENTIAL CODE

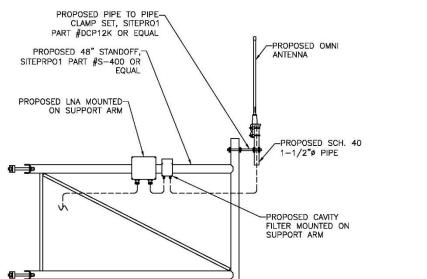
| APPROV | 'AL BLOCK | | | |
|----------------------|-----------|----------|-------------------|--------------------|
| PROPERTY OWNER | DATE | APPROVED | APPROVED AS NOTED | DISAPPROVED REVISE |
| SITE ACQUISITION | DATE | | | |
| CONSTRUCTION MANAGER | DATE | | | |
| ZONING | DATE | | | |
| RF ENGINEER | DATE | | | |

RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE

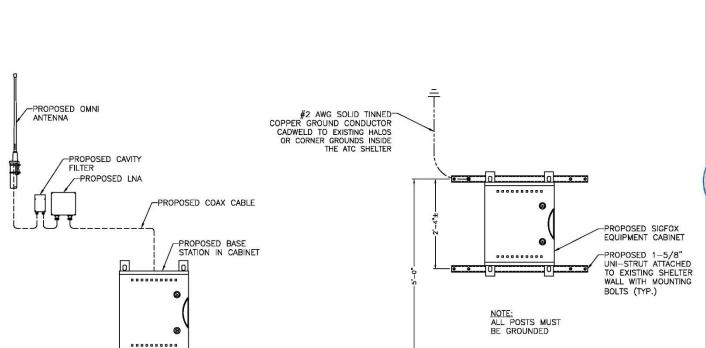
TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.



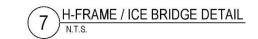


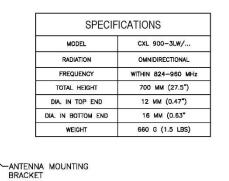


ANTENNA MOUNTING DETAIL



EQUIPMENT SCHEMATIC



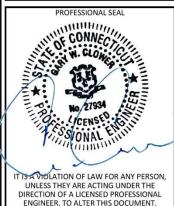


OMNI ANTENNA DETAIL 3





| | REVISIONS | | | |
|-------------|-------------|----------|----|-----|
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| | | | | |
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| | | | | |
| | | | | |
| REVISED CD | | 7.3.19 | KE | В |
| PRELIMINARY | | 01.25.19 | JW | A |
| | DESCRIPTION | DATE | BY | REV |



SITE INFORMATION

CT9122 93 OLD AMINTY ROAD BETHANY, CT 06524 NEW HAVEN COUNTY

SHEET TITLE

ANTENNA PLAN AND DETAILS

SHEET NUMBER

SCALE: AS NOTED DRAWN BY: JW CHECKED BY: KE DATE: 7/2/19

ELECTRICAL NOTES

- 1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NEC) AS WELL AS APPLICABLE STATE
- 2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED SPECIFICATION REQUIREMENTS.
- THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL
- 4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF
- 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
- 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).
- 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.
- 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
- 9. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED INDOORS AND OUTDOORS IN AREAS WHERE VIBRATION OCCURS AND FLEXIBILITY
- 10. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE THHN, THWN-2, OR THIN INSULATION.

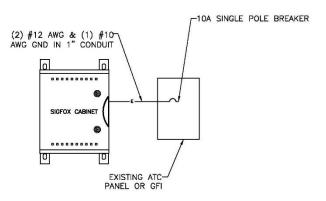
| PANEL | L NAME: N/A | 120/240 VOL | TS | 3 | WIRE | | 1 PHASE | MAIN BREAKER: | 100A |
|-----------|------------------|--------------|------|-----|------|------|--------------|------------------|------|
| CCT NO | LOAD DESCRIPTION | LOAD (VA) | POLE | AMP | AMP | POLE | LOAD (VA) | LOAD DESCRIPTION | CCT |
| 1 | SIGFOX BASE UNIT | 1440 | 1 | 10 | | | | | 2 |
| 3 | | | | | | | | | 4 |
| 5 | | | | | | | | | 6 |
| 7 | | | | | | | | | 8 |
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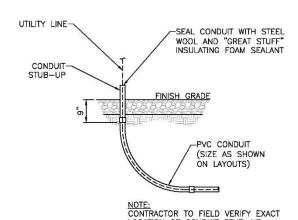
ELECTRICAL NOTES

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

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



ELECTRICAL ONE-LINE DIAGRAM 2



CONDUIT STUB-UP DETAIL (IF NEEDED)

TWO COURSES OF 1-1/2" BITUMINOUS PAVEMENT 6 ML YELLOW WARNING-LOAM AREA | PAVED AREA_ TAPE "HIGH VOLTAGE" 8" GRAVEL BASE GRADE EVEN EDGE BEFORE 12" .9 COMPACT BACKFILL -COMPACTED PROCESSED GRAVEL SCHEDULE 40 CONDUITS FOR NEW ELECTRICAL OR-(4" MIN ON ALL SIDES) TELCO SERVICES. PROVIDE APPROVED PULL BOXES LECTRIC SERVICE. PRIMARY HIGH VOLTAGE AS REQUIRED, AND COORDINATE INSTALLATION WITH ALL UTILITY COMPANIES FOR INTERFACING AT TERMINATION POINTS. PROVIDE FULL LENGTH PULL SERVICE REQUIRES 4" CONCRETE ENCASEMENT

GENERAL NOTES:

- 1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES. UTILITIES COMPANY OR OTHER PUBLIC AUTHORITIES.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY, OR MUNICIPAL AUTHORITIES.
- 3. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS
- PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL OF CONSTRUCTION OF THIS FACILITY.
- 5. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO
- COMPLETE THIS PROJECT, ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 7. CONTRACTOR SHALL VERIFY ANTENNA ELEVATIONS AND AZIMUTHS WITH RF ENGINEERING PRIOR TO INSTALLATION.
- TRANSMITTER EQUIPMENT AND ANTENNAS ARE DESIGNED TO MEET ANSI/EIA/TIA 222-G (NJ EDITION) REQUIREMENTS.
- 9. ALL STRUCTURAL ELEMENTS SHALL NOT BE DIPPED GALVANIZED STEEL.

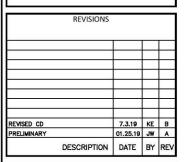
UTILITY TRENCH DETAIL (IF NEEDED)

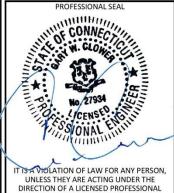
- 10. CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES PRIOR TO
- 11. IF ANY UNDERGROUND UTILITIES OR STRUCTURES EXIST BENEATH THE PROJECT AREA, CONTRACTOR MUST LOCATE IT AND CONTACT THE APPLICANT & THE OWNER'S REPRESENTATIVE.
- 12. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION BY TECHNICIANS APPROXIMATELY 2 TIMES PER
- 13. THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD
- 14. THE PROPOSED FACILITY WILL CAUSE ONLY A "DE MINIMIS" INCREASE IN STORMWATER RUNOFF. THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
- 15. NO SIGNIFICANT NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
- 16. THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION (NO HANDICAP ACCESS REQUIRED).
- 17. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SEWER SERVICE.



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ENGINEER, TO ALTER THIS DOCUMENT. SITE INFORMATION

> CT9122 93 OLD AMINTY ROAD BETHANY, CT 06524 **NEW HAVEN COUNTY**

> > SHEET TITLE

ELECTRICAL DETAILS

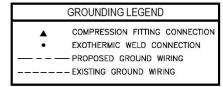
SHEET NUMBER

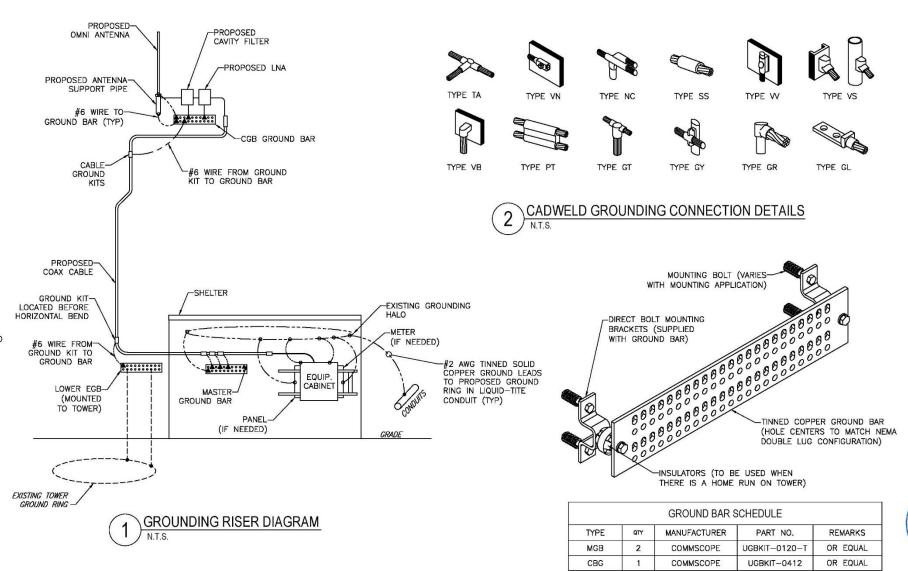
E-1

SCALE: AS NOTED DRAWN BY: JW CHECKED BY: KE DATE: 7/2/19

GROUNDING NOTES

- GROUNDING SHALL COMPLY WITH BED ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTING PROTECTION SHALL BE DONE IN ACCORDANCE WITH METRO MOD CELL SITE GROUNDING
- 2. GROUND CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS CABLE GROUNDING KITS SUPPLIED BY PROJECT
- 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
- 6. CONNECTIONS TO BE GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING
- 7. APPLY OXIDE INHIBITING COMPOUND TO ALL MECHANICAL GROUND
- 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.





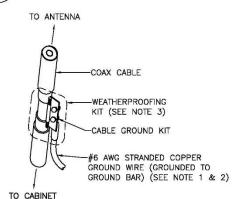


NOTES

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

 WEATHER PROOFING SHALL BE TWO-PART TAPE SUPPLIED WITH KIT. COLD SHRINK SHALL NOT BE



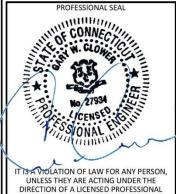
COAXIAL CABLE GROUNDING N.T.S.



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REVISIONS REVISED CD 7.3.19 KE B 01.25.19 JW A DESCRIPTION DATE BY REV



ENGINEER, TO ALTER THIS DOCUMENT. SITE INFORMATION

> CT9122 93 OLD AMINTY ROAD BETHANY, CT 06524 **NEW HAVEN COUNTY**

> > SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

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







EXHIBIT 2:

Structural Modification Report



Structural Analysis Report

Structure : 337.5 ft Self Supported Tower

ATC Site Name : BETHANY CT, CT

ATC Site Number : 88008

Engineering Number : OAA744465_C3_06

Proposed Carrier : Sigfox S.A

Carrier Site Name : CT9122_ATC_88008

Carrier Site Number : CT9122

Site Location : 93 Old Amity Road

Bethany, CT 06524-3400 41.404800,-73.000000

County : New Haven

Date : April 19, 2019

Max Usage : 98%

Result : Pass

Prepared By: Annika A. Venning, E.I. Structural Engineer II

becile wis

Reviewed By:



Authorized by "EOR" Apr 19 2019 5:01 PM cosign

COA: PEC.0001553



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|---------------------------------|----------|
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| Proposed Equipment | 3 |
| Structure Usages | 3 |
| Foundations | 3 |
| Standard Conditions | 4 |
| Calculations | Attached |

Eng. Number OAA744465_C3_06 April 19, 2019 Page 1

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 337.5 ft self supported tower to reflect the change in loading by Sigfox S.A..

Supporting Documents

| Tower Drawings CSEI Analysis ATC Engineering #73115244, dated November 18, 2002 | |
|--|---|
| Foundation Drawing Mapping by ETS Project #120302.01, dated June 18, 2012 | |
| Geotechnical Report | Geotel Report #E12-221, dated June 5, 2012 |
| Modifications | ATC Job #OAA712592_C6_13, dated August 13, 2018 |

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

| Basic Wind Speed: | 97 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult) |
|--------------------------|--|
| Basic Wind Speed w/ Ice: | 50 mph (3-Second Gust) w/ 3/4" radial ice concurrent |
| Code: | ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code |
| Structure Class: | II |
| Exposure Category: | В |
| Topographic Category: | 1 |
| Crest Height: | 0 ft |
| Spectral Response: | $Ss = 0.06, S_1 = 0.19$ |
| Site Class: | D - Stiff Soil |

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Page 2



Existing and Reserved Equipment

| LAISTINE | anu | Keservea Equipment | | | |
|-------------|-----|--|-------------------------|----------------------|---------------------------------|
| Elev.1 (ft) | Qty | Antenna | Mount Type | Lines | Carrier |
| 344.0 | 1 | Rohde & Schwarz ADD090 | Leg | (2) 7/8" Coax | US DEPT OF HOMELAND SECURITY |
| 326.0 | 1 | Kathrein Scala 750 10074 | Platform with Handrails | (1) 1 5/8" Coax | LIGADO NETWORKS LLC |
| 320.0 | 1 | Sinclair SC281-L | Leg | (1) 7/8" Coax | US DEPT OF |
| 315.0 | 1 | Sinclair SC381-HL (160") | Leg | (1) 7/8" Coax | HOMELAND SECURITY |
| 300.0 | 1 | Generic Abandoned Line | Leg | (1) 1/2" Coax | HOIVIELAND SECORITY |
| 291.0 | 2 | Generic 8' Omni | Side Arm | - | UNKNOWN |
| 285.0 | 1 | Sinclair SC281-L | Leg | (1) 7/8" Coax | US DEPT OF HOMELAND SECURITY |
| 266.0 | 1 | Generic 8' Omni | Side Arm | - | UNKNOWN |
| 250.0 | 12 | Decibel DB844H90E-XY | Leg | (12) 1 5/8" Coax | |
| | 3 | Alcatel-Lucent 800 MHz 2X50W RRH w/ Filter | | | |
| | 3 | Alcatel-Lucent 800 MHz 2X50W RRH w/ Filter | | | |
| 240.0 | 3 | Alcatel-Lucent 1900 MHz 4X45 RRH | Lan | (4) 1 1/4" Hybriflex | SPRINT NEXTEL |
| 240.0 | 3 | Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield | Leg | Cable | |
| | 3 | RFS APXVTM14-ALU-I20 | | | |
| | 3 | Commscope NNVV-65B-R4 | | | |
| | 6 | Remec S20057A1 | | | |
| 222.0 | 6 | KMW Smart Bias-T | Platform with Handrails | (12) 1 5/8" Coax | T-MOBILE |
| 222.0 | 3 | RFS APX16PV-16PVL-E-00 | Plationii with Hamurans | (1) 3/8" Coax | I-WOBILE |
| | 3 | Andrew LNX-6515DS-VTM | | | |
| 204.0 | 1 | Andrew DB616E-BC | Side Arm | (1) 1 1/4" Coax | US DEPT OF HOMELAND SECURITY |
| | 6 | RFS FD9R6004/1C-3L | | | |
| 180.0 | 3 | Rymsa MGD3-800TX | Low Profile Platform | (12) 1 5/8" Coax | VERIZON WIRELESS |
| 180.0 | 6 | Andrew DB844H90E-XY | Low Profile Platform | (12) 1 5/8 COAX | VERIZON WIRELESS |
| | 3 | Powerwave Allgon P65-16-XL-2 | | | |
| | 3 | Raycap DC2-48-60-0-9E | | | |
| | 3 | Powerwave Allgon LGP21901 | | (1) 0.39" (10mm) | |
| | 6 | Powerwave Allgon LGP21401 | 1 | Fiber Trunk | |
| 165.0 | 2 | Andrew SBNH-1D6565C (60.8 lbs) | Ct | (2) 0.78" (19.7mm) | ATOT MODILITY |
| 165.0 | 1 | KMW AM-X-CD-16-65-00T-RET | Sector Frame | 8 AWG 6 | AT&T MOBILITY |
| | 1 | Raycap FC12-PC6-10E | | (6) 1 5/8" Coax | |
| | 3 | Ericsson RRUS 11 (Band 12) | | (1) 3" conduit | |
| | 3 | Powerwave Allgon 7770.00 | | | |
| 100.0 | 3 | RFS APXV18-206517S-C | Leg | (6) 1 5/8" Coax | METRO PCS INC |
| 48.0 | 1 | PCTEL GPS-TMG-HR-26N | Leg | (1) 1/2" Coax | SPRINT NEXTEL |

Equipment to be Removed

| Elev.1 (ft) | Qty | Antenna | Mount Type | Lines | Carrier |
|--|-----|---------|------------|-------|---------|
| No loading was considered as removed as part of this analysis. | | | | | |

Eng. Number OAA744465_C3_06 April 19, 2019 Page 3

Proposed Equipment

| Elev.1 (ft) | Qty | Antenna | Mount Type | Lines | Carrier |
|-------------|-----|------------------------------------|------------|---------------|-------------|
| | 1 | Procom CXL 900-3LW | | | 0 |
| 147.0 | 1 | Generic 5" x 3" x 2" Cavity Filter | Side Arm | (1) 1/2" Coax | SIGFOX S.A. |
| | 1 | Generic Low Noise Amplifier | | | |

¹Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed coax anywhere on the tower.

Structure Usages

| Structural Component | Controlling Usage | Pass/Fail |
|----------------------|-------------------|-----------|
| Legs | 85% | Pass |
| Diagonals | 94% | Pass |
| Truss Diagonals | 98% | Pass |
| Horizontals | 87% | Pass |
| Truss Horizontals | 74% | Pass |
| Anchor Bolts | 45% | Pass |

Foundations

| Reaction Component | Analysis Reactions | % of Usage |
|--------------------|--------------------|------------|
| Uplift (Kips) | 307.7 | 55% |
| Axial (Kips) | 447.4 | 3% |

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

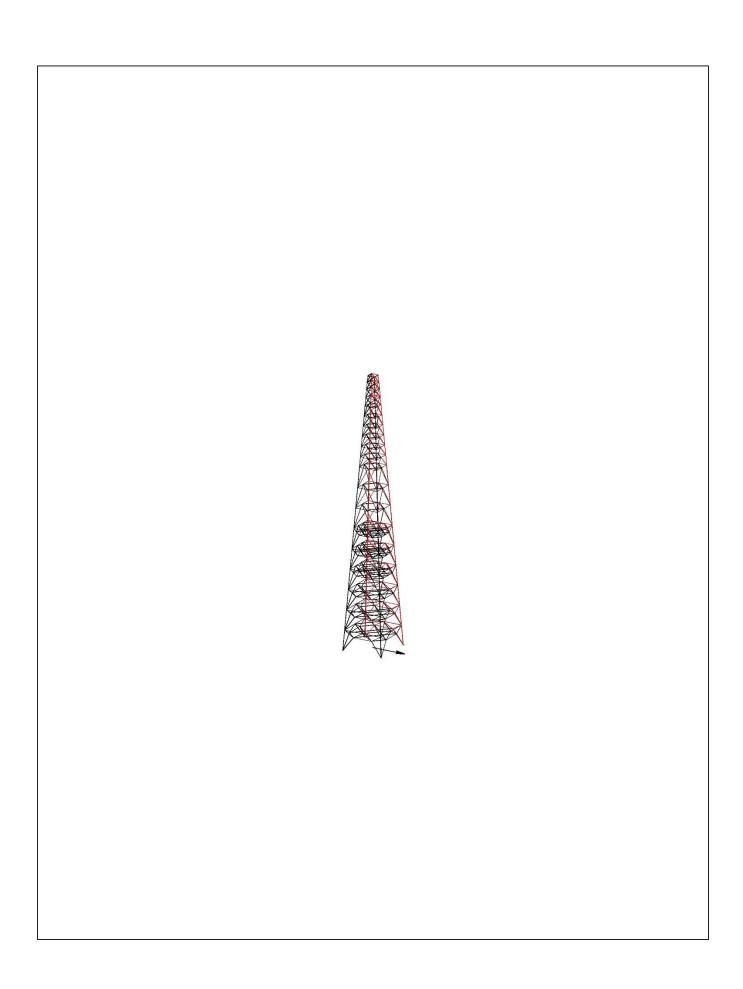
- · Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



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Legs

| Site No.: | 88008 | |
|-----------|------------|--|
| Engineer: | 43574 | |
| Date: | 01/18/2019 | |
| Carrier: | Sigfox | |

| Tower Section # | Section Elevations | Type of Shape ^[1] | Diameter or | Thickness [2] | F _Y |
|---|---|------------------------------------|---|--|---|
| # | (ft) | Snape | Length (in) | (in) | (ksi) |
| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 | 0.000-25.00 25.00-50.00 50.00-75.00 100.0-125.0 125.0-150.0 150.0-175.0 175.0-200.0 200.0-225.0 225.0-237.5 237.5-250.0 250.0-262.5 262.5-275.0 275.0-287.5 287.5-300.0 300.0-310.2 310.2-320.3 320.3-328.9 328.9-337.5 | | 8 8 8 8 8 8 8 6 6 6 6 5 5 5 5 | 1.125 1.125 1.125 1 1 0.875 0.75 0.75 0.75 0.75 0.5625 0.4375 0.4375 0.4375 0.3125 | 36 36 36 36 36 36 36 36 36 36 36 36 36 3 |

Notes:
[1] Type of Leg Shape: **R** = Round or **P** = Bent Plate or **S** = Schifflerized Angle. **L** = Even Leg

 $^{^{\}mbox{\scriptsize [2]}}$ For Solid Round Leg Shapes Thickness Equals Zero.

 $^{^{\}left[3\right] }$ Adjust for Bent Plate Leg Shapes.

Diagonals

| Site No.: | 88008 | |
|-----------|------------|--|
| Engineer: | 43574 | |
| Date: | 01/18/2019 | |
| Carrier: | Sigfox | |

| Tower Section # | Section Elevations (ft) | Type of Shape [1] | Diameter [2] | Web Length [3] | Flange Length ^[3] | Thickness (in) | F _y (ksi) | Is Diag. Tension Only? (Y/N) |
|---|--|--|--------------|---|--|--|---|------------------------------|
| 1 2 3 4 5 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 | 0.000-25.00 25.00-50.00 50.00-75.00 75.00-100.0 100.0-125.0 150.0-175.0 200.0-225.0 225.0-237.5 237.5-250.0 250.0-262.5 262.5-275.0 287.5-300.0 300.0-310.2 310.2-320.3 320.3-328.9 328.9-337.5 | 2L 2 | | 3 3 3 2.5 2.5 2.5 2.5 2.5 2.5 2.5 3.5 3.5 3 | 4 4 3.5 3.5 3.3 3 2.5 2.5 2 2 2 3.5 3.5 3.3 | 0.375 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.2 | 36 36 36 36 36 36 36 36 36 36 36 36 36 3 | YYYY |

Notes:
Type of Diagonal Shape: R = Round, L = Single-Angle or 2L = Double-Angle.

Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

 $^{^{\}mbox{\scriptsize [3]}}$ Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Horizontals

| Site No.: | 88008 | _ |
|-----------|------------|---|
| Engineer: | 43574 | |
| Date: | 01/18/2019 | |
| Carrier: | Sigfox | |

| Tower | Section | Туре | Diameter [2] | Web Length [3] | Flange Length [3] | Thickness | F _y | |
|--------------|-------------|----------------------------|--------------|-------------------|----------------------|-----------|----------------|--|
| Section # | Elevations | of Shape ^[1] | | Length | Length | | | |
| # | (ft) | Silape | (in) | (in) | (in) | (in) | (ksi) | |
| 1 | 0.000-25.00 | 2L | | 4 | 3 | 0.25 | 36 | |
| 2 | 25.00-50.00 | 2L | | 3.5 | 2.5 | 0.25 | 36 | |
| 3 | 50.00-75.00 | 2L | | 3 | 2.5 | 0.25 | 36 | |
| 4 | 75.00-100.0 | 2L | | 3.5 | 2.5 | 0.25 | 36 | |
| 5 | 100.0-125.0 | 2L | | 3.5 | 2.5 | 0.25 | 36 | |
| 6 | 125.0-150.0 | 2L | | 3 | 2.5 | 0.25 | 36 | |
| 7 | 150.0-175.0 | 2L | | 3 | 2.5 | 0.25 | 36 | |
| 8 | 175.0-200.0 | 2L | | 3 | 2.5 | 0.25 | 36 | |
| 9 | 200.0-225.0 | 2L | | 2.5 | 2.5 | 0.25 | 36 | |
| 10 | 225.0-237.5 | 2L | | 2.5 | 2.5 | 0.25 | 36 | |
| 11 | 237.5-250.0 | 2L | | 2.5 | 2.5 | 0.25 | 36 | |
| 12 | 250.0-262.5 | 2L | | 2.5 | 2.5 | 0.25 | 36 | |
| 13 | 262.5-275.0 | 2L | | 2.5 | 2.5 | 0.25 | 36 | |
| 14 | 275.0-287.5 | 2L | | 2.5 | 2.5 | 0.25 | 36 | |
| 15 | 287.5-300.0 | 2L | | 2.5 | 2.5 | 0.25 | 36 | |
| 16 | 300.0-310.2 | L | | 3 | 2.5 | 0.25 | 36 | |
| 17 | 310.2-320.3 | 2L | | 3 | 2.5 | 0.25 | 36 | |
| 18 | 320.3-328.9 | L | | 3 | 2.5 | 0.25 | 36 | |
| 19 | 328.9-337.5 | С | | 8 | 11.5 | | 36 | |
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Notes:
[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle, **2L** = Double-Angle, **C** = Channel, **W** = W Shape

 $^{^{\}left[2\right]}$ Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

 $^{^{\}mbox{\scriptsize [3]}}$ Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Diagonals

| Site No.: | 88008 | |
|-----------|------------|--|
| Engineer: | 43574 | |
| Date: | 01/18/2019 | |
| Carrier: | Sigfox | |

When inputting thickness values, include all decimal places. Input diags. from left to center & from base section upward.

| Tower Built-up Diag. # | Section Elevations | Type of Shape [1] | Diameter [2] | Web Length ^[3] | Flange Length ^[3] | Thickness | F _y |
|---|---|---|--------------|--|---|--|---|
| | (ft) | | (in) | (in) | (in) | (in) | (ksi) |
| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 | 0.000-25.00 0.000-25.00 25.00-50.00 25.00-50.00 50.00-75.00 75.00-100.0 75.00-100.0 100.0-125.0 100.0-125.0 125.0-150.0 125.0-150.0 | 2L 2L 2L 2L 2L 2L 2L 2L 2L 2L 2L 2L 2L 2 | | 3 4 3 4 2.5 3.5 3 2.5 2.5 2.5 2.5 2.5 2.5 2.5 | 2.5 3 2.5 3 3 2 2 2 2 2 2 2 2 2 2 2 2 | 0.3125 0.3125 0.215 0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.2 | 36 36 36 36 36 36 36 36 36 36 36 36 36 3 |

Notes:

[1] Type of Diagonal Shape: R = Round, L = Single-Angle or 2L = Double-Angle.

[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Horizontals

| Site No.: | 88008 |
|-----------|------------|
| Engineer: | 43574 |
| Date: | 01/18/2019 |
| Carrier: | Sigfox |

| Tower Section # | Section Elevations (ft) | Type of Shape ^[1] | Diameter ^[2] | Web Length [3] | Flange Length ^[3] (in) | Thickness | F _y (ksi) | Is Horiz. Tension Only? (Y/N) |
|----------------------------|--|------------------------------------|-------------------------|--------------------------------------|---|---|----------------------------------|-------------------------------|
| 1 2 3 4 5 6 | 0.000-25.00 25.00-50.00 50.00-75.00 75.00-100.0 100.0-125.0 125.0-150.0 | 2L 2L 2L 2L 2L 2L | | 2.5 2.5 3 2.5 2.5 2.5 | 3 3 3 3 3 | 0.25 0.25 0.25 0.375 0.25 0.25 | 36 36 36 36 36 36 | YYY |

 $^{^{\}rm [2]}$ Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

 $^{^{\}left[3\right] }$ Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

| Site No.: | 88008 | |
|-----------|----------|--|
| Engineer: | 43574 | |
| Date: | 01/18/19 | |
| Carrier: | Sigfox | |

| | | | | | | | | | Carrier: | Sigtox |
|---|----------------------------|-----------|------------|----------|-------|------------------|------------|-------------------|--------------------------------|-------------------------|
| | | | - | | | | | | | |
| | Description | From | То | Quantity | Shape | Width or | Perimeter | Unit | Part of Face Solidity Ratio | Include in Wind Load |
| | | (ft) | (ft) | | | Diameter (in) | (in) | Weight (lb/ft) | (Yes/No) | (Yes/No) |
| | 1 Climbing Ladder | 0 | 337.5 | 1 | Flat | 2 | 8.0 | 6 | Yes | Yes |
| | 2 US Dept | 0 | 337.5 | 2 | Round | 1.09 | 3.4 | 0.33 | Yes | Yes |
| | 3 US Dept1 | 0 | 337.5 | 1 | Round | 0.63 | 2.0 | 0.15 | Yes | Yes |
| 1 | 4 Ligado | 0 | 319 | 1 | Round | 1.98 | 6.2 | 0.82 | Yes | Yes |
| 1 | 5 US Dept2 | 0 | 310 | 2 | Round | 1.09 | 3.4 | 0.33 | Yes | Yes |
| 1 | 6 US Dept3 | 0 | 275 | 1 | Round | 1.09 | 3.4 | 0.33 | Yes | Yes |
| 1 | 7 Sprint1 | 0 | 240 | 3 | Round | 1.54 | 4.8 | 1 | Yes | Yes |
| 1 | 8 TMO | 0 | 220 | 1 | Flat | 6.5025 | 34.7 | 9.84 | Yes | Yes |
| 1 | 9 TMO1 | 0 | 220 | 1 | Round | 0.44 | 1.4 | 0.08 | Yes | Yes |
| 1 | 10 US Dept4 | 0 | 194 | 1 | Round | 1.55 | 4.9 | 0.63 | Yes | No |
| | 11 Verizon | 0 | 180 | 1 | Flat | 6.5025 | 34.7 | 9.84 | Yes | Yes |
| 1 | 12 ATT | 0 | 165 | 6 | Round | 1.98 | 6.2 | 0.82 | Yes | Yes |
| 1 | 13 ATT1 | 0 | 165 | 1 | Round | 0.39 | 1.2 | 0.17 | Yes | No |
| 1 | 14 ATT2 | 0 | 165 | 2 | Round | 0.78 | 2.5 | 0.59 | Yes | No |
| 1 | 15 ATT3 | 0 | 165 | 1 | Round | 3.5 | 11.0 | 7.58 | Yes | No |
| 1 | 16 Metro 17 Sprint2 | 0 | 100 48 | 6 1 | Round | 1.98 0.63 | 6.2 2.0 | 0.82 | Yes | Yes |
| | 17 Sprint2 18 Coax Cage | 0 12.5 | 48 32.5 | 2 | Round | 0.63 | 48.0 | 0.15 | Yes | No Yes |
| 1 | 19 Coax Cage2 | 12.5 | 32.5 | 2 | Flat | 12 | 48.0 | 25 | Yes | Yes |
| | 20 Waive Guide | 0 | 180 | 1 | Flat | 1.5 | 6.0 | 2 | Yes | Yes |
| | 21 Waive Guide1 | 0 | 165 | 1 | Flat | 1.5 | 6.0 | 2 | Yes | Yes |
| | 22 Waive Guide2 | 0 | 100 | 1 | Flat | 1.5 | 6.0 | 2 | Yes | Yes |
| | 23 Sigfox | 0 | 147 | 1 | Flat | 0.63 | 2.5 | 0.15 | Yes | Yes |
| 1 | 24 Sprint | 0 | 204.8 | 1 | Flat | 5.955 | 25.8 | 4.92 | Yes | Yes |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

 Site No.:
 88008

 Engineer:
 43574

 Date:
 01/18/19

 Carrier:
 Sigfox

| | f | 11A-222-G | | | ı | K _e | 0.9 | | 0.7 | | | | Carrier | Jigi | i Ox |
|-----------------|------|-----------|----------|----------------|------------|-----------------|-----------|---------|--------------|-------------|-------------|-------------|---------|---------------|------------|
| Description | From | То | Quantity | Face # | Coax Width | 200 | % Exposed | Spacing | Shape | Block Width | Block Depth | Perimeter | Unit | In Face Zone | Include in |
| Description. | 110 | | quantity | Genomatic | Coux Wildu | (Block / Flat / | у спросси | opading | (Round/Flat) | | Бюеж Берин | · connected | Weight | III Tucc Lone | Wind Load |
| | (ft) | (ft) | | (1-4, A- D) | (in) | Ind) | | (in) | | (# coax) | (# coax) | (in) | (lb/ft) | (Yes/No) | (Yes/No) |
| Climbing Ladder | 0 | 337.5 | 1 | В | 2.00 | Flat | 100 | 0 | Flat | 1 | 1 | 8.0 | 6 | Yes | Yes |
| US Dept | 0 | 337.5 | 2 | 2 | 1.09 | Ind | 100 | | Round | 2 | 1 | 3.4 | 0.33 | Yes | Yes |
| US Dept1 | 0 | 337.5 | 1 | 2 | 0.63 | Ind | 100 | 0 | Round | 1 | 1 | 2.0 | 0.15 | Yes | Yes |
| Ligado | 0 | 319 | 1 | 4 | 1.98 | Ind | 100 | 0 | Round | 1 | 1 | 6.2 | 0.82 | Yes | Yes |
| US Dept2 | 0 | 310 | 2 | 2 | 1.09 | Ind | 100 | 0 | Round | 2 | 1 | 3.4 | 0.33 | Yes | Yes |
| US Dept3 | 0 | 275 | 1 | 2 | 1.09 | Ind | 100 |) | Round | 1 | 1 | 3.4 | 0.33 | Yes | Yes |
| Sprint1 | 0 | 240 | 3 | В | 1.54 | Ind | 100 | 0 | Round | 3 | 1 | 4.8 | 1 | Yes | Yes |
| TMO | 0 | 220 | 12 | 1 | 1.98 | Block | 50 | 0.25 | Flat | 6 | 2 | 34.7 | 9.84 | Yes | Yes |
| TMO1 | 0 | 220 | 1 | 1 | 0.44 | Ind | 100 | D | Round | 1 | 1 | 1.4 | 0.08 | Yes | Yes |
| US Dept4 | 0 | 194 | 1 | 4 | 1.55 | Ind | 100 | 0 | Round | 1 | 1 | 4.9 | 0.63 | Yes | No |
| Verizon | 0 | 180 | 12 | 4 | 1.98 | Block | 50 | 0.25 | Flat | 6 | 2 | 34.7 | 9.84 | Yes | Yes |
| ATT | 0 | 165 | 6 | 2 | 1.98 | Ind | 100 | 0 | Round | 6 | 1 | 6.2 | 0.82 | Yes | Yes |
| ATT1 | 0 | 165 | 1 | 2 | 0.39 | Ind | 100 | | Round | 1 | 1 | 1.2 | 0.17 | Yes | No |
| ATT2 | 0 | 165 | 2 | 2 | 0.78 | Ind | 100 | 0 | Round | 2 | 1 | 2.5 | 0.59 | Yes | No |
| ATT3 | 0 | 165 | 1 | 2 | 3.50 | Ind | 100 | | Round | 1 | 1 | 11.0 | 7.58 | Yes | No |
| Metro | 0 | 100 | 6 | 1 | 1.98 | Ind | 100 | 0 | Round | 6 | 1 | 6.2 | 0.82 | Yes | Yes |
| Sprint2 | 0 | 48 | 1 | В | 0.63 | Ind | 100 | 0 | Round | 1 | 1 | 2.0 | 0.15 | Yes | No |
| Coax Cage | 12.5 | 32.5 | 2 | 1 | 12.00 | Flat | 100 | | Flat | 2 | 1 | 48.0 | 25 | Yes | Yes |
| Coax Cage2 | 12.5 | 32.5 | 2 | 3 | 12.00 | Flat | 100 | 0 | Flat | 2 | 1 | 48.0 | 25 | Yes | Yes |
| Waive Guide | 0 | 180 | 1 | 4 | 1.50 | Flat | 100 | 0 | Flat | 1 | 1 | 6.0 | 2 | Yes | Yes |
| Waive Guide1 | 0 | 165 | 1 | 2 | 1.50 | Flat | 100 | 0 | Flat | 1 | 1 | 6.0 | 2 | Yes | Yes |
| Waive Guide2 | 0 | 100 | 1 | 1 | 1.50 | Flat | 100 | 0 | Flat | 1 | 1 | 6.0 | 2 | Yes | Yes |
| Sigfox | 0 | 147 | 1 | С | 0.63 | Flat | 100 | | Flat | 1 | 1 | 2.5 | 0.15 | Yes | Yes |
| Sprint | 0 | 204.8 | 6 | В | 1.98 | Block | 50 | 1 | Flat | 3 | 2 | 25.8 | 4.92 | Yes | Yes |
| | | | | | | | | 1 | | | | | | No | No |
| | | | | | | | | 1 | | | | | | No | No |
| | | | | | | | | 1 | | | | | | No | No |
| | | | | | | | | 1 | | | | | | No | No |
| | | | | | | | | 1 | | | | | | No | No |
| | | | | | | | | | | | | | | No | No |
| | | | | | | | | | | | | | | No | No |
| | | | | | | | | | | | | | | No | No |
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| | | | | | | | | | | | | | | No | No |
| | | | | | | | | | | | | | | No | No |
| | | | | | | | | | | | | | | No | No |
| | | | | | | | | | | | | | | No | No |
| | | | | | | | | 0.5 | | | | | | No | No |
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| | | | | | | | | | | | | | | No | No |
| | | | | | | | | | | | | | | No No | No No |
| | | | | | | | | | | | | | | No | No |
| | | | | | | | | | | | | | | No | No |
| | | | | | | | | | | | | | | No | No |
| | | | | | | | | | | | | | | No | No |
| | | | | | | | | 3.5 | | | | | | No | No |

Dishes

| Dish Types | | | | | | |
|------------|--------------------|--|--|--|--|--|
| 5 | Standard | | | | | |
| R | Standard w/ Radome | | | | | |
| н | High Performance | | | | | |
| - | Citi | | | | | |

| Dish | Dish Elevation | Dish Dia. | Dish Angle | Dish Type | Joint | Equipment |
|--------|----------------|-----------|------------|-----------|-------------|-----------|
| Number | (ft) | (ft) | (deg) | | Orientation | Staus |
| 1 2 | | | | | | |
| 2 | | | | | | |
| 3 4 | | | | | | |
| 4 | | | | | | |
| 5 6 | | | | | | |
| 6 | | | | | | |
| 7 8 | | | | | | |
| 8 9 | | | | | | |
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| Equipment Label | Attach Label | Equipment Property Set | EIA Antenn Orientation Angle (deg) |
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88008 43574 01/18/19 Sigfax

| | | Joint Orien | tation |
|-----|----|-------------|--------|
| | XY | 0° | Y |
| 90° | | | |

Site #: 88008 Name: Sigfox Engineer: 43574 Date: 01/18/19

| Member | Group | Section | Symmetry | Origin | End | Ecc. | Rest. | Ratio | Ratio | Ratio |
|--------|---------|---------|-------------|--------|-------|------|-------|-------------|-------------|-------------|
| Label | Label | Label | Code | Joint | Joint | Code | Code | RLX | RLY | RLZ |
| L1 | Leg S1 | | XY-Symmetry | OP | 1P | 1 | 4 | 0.2812 | 0.2812 | 0.2812 |
| L 2 | Leg S2 | | XY-Symmetry | 1P | 2P | 1 | 4 | 0.2812 | 0.2812 | 0.2812 |
| L3 | Leg S3 | | XY-Symmetry | 2P | 3P | 1 | 4 | 0.2812 | 0.2812 | 0.2812 |
| L4 | Leg S4 | | XY-Symmetry | 3P | 4P | 1 | 4 | 0.2812 | 0.2812 | 0.2812 |
| L 5 | Leg S5 | | XY-Symmetry | 4P | 5P | 1 | 4 | 0.2812 | 0.2812 | 0.2812 |
| L6 | Leg S6 | | XY-Symmetry | 5P | 6P | 1 | 4 | 0.2812 | 0.2812 | 0.2812 |
| L7 | Leg S7 | | XY-Symmetry | 6P | 7P | 1 | 4 | 0.333333333 | 0.33333333 | 0.333333333 |
| L8 | Leg S8 | | XY-Symmetry | 7P | 8P | 1 | 4 | 0.333333333 | 0.333333333 | 0.333333333 |
| L9 | Leg S9 | | XY-Symmetry | 8P | 9P | 1 | 4 | 0.333333333 | 0.333333333 | 0.333333333 |
| L 10 | Leg S10 | | XY-Symmetry | 9P | 10P | 1 | 4 | 0.5 | 0.5 | 0.5 |
| L 11 | Leg S11 | | XY-Symmetry | 10P | 11P | 1 | 4 | 0.5 | 0.5 | 0.5 |
| L 12 | Leg S12 | | XY-Symmetry | 11P | 12P | 1 | 4 | 0.5 | 0.5 | 0.5 |
| L 13 | Leg S13 | | XY-Symmetry | 12P | 13P | 1 | 4 | 0.5 | 0.5 | 0.5 |
| L 14 | Leg S14 | | XY-Symmetry | 13P | 14P | 1 | 4 | 0.5 | 0.5 | 0.5 |
| L 15 | Leg S15 | | XY-Symmetry | 14P | 15P | 1 | 4 | 0.5 | 0.5 | 0.5 |
| L 16 | Leg S16 | | XY-Symmetry | 15P | 16P | 1 | 4 | 0.5 | 0.5 | 0.5 |
| L 17 | Leg S17 | | XY-Symmetry | 16P | 17P | 1 | 4 | 0.5 | 0.5 | 0.5 |
| L 18 | Leg S18 | | XY-Symmetry | 17P | 18P | 1 | 4 | 0.5 | 0.5 | 0.5 |
| L 19 | Leg S19 | | XY-Symmetry | 18P | 19P | 1 | 4 | 0.5 | 0.5 | 0.5 |

| D 1 | Diag S1 | XY-Symmetry | OP | H2P | 1 | 6 | 0.333333333 | 0.848 | 0.33333333 |
|------|----------|-------------|-----|------|---|---|-------------|-----------|-------------|
| D 2 | Diag S1 | XY-Symmetry | OP | H1P | 1 | 6 | 0.333333333 | 0.848 | 0.33333333 |
| D 3 | Diag S2 | XY-Symmetry | 1P | H6P | 1 | 6 | 0.333333333 | 0.848 | 0.33333333 |
| D 4 | Diag S2 | XY-Symmetry | 1P | H5P | 1 | 6 | 0.333333333 | 0.848 | 0.33333333 |
| D 5 | Diag S3 | XY-Symmetry | 2P | H10P | 1 | 6 | 0.333333333 | 0.848 | 0.33333333 |
| D 6 | Diag S3 | XY-Symmetry | 2P | H9P | 1 | 6 | 0.333333333 | 0.848 | 0.333333333 |
| D 7 | Diag S4 | XY-Symmetry | 3P | H14P | 1 | 6 | 0.333333333 | 0.3333333 | 0.33333333 |
| D 8 | Diag S4 | XY-Symmetry | 3P | H13P | 1 | 6 | 0.333333333 | 0.3333333 | 0.33333333 |
| D 9 | Diag S5 | XY-Symmetry | 4P | H18P | 1 | 6 | 0.333333333 | 0.3333333 | 0.33333333 |
| D 10 | Diag S5 | XY-Symmetry | 4P | H17P | 1 | 6 | 0.333333333 | 0.3333333 | 0.33333333 |
| D 11 | Diag S6 | XY-Symmetry | 5P | H22P | 1 | 6 | 0.3 | 0.848 | 0.3 |
| D 12 | Diag S6 | XY-Symmetry | 5P | H21P | 1 | 6 | 0.3 | 0.848 | 0.3 |
| D 13 | Diag S7 | XY-Symmetry | 6P | A13P | 1 | 6 | 0.3 | 0.6 | 0.3 |
| D 14 | Diag S7 | XY-Symmetry | 6P | A14P | 1 | 6 | 0.3 | 0.6 | 0.3 |
| D 15 | Diag S8 | XY-Symmetry | 7P | A15P | 1 | 6 | 0.3 | 0.6 | 0.3 |
| D 16 | Diag S8 | XY-Symmetry | 7P | A16P | 1 | 6 | 0.3 | 0.6 | 0.3 |
| D 17 | Diag S9 | XY-Symmetry | 8P | A17P | 1 | 6 | 0.3 | 0.6 | 0.3 |
| D 18 | Diag S9 | XY-Symmetry | 8P | A18P | 1 | 6 | 0.3 | 0.6 | 0.3 |
| D 19 | Diag S10 | XY-Symmetry | 9P | A19P | 1 | 6 | 0.5 | 1 | 0.5 |
| D 20 | Diag S10 | XY-Symmetry | 9P | A20P | 1 | 6 | 0.5 | 1 | 0.5 |
| D 21 | Diag S11 | XY-Symmetry | 10P | A21P | 1 | 6 | 0.5 | 1 | 0.5 |
| D 22 | Diag S11 | XY-Symmetry | 10P | A22P | 1 | 6 | 0.5 | 1 | 0.5 |
| D 23 | Diag S12 | XY-Symmetry | 11P | A23P | 1 | 6 | 0.5 | 1 | 0.5 |
| | | | | | | | | | |

| Member | Group | Section | Symmetry | Origin | End | Ecc. | Rest. | Ratio | Ratio | Ratio |
|--------|----------|---------|-------------|--------|-------|------|-------|-------|-------|-------|
| Label | Label | Label | Code | Joint | Joint | Code | Code | RLX | RLY | RLZ |
| D 24 | Diag S12 | | XY-Symmetry | 11P | A24P | 1 | 6 | 0.5 | 1 | 0.5 |
| D 25 | Diag S13 | | XY-Symmetry | 12P | A25P | 1 | 6 | 0.5 | 1 | 0.5 |
| D 26 | Diag S13 | | XY-Symmetry | 12P | A26P | 1 | 6 | 0.5 | 1 | 0.5 |
| D 27 | Diag S14 | | XY-Symmetry | 13P | A27P | 1 | 6 | 0.5 | 1 | 0.5 |
| D 28 | Diag S14 | | XY-Symmetry | 13P | A28P | 1 | 6 | 0.5 | 1 | 0.5 |
| D 29 | Diag S15 | | XY-Symmetry | 14P | A29P | 1 | 6 | 0.5 | 1 | 0.5 |
| D 30 | Diag S15 | | XY-Symmetry | 14P | A30P | 1 | 6 | 0.5 | 1 | 0.5 |
| D 31 | Diag S16 | | XY-Symmetry | 15P | 16Y | 2 | 6 | 100 | 100 | 100 |
| D 32 | Diag S16 | | XY-Symmetry | 15P | 16X | 2 | 6 | 100 | 100 | 100 |
| D 33 | Diag S17 | | XY-Symmetry | 16P | 17Y | 2 | 5 | 100 | 100 | 100 |
| D 34 | Diag S17 | | XY-Symmetry | 16P | 17X | 2 | 5 | 100 | 100 | 100 |
| D 35 | Diag S18 | | XY-Symmetry | 17P | 18Y | 2 | 5 | 100 | 100 | 100 |
| D 36 | Diag S18 | | XY-Symmetry | 17P | 18X | 2 | 5 | 100 | 100 | 100 |
| D 37 | Diag S19 | | XY-Symmetry | 18P | 19Y | 2 | 5 | 100 | 100 | 100 |
| D 38 | Diag S19 | | XY-Symmetry | 18P | 19X | 2 | 5 | 100 | 100 | 100 |

| H 1 | Horiz 1 | XY-Symmetry | 1P | A1P |
|------|---------|-------------|----|------|
| H 2 | Horiz 1 | XY-Symmetry | 1P | A2P |
| H 3 | Horiz 2 | XY-Symmetry | 2P | АЗР |
| H 4 | Horiz 2 | XY-Symmetry | 2P | A4P |
| H 5 | Horiz 3 | XY-Symmetry | 3P | A5P |
| H 6 | Horiz 3 | XY-Symmetry | 3P | A6P |
| H 7 | Horiz 4 | XY-Symmetry | 4P | A7P |
| H 8 | Horiz 4 | XY-Symmetry | 4P | A8P |
| H 9 | Horiz 5 | XY-Symmetry | 5P | A9P |
| H 10 | Horiz 5 | XY-Symmetry | 5P | A10P |

| 1 | 6 | 0.5 | 0.5 | 0.5 |
|---|---|------|------|------|
| 1 | 6 | 0.5 | 0.5 | 0.5 |
| 1 | 6 | 0.49 | 0.49 | 0.49 |
| 1 | 6 | 0.49 | 0.49 | 0.49 |
| 1 | 6 | 0.46 | 0.46 | 0.46 |
| 1 | 6 | 0.46 | 0.46 | 0.46 |
| 1 | 6 | 0.9 | 0.9 | 0.9 |
| 1 | 6 | 0.9 | 0.9 | 0.9 |
| 1 | 6 | 1 | 1 | 1 |
| 1 | 6 | 1 | 1 | 1 |

| Member | Group | Section | Symmetry | Origin | End | Ecc. | Rest. | Ratio | Ratio | Ratio |
|--------|----------|---------|-------------|--------|-------|------|-------|-------|-------|-------|
| Label | Label | Label | Code | Joint | Joint | Code | Code | RLX | RLY | RLZ |
| H 11 | Horiz 6 | | XY-Symmetry | 6P | A11P | 1 | 6 | 0.98 | 0.98 | 0.98 |
| H 12 | Horiz 6 | | XY-Symmetry | 6P | A12P | 1 | 6 | 0.98 | 0.98 | 0.98 |
| H 13 | Horiz 7 | | XY-Symmetry | 7P | A13P | 1 | 6 | 1 | 1 | 1 |
| H 14 | Horiz 7 | | XY-Symmetry | 7P | A14P | 1 | 6 | 1 | 1 | 1 |
| H 15 | Horiz 8 | | XY-Symmetry | 8P | A15P | 1 | 6 | 1 | 1 | 1 |
| H 16 | Horiz 8 | | XY-Symmetry | 8P | A16P | 1 | 6 | 1 | 1 | 1 |
| H 17 | Horiz 9 | | XY-Symmetry | 9P | A17P | 1 | 6 | 1 | 1 | 1 |
| H 18 | Horiz 9 | | XY-Symmetry | 9P | A18P | 1 | 6 | 1 | 1 | 1 |
| H 19 | Horiz 10 | | XY-Symmetry | 10P | A19P | 1 | 6 | 1 | 1 | 1 |
| H 20 | Horiz 10 | | XY-Symmetry | 10P | A20P | 1 | 6 | 1 | 1 | 1 |
| H 21 | Horiz 11 | | XY-Symmetry | 11P | A21P | 1 | 6 | 1 | 1 | 1 |
| H 22 | Horiz 11 | | XY-Symmetry | 11P | A22P | 1 | 6 | 1 | 1 | 1 |
| H 23 | Horiz 12 | | XY-Symmetry | 12P | A23P | 1 | 6 | 1 | 1 | 1 |
| H 24 | Horiz 12 | | XY-Symmetry | 12P | A24P | 1 | 6 | 1 | 1 | 1 |
| H 25 | Horiz 13 | | XY-Symmetry | 13P | A25P | 1 | 6 | 1 | 1 | 1 |
| H 26 | Horiz 13 | | XY-Symmetry | 13P | A26P | 1 | 6 | 1 | 1 | 1 |
| H 27 | Horiz 14 | | XY-Symmetry | 14P | A27P | 1 | 6 | 1 | 1.2 | 1 |
| H 28 | Horiz 14 | | XY-Symmetry | 14P | A28P | 1 | 6 | 1 | 1.2 | 1 |
| H 29 | Horiz 15 | | XY-Symmetry | 15P | A29P | 1 | 6 | 1 | 1.07 | 1 |
| H 30 | Horiz 15 | | XY-Symmetry | 15P | A30P | 1 | 6 | 1 | 1.07 | 1 |
| H 31 | Horiz 16 | | Y-Symmetry | 16P | 16X | 3 | 6 | 0.5 | 0.52 | 0.5 |
| H 32 | Horiz 16 | | X-Symmetry | 16P | 16Y | 3 | 6 | 0.5 | 0.52 | 0.5 |
| H 33 | Horiz 17 | | Y-Symmetry | 17P | 17X | 1 | 6 | 0.5 | 1 | 0.5 |
| H 34 | Horiz 17 | | X-Symmetry | 17P | 17Y | 1 | 6 | 0.5 | 1 | 0.5 |
| H 35 | Horiz 18 | | Y-Symmetry | 18P | 18X | 3 | 6 | 0.5 | 1 | 0.5 |
| H 36 | Horiz 18 | | X-Symmetry | 18P | 18Y | 3 | 6 | 0.5 | 1 | 0.5 |
| H 37 | Horiz 19 | | Y-Symmetry | 19P | 19X | 3 | 6 | 1 | 1 | 1 |
| H 38 | Horiz 19 | | X-Symmetry | 19P | 19Y | 3 | 6 | 1 | 1 | 1 |

| Member | Group | Section | Symmetry | Origin | End | Ecc. | Rest. | Ratio | Ratio | Ratio |
|--------|-------|---------|----------|--------|-------|------|-------|-------|-------|-------|
| Label | Lahel | Lahel | Code | loint | loint | Code | Code | RLX | RIY | RI 7 |

| H 45 | Horiz 4 | Y-Symmetry | A7P | A7X | 1 | 6 | 1 | 1 | 1 |
|------|---------|------------|------|------|---|---|---|---|---|
| H 46 | Horiz 4 | X-Symmetry | A8P | A8Y | 1 | 6 | 1 | 1 | 1 |
| H 47 | Horiz 5 | Y-Symmetry | A9P | A9X | 1 | 6 | 1 | 1 | 1 |
| H 48 | Horiz 5 | X-Symmetry | A10P | A10Y | 1 | 6 | 1 | 1 | 1 |
| H 49 | Horiz 6 | Y-Symmetry | A11P | A11X | 1 | 6 | 1 | 1 | 1 |
| H 50 | Horiz 6 | X-Symmetry | A12P | A12Y | 1 | 6 | 1 | 1 | 1 |

| LH 1 | LH 1 | Y-Symmetry | H1P | H1X | 1 | 6 | 100 | 100 | 100 |
|-------|------|-------------|------|------|---|---|------|------|------|
| LH 2 | LH 1 | X-Symmetry | H2P | H2Y | 1 | 6 | 100 | 100 | 100 |
| LH 3 | LH 2 | Y-Symmetry | H5P | H5X | 1 | 6 | 100 | 100 | 100 |
| LH 4 | LH 2 | X-Symmetry | H6P | H6Y | 1 | 6 | 100 | 100 | 100 |
| LH 5 | LH 3 | Y-Symmetry | H9P | H9X | 1 | 6 | 100 | 100 | 100 |
| LH 6 | LH 3 | X-Symmetry | H10P | H10Y | 1 | 6 | 100 | 100 | 100 |
| LH 7 | LH 4 | XY-Symmetry | H13P | H15P | 1 | 6 | 0.94 | 1.88 | 0.94 |
| LH 8 | LH 4 | XY-Symmetry | H14P | H16P | 1 | 6 | 0.94 | 1.88 | 0.94 |
| LH 9 | LH 5 | XY-Symmetry | H17P | H19P | 1 | 6 | 0.94 | 1.88 | 0.94 |
| LH 10 | LH 5 | XY-Symmetry | H18P | H20P | 1 | 6 | 0.94 | 1.88 | 0.94 |
| LH 11 | LH 6 | XY-Symmetry | H21P | H23P | 1 | 6 | 0.94 | 1.88 | 0.94 |
| LH 12 | LH 6 | XY-Symmetry | H22P | H24P | 1 | 6 | 0.94 | 1.88 | 0.94 |

| LD 1 | LD 1 | XY-Symmetry | H1P | 1P |
|------|------|-------------|-----|-----|
| LD 2 | LD 1 | XY-Symmetry | H2P | 1P |
| LD 3 | LD 2 | XY-Symmetry | H1P | A1P |

| 1 | 6 | 0.904 | 0.904 | 0.904 |
|---|---|-------|-------|-------|
| 1 | 6 | 0.904 | 0.904 | 0.904 |
| 1 | 6 | 0.904 | 0.904 | 0.904 |

| Member | Group | Section | Symmetry | Origin | End | Ecc. | Rest. | Ratio | Ratio | Ratio |
|--------|-------|---------|-------------|--------|-------|------|-------|-------|-------|-------|
| Label | Label | Label | Code | Joint | Joint | Code | Code | RLX | RLY | RLZ |
| 04 | LD 2 | | XY-Symmetry | H2P | A2P | 1 | 6 | 0.904 | 0.904 | 0.904 |
| | | | | | | | | | | |
| .D 7 | LD 4 | | XY-Symmetry | H5P | 2P | 1 | 6 | 0.904 | 0.904 | 0.904 |
| D 8 | LD 4 | | XY-Symmetry | H6P | 2P | 1 | 6 | 0.904 | 0.904 | 0.90 |
| D 9 | LD 5 | | XY-Symmetry | H5P | A3P | 1 | 6 | 0.904 | 0.904 | 0.90 |
| D 10 | LD 5 | | XY-Symmetry | H6P | A4P | 1 | 6 | 0.904 | 0.904 | 0.90 |
| | | | | | | | | | | |
| D 13 | LD 7 | | XY-Symmetry | Н9Р | 3P | 1 | 6 | 0.904 | 0.904 | 0.90 |
| D 14 | LD 7 | | XY-Symmetry | H10P | 3P | 1 | 6 | 0.904 | 0.904 | 0.90 |
| D 15 | LD 8 | | XY-Symmetry | H9P | A5P | 1 | 6 | 0.904 | 0.904 | 0.90 |
| D 16 | LD 8 | | XY-Symmetry | H10P | A6P | 1 | 6 | 0.904 | 0.904 | 0.90 |
| | | | | | | | | | | |
| .D 19 | LD 10 | | XY-Symmetry | H13P | 4P | 1 | 6 | 0.83 | 0.83 | 0.8 |
| D 20 | LD 10 | | XY-Symmetry | H14P | 4P | 1 | 6 | 0.83 | 0.83 | 0.8 |
| D 21 | LD 11 | | XY-Symmetry | H13P | A7P | 1 | 6 | 0.85 | 0.85 | 0.8 |
| D 22 | LD 11 | | XY-Symmetry | H14P | A8P | 1 | 6 | 0.85 | 0.85 | 0.8 |
| D 23 | LD 12 | | XY-Symmetry | A7P | H15P | 1 | 6 | 0.86 | 0.86 | 0.8 |
| D 24 | LD 12 | | XY-Symmetry | A8P | H16P | 1 | 6 | 0.86 | 0.86 | 0.8 |
| D 25 | LD 13 | | XY-Symmetry | H17P | 5P | 1 | 6 | 0.83 | 0.83 | 0.8 |
| D 26 | LD 13 | | XY-Symmetry | H18P | 5P | 1 | 6 | 0.83 | 0.83 | 0.8 |
| D 27 | LD 14 | | XY-Symmetry | H17P | A9P | 1 | 6 | 0.85 | 0.85 | 0.8 |
| D 28 | LD 14 | | XY-Symmetry | H18P | A10P | 1 | 6 | 0.85 | 0.85 | 0.8 |
| D 29 | LD 15 | | XY-Symmetry | A9P | H19P | 1 | 6 | 0.86 | 0.86 | 0.8 |
| D 30 | LD 15 | | XY-Symmetry | A10P | H20P | 1 | 6 | 0.86 | 0.86 | 0.8 |
| D 31 | LD 16 | | XY-Symmetry | H21P | 6P | 1 | 6 | 0.83 | 0.83 | 0.8 |
| D 32 | LD 16 | | XY-Symmetry | H22P | 6P | 1 | 6 | 0.83 | 0.83 | 0.8 |
| 33 | LD 17 | | XY-Symmetry | H21P | A11P | 1 | 6 | 0.85 | 0.85 | 0.8 |
| D 34 | LD 17 | | XY-Symmetry | H22P | A12P | 1 | 6 | 0.85 | 0.85 | 0.8 |
| 35 | LD 18 | | XY-Symmetry | A11P | H23P | 1 | 6 | 0.86 | 0.86 | 0.8 |
| D 36 | LD 18 | | XY-Symmetry | A12P | H24P | 1 | 6 | 0.86 | 0.86 | 0.8 |

| Member | Group | Section | Symmetry | Origin | End | Ecc. | Rest. | Ratio | Ratio | Ratio |
|--------|-------|---------|----------|--------|-------|------|-------|-------|-------|-------|
| Label | Label | Label | Code | Joint | Joint | Code | Code | RLX | RLY | RLZ |

| BR 1 | DUM 1 | XY-Symmetry | A1P | A2P | 1 | 4 | 1 | 1 | 1 |
|-------|-------|-------------|------|-------|---|---|---|---|---|
| BR 3 | DUM 1 | XY-Symmetry | A3P | A4P | 1 | 4 | 1 | 1 | 1 |
| BR 5 | DUM 1 | XY-Symmetry | A5P | A6P | 1 | 4 | 1 | 1 | 1 |
| BR 7 | DUM 1 | XY-Symmetry | A7P | A8P | 1 | 4 | 1 | 1 | 1 |
| BR 8 | DUM 1 | XY-Symmetry | A7P | A8XY | 1 | 4 | 1 | 1 | 1 |
| BR 9 | DUM 1 | XY-Symmetry | A9P | A10P | 1 | 4 | 1 | 1 | 1 |
| BR 10 | DUM 1 | XY-Symmetry | A9P | A10XY | 1 | 4 | 1 | 1 | 1 |
| BR 11 | DUM 1 | XY-Symmetry | A11P | A12P | 1 | 4 | 1 | 1 | 1 |
| BR 12 | DUM 1 | XY-Symmetry | A11P | A12XY | 1 | 4 | 1 | 1 | 1 |
| BR 13 | DUM 1 | XY-Symmetry | A13P | A14P | 1 | 4 | 1 | 1 | 1 |
| | | -101 101 | | | | | | | |
| BR 15 | DUM 1 | XY-Symmetry | A15P | A16P | 1 | 4 | 1 | 1 | 1 |
| BR 17 | DUM 1 | XY-Symmetry | A17P | A18P | 1 | 4 | 1 | 1 | 1 |
| BR 19 | DUM 1 | XY-Symmetry | A19P | A20P | 1 | 4 | 1 | 1 | 1 |
| BR 21 | DUM 1 | XY-Symmetry | A21P | A22P | 1 | 4 | 1 | 1 | 1 |
| BR 23 | DUM 1 | XY-Symmetry | A23P | A24P | 1 | 4 | 1 | 1 | 1 |
| BR 25 | DUM 1 | XY-Symmetry | A25P | A26P | 1 | 4 | 1 | 1 | 1 |
| BR 27 | DUM 1 | XY-Symmetry | A27P | A28P | 1 | 4 | 1 | 1 | 1 |
| BR 29 | DUM 1 | XY-Symmetry | A29P | A30P | 1 | 4 | 1 | 1 | 1 |

| Member | Group | Section | Symmetry | Origin | End | Ecc. | Rest. | Ratio | Ratio | Ratio |
|--------|-------|---------|----------|--------|-------|------|-------|-------|-------|-------|
| Label | Label | Label | Code | Joint | Joint | Code | Code | RLX | RLY | RLZ |

| BR | 61 DUM | 1 XY-Symmetry | H1P | H2P | 1 | 4 | 1 | 1 | 1 |
|----|--------|---------------|------|-------|---|---|---|---|---|
| BR | 62 DUM | 1 XY-Symmetry | H1P | H2XY | 1 | 4 | 1 | 1 | 1 |
| | | | | | | | | | |
| BR | 64 DUM | 1 XY-Symmetry | H5P | H6P | 1 | 4 | 1 | 1 | 1 |
| BR | 65 DUM | 1 XY-Symmetry | H5P | H6XY | 1 | 4 | 1 | 1 | 1 |
| | | | | | | | | | |
| BR | 67 DUM | 1 XY-Symmetry | Н9Р | H10P | 1 | 4 | 1 | 1 | 1 |
| BR | 68 DUM | 1 XY-Symmetry | H9P | H10XY | 1 | 4 | 1 | 1 | 1 |
| | | | | | | | | | |
| BR | 70 DUM | 1 XY-Symmetry | H13P | H14P | 1 | 4 | 1 | 1 | 1 |
| BR | 71 DUM | 1 XY-Symmetry | H13P | H14XY | 1 | 4 | 1 | 1 | 1 |
| BR | 72 DUM | 1 XY-Symmetry | H15P | H16P | 1 | 4 | 1 | 1 | 1 |
| BR | 73 DUM | 1 XY-Symmetry | H17P | H18P | 1 | 4 | 1 | 1 | 1 |
| BR | 74 DUM | 1 XY-Symmetry | H17P | H18XY | 1 | 4 | 1 | 1 | 1 |
| BR | 75 DUM | 1 XY-Symmetry | H19P | H20P | 1 | 4 | 1 | 1 | 1 |
| BR | 76 DUM | 1 XY-Symmetry | H21P | H22P | 1 | 4 | 1 | 1 | 1 |
| BR | 77 DUM | 1 XY-Symmetry | H21P | H22XY | 1 | 4 | 1 | 1 | 1 |
| BR | 78 DUM | 1 XY-Symmetry | H23P | H24P | 1 | 4 | 1 | 1 | 1 |
| | | | | | | | | | |

| Tower Height: | 337.5 | ft |
|-----------------|-------|-----------|
| Gh: | 0.85 | |
| Wind Speed: | 97 | mph, Vasd |
| Ice Wind Speed: | 50 | |
| Ice Density: | 56 | |
| Tower Type: | S | 7 |



| Site No.: | 88008 |
|-----------|------------|
| Engineer: | 43574 |
| Date: | 01/18/2019 |
| Carrier: | Sigfox |

| | No. | Carrier | Elevation (ft) | Quantity | # of Azimuths | Manufacturer | Model | Height | Width | Depth | Weight (lbs/ea) | Flat/Round (F/R) | Reduction | C _a A _c (ft ²) | Weight (k) | Ka |
|--|--------|-------------|----------------|----------|------------------|------------------|----------------------------|--------|-------|-------|-----------------|---------------------|-----------|--|------------|------|
| 1 | 1 | | 338 | | 1 | | 2000 | | | | | | | | | |
| 1 | 2 | US Dept | | | | Rohde & Schwarz | ADD090 | 0.001 | 0.001 | 0.001 | 0.001 | F | | 20.76 | 0.09 | |
| Signate 1985 1 1 1 1 1 1 1 1 1 | - | | 338 | | | * | Platform | | | | | | 1.000 | 70.00 | 6.00 | |
| | 3 | | | | | Kathrain Scala | 750 10074 | 0.001 | 0.001 | 0.001 | 0.001 | F | | 1 73 | 0.02 | |
| Column C | 4 | | | | - 3 | racii eii scaia | /30 100/4 | 0.001 | 0.001 | 0.001 | 0.001 | F | | 1.73 | 0.02 | 270 |
| Other 198 1 1 Note Schell 198 1 1 Note Schell 198 19 | | | | | 1 | | Side Arm | 0.001 | 0.001 | 0.001 | 0.001 | | | 5.20 | 0.15 | 1 |
| Color | 2000 | US Dept | 310 | 1 | 1 | Sinclair | 5C381-HL (160") | | | | | | 1.000 | 6.00 | 0.05 | 1 |
| The content 19 | 6 | | | | | Cinclair | CC201.I | 0.001 | 0.001 | 0.001 | 0.001 | F | | 10.46 | 0.00 | 1 |
| Second S | 7 | - | 310 | | 1 | 511001 | SCLUTE | 0.001 | 0.001 | 0.001 | 0.001 | F | 0.001 | | | 1 |
| Discourage 1 | 8 | | | | 1 | | Sector Frame | 0.001 | 0.001 | 0.001 | 0.001 | F | | 14.90 | 0.30 | 1 |
| U.Cree | 30.00 | Unknown | 287 | 1 | 1 | Generic | 8º Omni | | | | | | 1.000 | 2.40 | 0.03 | 1 |
| Color Colo | 9 | | | | 1 | Sinclair | SC281-L | 0.001 | 0.001 | 0.001 | 0.001 | F | | 10.46 | 0.08 | 1 |
| Second Color Col | 10 | US Dept | 275 | 1 | 1 | • | | 0.001 | 0.001 | 0.001 | 0.001 | F | 0.001 | | | 1 |
| Married Science 1 | 11 | | | | 1 | <u> </u> | Sector Frame | 0.001 | 0.001 | 0.001 | 0.001 | F | | 14.90 | 0.30 | 1 |
| No. 200 1 | | | | | 1 | | | | | | | | | 2.40 | 0.03 | |
| Mode | 12 | | | | 1 | KMW - | Smart Bias-T | 3.5 | 2.8 | 1.7 | 3.1 | - | | 0.00 | 0.00 | |
| Moc 220 3 1 94 | 13 | | 220 | | 3 | Remec | S20057A1 | 13.2 | 6.4 | 3 | 15.4 | F | 0.500 | | | 0.8 |
| This 1966 1967 1 | 14 | | | | 3 | RFS | APX16PV-16PVL-E-00 | 53 | 12.9 | 3.1 | 14 | F | | 0.00 | 0.00 | |
| TAME 1998 1 1 1 1 1 1 1 1 1 | 150.00 | TMO | 220 | | 1 | | | | | | | F | 0.001 | 0.00 | 0.00 | 1 |
| Mode | 000 | TMO | 220 | 3 | 3 | Andrew | | | | | | | 0.670 | 10.00 | 0.30 | 0.75 |
| 1 | 16 | | | | 1 | Δndrew | DB616F-RC | 0.001 | 0.001 | 0.001 | 0.001 | F | 0.001 | 6.73 | 0.05 | |
| 12 | 17 | US Dept | 194 | 1 | 1 | Oliviu. | - | 0.001 | 0.001 | 0.001 | 0.001 | F | 0.001 | | | 1 |
| Vertico 100 1 | 18 | | | | 1 | RES | | 5.8 | 65 | 15 | 3.1 | F | | 5.20 | 0.15 | |
| New York 180 1 1 1 1 1 1 1 1 1 | 0.000 | Verizon | 180 | 1 | 1 | | | | | | | | 0.001 | 0.00 | 0.00 | 1 |
| Vertical 100 6 | 19 | | | - 2 | 3 1 | Rymsa - | MGD3-800TX | 52.8 | 6.3 | 3.5 | 15.4 | F | | 0.00 | 0.00 | |
| 22 Vorzon 130 3 3 Powermer Algon P65-16-12 72 12 5 33 F 0.050 10.00 0.37 10.75 | 20 | Verizon | 180 | | 3 | Andrew | DB844H90E-XY | 48 | 6.5 | 8 | 14 | F | 0.740 | | | 0.8 |
| 22 ATT 150 1 1 5 1 5 5 7 0.005 0.00 0.00 0.00 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 21 | | | | 3 | Powerwave Allgon | P65-16-XL-2 | 72 | 12 | 5 | 33 | F | | 0.00 | 0.00 | |
| ATT 150 1 1 Percept CC24860 9f 103 103 103 62 16 F 0.500 C0 0.00 1 2 | 22 | | | | | B Allan | | | | | | | | 10.00 | 0.30 | |
| ATT 155 1 1 1 Power-wer Algen | 22 | ATT | | | | Powerwave Aligon | | 4 | 6 | 3 | 3.3 | | | 0.00 | 0.00 | |
| 24 ATT 155 6 3 Powerrown Align LGF1401 16.4 9.2 Z.5 14.1 F 0.250 0.0 0.0 0.0 1 1 2 1 1 | 23 | | | | 3 | Raycap | DC2-48-60-0-9E | 10.3 | 10.3 | 6.2 | 16 | F | | 0.00 | 0.00 | |
| ATT 166 1 1 1 | 24 | ATT | 165 | | 3 | Powerwave Allgon | LGP21401 | 14.4 | 9.2 | 2.6 | 14.1 | F | 0.500 | | | |
| ATT 155 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 25 | | | | 1 | Raycan | FC12-PC6-10F | 15.5 | 163 | 6.6 | 25 | | | 0.00 | 0.00 | |
| ATT 156 3 3 3 Powerane Aligne 7770 55 11 5 35 F 0.650 0.00 0.00 1 2 | | ATT | 165 | 1 | 1 | | | | | | | | 0.001 | 0.00 | 0.00 | 1 |
| ATT 155 3 3 Powerwave Algon 7770 55 11 5 35 F 0.650 0.00 0.00 1 ATT 156 1 1 1 | 26 | | | | 1 | Ericsson | RRUS 11 (Band 12) | 17.8 | 17.3 | 7.2 | 50 | F | | 0.00 | 0.00 | |
| ATT 165 1 1 | 27 | | | | 3 | Powerwave Allgon | 7770 | 55 | 11 | 5 | 35 | F | | 0.00 | 0.00 | |
| ATT 165 2 2 4 Andrew \$88N+1806805 (608 lbs) 96.4 11.9 7.1 60.8 F 0.700 | 28 | ATT | 165 | | 1 | KMW | AM-X-CD-16-65-00T-RET | 72 | 11.8 | 5.9 | 48.5 | F | 0.670 | | | |
| ATT 165 3 3 3 | 29 | | | | 1 | - Androw | SBNH-106565C (60.8 lbs) | 96.4 | 11.0 | 7.1 | 60.8 | | | 0.00 | 0.00 | |
| Metro 100 1 1 | 330 | ATT | 165 | 3 | 3 | - | Sector Frame | | | | | | 0.670 | 10.00 | 0.30 | |
| Spring 48 | 30 | | | | 3 1 | RFS - | APXV18-206517S-C | 72 | 6.8 | 3.2 | 26.4 | F | | 0.00 | 0.00 | |
| 32 - 320 1 1 4 - Access Platform | 31 | Sprint | 48 | | 1 | PCTEL | GPS-TMG-HR-26N | 5 | 3.2 | 3.2 | 0.6 | F | 1.000 | | | 1 |
| 33 | 32 | Sprint - | | | 1 | | | 0.001 | 0.001 | 0.001 | 0.001 | F | | 0.00 | 0.00 | 1 |
| - 287.5 1 1 | 22 | | | | 4 | • | Access Platform | 0.001 | 0.001 | 0.001 | 0.001 | | | 30.00 | 5.00 | 1 |
| - 237 1 3 - Catwalk - 1000 3000 5.00 1 - 200 1 1 1 Rex Platform - 1000 0.00 0.00 0.00 0.00 0.00 0.00 1 - 150 1 1 Rex Platform - 1000 0.00 0.00 0.00 0.00 0.00 0.00 0. | | | 287.5 | | 1 | \$ | Rest Platform | | | | | | 1.000 | 15.00 | 0.50 | 1 |
| 35 - 200 1 1 1 | 34 | | | 1 | 1 | * | Catwalk | 0.001 | 0.001 | 0.001 | 0.001 | F | | 30.00 | 5.00 | 1 |
| 1 | 35 | 140 | 200 | 1 | 1 | | | 0.001 | 0.001 | 0.001 | 0.001 | F | 0.001 | | | 1 |
| - 150 1 1 1 - Retr Platform - 125 1 3 3 - Catwelk - 125 1 1 1 Proposed Procom - 126 1 1 Proposed Generic - Sprint 240 1 1 1 Proposed Generic - Sprint 240 3 3 3 Sprint 240 1 1 1 Sprint 2048 8 6 4 DBB98(PDF-M - Sprint 2048 1 1 1 Sprint 2048 8 1 Sprint 2048 8 1 Sprint 2048 8 1 Sprint 2048 | 36 | - | | | 1 | * | Rest Platform | 0.001 | 0.001 | 0.001 | 0.001 | F | | 10.00 | 0.50 | 1 |
| 125 | 6990 | (+) | 150 | | 1 | | Rest Platform | | | | | | 1.000 | 10.00 | 0.50 | 1 |
| Section Sect | 37 | | | - 5 | 3 | | Catwalk | 0.001 | 0.001 | 0.001 | 0.001 | F | | 70.00 | 8.00 | 1 |
| 39 SIGNOX S.A. 147 1 1 1 Proposed Generic 5" x3" x2" Carby Filter 5.3 3.2 1.9 1.5 F 1.000 1.00 0.00 1.00 0.00 1.00 0.00 0 | 38 | | 147 | | 1 | Proposed Procom | | 27.6 | 0.6 | 0.6 | 1.5 | R | 1.000 | | | 1 |
| 40 SGFOX S.A. 147 1 1 1 Proposed Generic Low Noise Angillier 5 4 2 2 F 1.000 6.3 0.15 1 41 Sprint 240 3 3 3 3 5 APXYSP18C-A20 72 11.8 7 57 F 0.680 0.00 0.00 1 42 Sprint 240 3 3 3 3 1 1900 MHz 4x45 RRH 25.1 11.1 10.7 60 F 0.500 0.00 0.00 0.0 1 43 Sprint 240 3 3 3 3 0.00 0.00 0.00 1 44 Sprint 240 3 3 3 3 8 800 MHz 2x50W RHH willer 19 13 12.2 64 F 0.500 0.00 0.00 0.0 1 45 Sprint 240 3 3 3 8 Pges 0.570 MHz 4x45 RRH 25.1 11.1 10.7 60 F 0.500 0.00 0.00 1 46 Sprint 240 3 3 3 8 800 MHz 2x50W RHH willer 19 13 12.2 64 F 0.500 0.00 0.00 1 47 Sprint 204.8 6 4 B 0.00 0.00 0.00 1 48 Sprint 204.8 1 1 1 B 0.00 0.00 1 1 49 Sprint 48 1 1 1 GPS 5 3.2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3.2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 5 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 6 3 2 3.2 0.6 1.000 0.00 1 40 Sprint 48 1 1 1 GPS 6 4 4 5 4 4 5 4 4 4 4 4 4 4 4 4 4 4 4 4 | 39 | SIGFOX S.A. | 147 | 1 | 1 | Proposed Generic | 5" x 3" x 2" Cavity Filter | 5.3 | 3.2 | 1.9 | 1.5 | F | 1.000 | | | i |
| Signate | 40 | SIGFOX S.A. | | | 1 | Proposed Generic | Low Noise Amolifier | 5 | 4 | 2 | 2 | F | | 0.00 | 0.00 | 1 |
| Sprint 240 1 1 1 1 1 1 1 1 1 | - | SIGFOX S.A. | 147 | 1 | î | , see Sellere | Side Arm | | | | | | 1.000 | 6.30 | 0.15 | 1 |
| 42 | 41 | | | | 3 1 | | APXVSPP18-C-A20 | 72 | 11.8 | 7 | 57 | F | | 0.00 | 0.00 | |
| 43 Sprint 240 3 3 3 800 MHz 2500 MHH W Filter 19 13 12.2 64 F 0.500 0.80 0.8 1 | 42 | Sprint | | | 3 | | 1900 MHz 4x45 RRH | 25.1 | 11.1 | 10.7 | 60 | F | 0.500 | | | |
| Sprint 240 3 3 Pipes 0,670 8,00 0,20 1 | 43 | Sprint | 240 | | | | | 19 | 13 | 12.2 | 64 | F | 0.500 | | | |
| Sprint 204.8 | | Sprint | | | | | Pipes | 60 | 6.3 | | 85 | F | 0.670 | 8.00 | 0.20 | |
| Sprint 48 1 1 | | Sprint | 204.8 | 1 | 1 | | | | | | | | 0.001 | 0.00 | 0.00 | 1 |
| 46 47 48 49 50 | 45 | | | | | | GPS | 5 | 3.2 | 3.2 | 0.6 | | | 0.00 | 0.00 | |
| 47 48 49 50 | 46 | - | | 65.1 | - | | | | | | | | | | | 1 |
| 48 49 50 | 47 | | | | | | | | | | | | | | | 1 |
| 49 50 | 40 | | | | | | | | | | | | | | | |
| 50 | 0.000 | | | | | | | | | | | | | | | 1 |
| 50 | 49 | | | | | | | | | | | | | | | |
| 1 | 50 | | | | | | | | | | | | | | | 1 |
| | | | | | | | | | | | | | | | | |

| No. | Elevation | C _A A _c | C _A A _c (Ice) | Force | Force (Ice) | Weight | Weight (Ice) | 60 A | | | Height | Sum of Forces (No |
|------|--------------|-------------------------------|-------------------------------------|--------------------|------------------------|-------------|--------------|------|-------|------------------|------------------------|-------------------|
| 1 | (ft) 338 | (ft²) 0.00 | (ft²) 0.00 | (Ib) 0.000 | (<i>lb</i>) 0.000 | (Ib) 0 | (Ib) 0 | 1.00 | | | Flag | 60 Azi. 180 Azi. |
| 10 | 338 | 20.76 | 28.03 | 808.996 | 181.366 | 108 | 140 | 1.00 | | | 0.000010 | 808.9957366 |
| 2 | 338 338 | 70.00 | 0.00 94.50 | 0.000 2727.828 | 0.000 611.543 | 0 7200 | 9360 | 1.00 | | | 0.0000020 1.5029586 | 3536.823365 |
| 3 | 319 | 0.00 | 0.00 | 0.000 | 0.000 | 0 | 0 | 1.00 | 0.00 | 0.00 | 1.5029596 | |
| 4 | 319 319 | 1.73 | 2.34 0.00 | 66.311 0.000 | 14.866 | 24 | 31 0 | 1.00 | | | 1.5029596 1.5029606 | 66.31108359 |
| | 319 | 5.20 | 7.02 | 199.317 | 44.684 | 180 | 234 | 1.00 | | | 1.5031348 | 265.6276354 |
| 5 | 310 | 0.00 | 0.00 | 0.000 | 0.000 | 0 | 0 | 1.00 | 0.00 | | 1.5031358 | |
| 6 | 310 310 | 0.00 | 8.10 0.00 | 228.108 0.000 | 51.139 0.000 | 60 0 | 78 0 | 1.00 | | 5 28.13 0.00 | 1.5031358 1.5031368 | 228.1077981 |
| | 310 | 10.46 | 14.12 | 397.668 | 89.152 | 96 | 125 | 1.00 | | | 1.5031368 | 625.775726 |
| 7 | 310 | 0.00 | 0.00 | 0.000 | 0.000 | 0 360 | 0 468 | 1.00 | | 0.00 | 1.5031378 | 1192.243424 |
| 8 | 310 287 | 0.00 | 0.00 | 566.468 0.000 | 126.995 0.000 | 0 | 0 | 1.00 | | | 1.5032258 1.5032268 | 1192.243424 |
| | 287 | 2.40 | 3.24 | 89.255 | 20.010 | 36 | 47 | 1.00 | 49.09 | 11.01 | 1.5034843 | 89.25539314 |
| 9 | 275 275 | 0.00 10.46 | 0.00 14.12 | 0.000 384.287 | 0.000 86.152 | 0 96 | 0 125 | 1.00 | | | 1.5034853 1.5034853 | 384.2865087 |
| 10 | 275 | 0.00 | 0.00 | 0.000 | 0.000 | 0 | 0 | 1.00 | | 0.00 | 1.5034863 | 364.2603087 |
| | 275 | 14.90 | 20.12 | 547.406 | 122.721 | 360 | 468 | 1.00 | | | 1.5036364 | 931.692721 |
| 11 | 262 262 | 2.40 | 0.00 3.24 | 0.000 86.961 | 0.000 19.496 | 0 36 | 0 47 | 1.00 | | 0.00 | 1.5036374 1.5038168 | 86.96123981 |
| 12 | 220 | 0.20 | 0.50 | 6.756 | 2.872 | 22 | 31 | 1.00 | | 1.58 | 1.5038178 | 00.30123301 |
| | 220 | 0.00 | 0.00 | 0.000 | 0.000 | 1 | 2 | 1.00 | | 0.00 | 1.5038178 | 6.756054826 |
| 13 | 220 220 | 1.69 0.00 | 2.71 0.00 | 58.240 0.000 | 15.511 0.000 | 111 | 159 2 | 1.00 | | | 1.5038188 1.5038188 | 64.99574233 |
| 14 | 220 | 8.69 | 10.99 | 299.649 | 62.892 | 50 | 238 | 1.00 | 164.8 | 1 34.59 | 1.5038198 | |
| | 220 | 10.20 | 20.00 | 200 000 | (400 000 | *** | 477 | 1.00 | | 0.00 | 1.5045455 | 364.6451609 |
| 15 | 220 220 | 19.20 20.10 | 21.56 27.14 | 661.965 519.628 | 123.397 116.494 | 119 1080 | 477 1404 | 1.00 | | | 1.5045465 1.5045455 | 1546.237273 |
| 16 | 194 | 0.00 | 0.00 | 0.000 | 0.000 | 0 | 0 | 1.00 | 0.00 | 0.00 | 1.5045465 | |
| | 194 | 6.73 | 9.09 | 223.792 | 50.171 | 60 | 78 | 1.00 | 123.0 | | 1.5051546 | 223.7916902 |
| 17 | 194 194 | 0.00 5.20 | 0.00 7.02 | 0.000 172.915 | 0.000 38.765 | 0 180 | 234 | 1.00 | | 0.00 | 1.5051556 1.5051546 | 396.7065178 |
| 18 | 180 | 0.75 | 1.36 | 24.542 | 7.365 | 22 | 37 | 1.00 | | | 1.5051556 | |
| 1220 | 180 | 222 | | 99322 | | | | 1.00 | | | 1.5055556 | 24.54178651 |
| 19 | 180 180 | 5.53 | 6.82 | 180.047 | 36.858 | 55 | 170 | 1.00 | | | 1.5055566 1.5055556 | 204.5884044 |
| 20 | 180 | 13.26 | 16.24 | 431.623 | 87.777 | 101 | 247 | 1.00 | 237.3 | | 1.5055566 | |
| | 180 | 12.69 | | | | | | 1.00 | | 0.00 | 1.5055556 | 636.2113786 |
| 21 | 180 180 | 20.10 | 15.05 27.14 | 412.979 490.673 | 81.343 110.002 | 119 1080 | 374 1404 | 1.00 | | | 1.5055566 1.5055556 | 1539.863393 |
| 22 | 165 | 0.24 | 0.48 | 7.620 | 2.537 | 20 | 31 | 1.00 | 4.19 | 1.40 | 1.5055566 | |
| | 165 | 0.00 | 0.00 | 0.000 | 0.000 | 1 | 2 | 1.00 | | 0.00 | 1.5060606 | 7.619932909 |
| 23 | 165 165 | 1.06 0.00 | 1.62 0.00 | 33.683 0.000 | 8.565 0.000 | 58 1 | 100 | 1.00 | | 4.71 0.00 | 1.5060616 1.5060606 | 41.30310274 |
| 24 | 165 | 2.65 | 3.97 | 84.124 | 20.930 | 102 | 157 | 1.00 | | 11.51 | 1.5060616 | |
| 25 | 165 165 | 0.00 | 0.00 1.18 | 0.000 26.738 | 0.000 | 1 | 2 101 | 1.00 | | 0.00 3.41 | 1.5060606 | 125.4268433 |
| 25 | 165 | 0.00 | 0.00 | 0.000 | 6.205 0.000 | 30 1 | 2 | 1.00 | | 0.00 | 1.5060616 1.5060606 | 152.1653199 |
| 26 | 165 | 3.08 | 4.23 | 97.770 | 22.319 | 180 | 295 | 1.00 | | | 1.5060616 | |
| 27 | 165 165 | 0.00 8.59 | 0.00 10.71 | 0.000 272.832 | 0.000 56.476 | 1 126 | 2 315 | 1.00 | | 0.00 5 31.06 | 1.5060606 1.5060616 | 249.9350334 |
| 21 | 165 | 0.00 | 0.00 | 0.000 | 0.000 | 126 | 2 | 1.00 | | 0.00 | 1.5060616 | 522.7669197 |
| 28 | 165 | 4.30 | 5.09 | 136.558 | 26.859 | 58 | 302 | 1.00 | 75.11 | | 1.5060616 | |
| 29 | 165 165 | 0.00 | 0.00 | 0.000 406.988 | 0.000 75.864 | 1 146 | 499 | 1.00 | | | 1.5060606 1.5060616 | 659.3251756 |
| ** | 165 | 20.10 | 27.14 | 478.625 | 107.301 | 1080 | 1404 | 1.00 | | | 1.5060606 | 1544.938686 |
| 30 | 100 | 10.54 | 12.63 | 290.028 | 57.731 | 95 | 250 | 1.00 | | | 1.5060616 | |
| 31 | 100 48 | 0.00 | 0.00 | 0.000 3.471 | 0.000 1.100 | 1 | 7 | 1.00 | | 0.00 | 1.5100000 1.5100010 | 290.0283678 |
| | 48 | 0.00 | 0.00 | 0.000 | 0.000 | 1 | 2 | 1.00 | 0.00 | 0.00 | 1.5208333 | 3.470677117 |
| 32 | 320 | 0.00 | 0.00 | 0.000 | 0.000 | 0 | 0 | 1.00 | | | 1.5208343 | 4450 00405 |
| 33 | 320 287.5 | 0.00 | 40.50 0.00 | 1150.932 0.000 | 258.024 0.000 | 6000 | 7800 0 | 1.00 | | | 1.5031250 1.5031260 | 1150.93195 |
| | 287.5 | 15.00 | 20.25 | 558.124 | 125.124 | 600 | 780 | 1.00 | 306.9 | 7 68.82 | 1.5034783 | 558.1237081 |
| 34 | 237 237 | 30.00 | 0.00 40.50 | 0.000 1056.312 | 0.000 236.811 | 6000 | 0 7800 | 1.00 | | 0.00 7 130.25 | 1.5034793 | 1056.311571 |
| 35 | 200 | 0.00 | 0.00 | 0.000 | 0.000 | 0 | 0 | 1.00 | | | 1.5042194 | 2030.3113/1 |
| 223 | 200 | 10.00 | 13.50 | 335.435 | 75.200 | 600 | 780 | 1.00 | 184.4 | 9 41.36 | 1.5050000 | 335.4350161 |
| 36 | 150 150 | 10.00 | 0.00 13.50 | 0.000 308.967 | 0.000 69.266 | 0 600 | 0 780 | 1.00 | | | 1.5050010 1.5066667 | 308.9666577 |
| 37 | 125 | 0.00 | 0.00 | 0.000 | 0.000 | 0 | 0 | 1.00 | 0.00 | 0.00 | 1.5066677 | |
| 20 | 125 | 70.00 | 94.50 | 2052.988 | 460.253 | 9600 | 12480 | 1.00 | | | 1.5080000 | 2052.988145 |
| 38 | 147 147 | 0.14 | 0.40 | 4.239 0.000 | 2.062 0.000 | 2 | 17 2 | 1.00 | | 1.13 0.00 | 1.5080010 1.5068027 | 4.23923032 |
| 39 | 147 | 0.14 | 0.31 | 4.342 | 1.585 | 2 | 8 | 1.00 | 2.39 | 0.87 | 1.5068037 | |
| 40 | 147 147 | 0.00 | 0.00 | 0.000 5.120 | 0.000 1.773 | 1 2 | 9 | 1.00 | | 0.00 | 1.5068027 1.5068037 | 8.580856766 |
| 40 | 147 | 6.30 | 8.51 | 5.120 193.529 | 43.387 | 180 | 234 | 1.00 | | | 1.5068037 | 207.2293405 |
| 41 | 240 | 13.10 | 15.51 | 462.772 | 91.019 | 205 | 496 | 1.00 | 254.5 | 2 50.06 | 1.5068037 | |
| 42 | 240 240 | 0.00 3.13 | 0.00 3.91 | 0.000 110.723 | 0.000 22.946 | 1 216 | 2 356 | 1.00 | | 0.00 | 1.5041667 1.5041677 | 462.7716781 |
| | 240 | 0.00 | 0.00 | 0.000 | 0.000 | 1 | 2 | 1.00 | | | 1.5041677 | 573.4942174 |
| 43 | 240 | 2.70 | 3.47 | 95.563 | 20.351 | 230 | 360 | 1.00 | 52.56 | | 1.5041677 | |
| 44 | 240 204.8 | 16.08 15.66 | 21.71 19.14 | 568.221 528.905 | 127.388 107.360 | 720 61 | 936 189 | 1.00 | | | 1.5041667 1.5041677 | 1237.279159 |
| | 204.8 | 0.00 | 0.00 | 0.000 | 0.000 | 1 | 2 | 1.00 | | | 1.5048828 | 528.9050228 |
| 45 | 48 | 0.16 | 0.30 | 3.471 | 1.100 | 1 | 7 | 1.00 | | 0.61 | 1.5048838 | |
| 46 | 48 | 0.00 | 0.00 | 0.000 | 0.000 #VALUE! | 1 | 2 | 1.00 | | | 1.5208333 1.5208343 | 3.470677117 |
| 40 | | | | | | | | 1.00 | | | 1.5208343 | #VALUE! |
| 47 | | | | | #VALUE! | | | 1.00 | #VALU | E! #VALUE! | 1.5208353 | |
| 48 | | | | | #VALUE! | | | 1.00 | | | 1.5208353 1.5208363 | #VALUE! |
| 3770 | | | | | | | | 1.00 | | E! #VALUE! | 1.5208363 | #VALUE! |
| 49 | | | | | #VALUE! | | | 1.00 | | E! #VALUE! | 1.5208373 | |
| 50 | | | | | #VALUE! | | | 1.00 | | | 1.5208373 1.5208383 | #VALUE! |
| | | | | | | | | 1.00 | | | 1.5208383 | #VALUE! |
| - 1 | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Foundation

Design Loads (Factored)

| k | 447.43 | Compression/Leg: |
|---|--------|------------------|
| k | 307.72 | Uplift/Leg: |
| k | 67.29 | Shear/Leg |

| Face Wi | 4.00 | ft | | | | | |
|------------------------|----------------------|------------------------------------|--------|-------|--|--|--|
| Face Width | 7.50 | ft | | | | | |
| | Total Length o | of Pier (I): | 7.25 | ft | | | |
| Height of Pede | stal Above Gr | ound (h): | 0.50 | ft | | | |
| | Width of | Pad (W): | 21.50 | ft | | | |
| | Length o | f Pad (L): | 21.50 | ft | | | |
| | Thickness of | of Pad (t): | 2.50 | ft | | | |
| V | Vater Table D | epth (w): | | 10000 | | | |
| Ur | it Weight of (| Concrete: | 150.0 | pcf | | | |
| Unit Weight of Soi | I (Above Wate | er Table): | 131.0 | pcf | | | |
| Unit Weight of Soi | l (Below Wate | er Table): | 68.6 | pcf | | | |
| Frict | ion Angle of I | Jplift (A): | 100000 | | | | |
| Ultimate Compre | ssive Bearing | Pressure: | 48200 | psf | | | |
| | Ultimate Skin | | 0 | psf | | | |
| Volume Pier (Total): | 247.10 | ft ³ | | | | | |
| Volume Pad (Total): | 1155.63 | ft ³ | | | | | |
| Volume Soil (Total): | 4120.07 | ft ³ | | | | | |
| Volume Pier (Buoyant): | 0.00 | ft ³ | | | | | |
| Volume Pad (Buoyant): | 0.00 | ft ³ ft ³ | | | | | |
| Volume Soil (Buoyant): | | | | | | | |
| Weight Pier: | Weight Pier: 37.07 k | | | | | | |
| Weight Pad: | 173.34 | k | | | | | |
| Weight Soil: | 539.73 | k | | | | | |
| Uplift Skin Friction: | 0.00 | k | | | | | |

Uplift Check

| φs Uplift Resistance (k) | Ratio | Result |
|--------------------------|-------|--------|
| 562.60 | 0.55 | ОК |

Axial Check

| φs Axial Resistance (k) | Ratio | Result |
|-------------------------|-------|--------|
| 16710 34 | 0.03 | OK |

Anchor Bolt Check

| Bolt Diameter (in) | 2.25 |
|--------------------|------|
| # of Bolts | 6 |
| Steel Grade | A36 |
| Steel Fy | 36 |
| Steel Fu | 58 |
| Detail Type | В |

| Usage Ratio | Result |
|-------------|--------|
| 0.45 | ОК |

| Site No.: | 88008 | |
|-----------|----------|--|
| Engineer: | 43574 | |
| Date: | 01/18/19 | |
| Carrier: | Sigfox | |

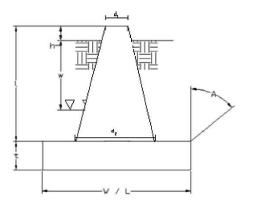




EXHIBIT 3:

General Power Density Table report (RF Emissions Analysis Report)



RF EMISSIONS COMPLIANCE REPORT

T-Squared Site Services on behalf of Sigfox S.A.

ATC Site Name: BETHANY CT
Sigfox S.A. Site Name: CT9122_ATC_88008
Sigfox S.A. Site #: CT9122
93 Old Amity Road
Bethany, CT
2/11/2019

Report Status:

Sigfox S.A. Is Compliant



Prepared By:

Sitesafe, LLC

Engineering Statement in Re: Electromagnetic Energy Analysis T-Squared Site Services Bethany, 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.A.'s installations involve communications equipment, antennas and associated technical equipment at a location referred to as the "BETHANY CT" ("the site"); and

That Sigfox S.A. 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 S.A. and shown on the worksheet, and that worst-case 100% duty cycle have been assumed; 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

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.A.'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 S.A. 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 2.273% 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.A.'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.

T-Squared Site Services BETHANY CT Site Summary

| Carrier | Area Maximum Percentage MPE |
|------------------------------------|-----------------------------|
| AT&T Mobility, LLC | 0.376 % |
| AT&T Mobility, LLC | 0.402 % |
| AT&T Mobility, LLC | 0.133 % |
| Ligado Networks | 0.001 % |
| MetroPCS (Decommissioned) | 0 % |
| Sigfox S.A. (Proposed) | 0 % |
| Sprint | 0.05 % |
| Sprint | 0.05 % |
| Sprint | 0.029 % |
| Sprint | 0.029 % |
| Sprint | 0.092 % |
| T-Mobile | 0.052 % |
| T-Mobile | 0.115 % |
| T-Mobile | 0.03 % |
| US Department of Homeland Security | 0.028 % |
| US Department of Homeland Security | 0.006 % |
| US Department of Homeland Security | 0.02 % |
| US Department of Homeland Security | 0 % |
| Unknown Carrier | 0.059 % |
| Verizon Wireless | 0.159 % |
| Verizon Wireless | 0.183 % |
| Verizon Wireless | 0.325 % |
| Verizon Wireless | 0.131 % |
| | |
| Composite Site MPE: | 2.273 % |

AT&T Mobility, LLC BETHANY CT Carrier Summary

| | | | | | On Axis | | Are | ea |
|---------------|-------------------|------------------|----------------------------|----------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 | AM-X-CD-16-65-00T | 158 | 0 | 4888 | 0.877007 | 0.087701 | 1.480814 | 0.148081 |
| ANDREW | SBNH-1D6565C | 158 | 120 | 6225 | 2.386373 | 0.238637 | 3.658633 | 0.365863 |
| ANDREW | SBNH-1D6565C | 158 | 240 | 6225 | 2.412871 | 0.241287 | 3.658633 | 0.365863 |

AT&T Mobility, LLC BETHANY CT Carrier Summary

| | | | | | On Axis | | Are | ea |
|---------------|-------------------|---------------|-------------------------------|-------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 | AM-X-CD-16-65-00T | 158 | 0 | 3305 | 1.379544 | 0.280776 | 1.443331 | 0.293758 |
| ANDREW | SBNH-1D6565C | 158 | 120 | 3665 | 0.847873 | 0.172566 | 1.577483 | 0.321062 |
| ANDREW | SBNH-1D6565C | 158 | 240 | 3665 | 0.847572 | 0.172504 | 1.577483 | 0.321062 |

AT&T Mobility, LLC BETHANY CT Carrier Summary

 Frequency:
 850
 MHz

 Maximum Permissible Exposure (MPE):
 566.67
 μW/cm²2

 Maximum power density at ground level:
 0.75553
 μW/cm²2

 Highest percentage of Maximum Permissible Exposure:
 0.13333
 %

| | | | | | On A | Axis | Are | ea |
|--------------|---------|--|-----|----------------|-----------------------------------|-------------------|-----------------------------------|----------------|
| Antenna Make | Model | Height Orientation Model (feet) (degrees true) | | ERP (Watts) | Max Power Density (μW/cm^2) | Percent of MPE | Max Power Density (μW/cm^2) | Percent of MPE |
| Powerwave | 7770_00 | 158 | 0 | 1094 | 0.416374 | 0.073478 | 0.646931 | 0.114164 |
| Powerwave | 7770_00 | 158 | 120 | 1094 | 0.416905 | 0.073572 | 0.646931 | 0.114164 |
| Powerwave | 7770_00 | 158 | 240 | 1094 | 0.416374 | 0.073478 | 0.646931 | 0.114164 |

Ligado Networks BETHANY CT Carrier Summary

| | | | | 10 - | On Axis | | Are | ea |
|----------------|-----------|------------------|-------------------------------|-----------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 | 750_10074 | 326 | 0 | 100 | 0.011295 | 0.00113 | 0.011295 | 0.00113 |

MetroPCS (Decommissioned) BETHANY CT Carrier Summary

| | | | | | On A | Axis | Are | ea |
|--------------|------------------|------------------|----------------------------|----------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 | APXV18-206517S-C | 103 | 0 | 0 | 0 | 0 | 0 | 0 |
| RFS | APXV18-206517S-C | 103 | 120 | 0 | 0 | 0 | 0 | 0 |
| RFS | APXV18-206517S-C | 103 | 240 | 0 | 0 | 0 | 0 | 0 |

Sigfox S.A. (Proposed) BETHANY CT Carrier Summary

 Frequency:
 905.2
 MHz

 Maximum Permissible Exposure (MPE):
 603.47
 μW/cm²2

 Maximum power density at ground level:
 0.00257
 μW/cm²2

 Highest percentage of Maximum Permissible Exposure:
 0.00043
 %

| | | | | , | On A | Axis | Are | ea | |
|--------------|-------------|------------------|-------------------------------|-------------|-----------------------------------|----------------|-----------------------------------|----------------|--|
| 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 | |
| Procom | CXL 900-3LW | 147 | 0 | 1.22 | 0.002568 | 0.000426 | 0.002568 | 0.000426 | |

| | | | | | On A | Axis | Are | ea |
|--------------|-------------|------------------|-------------------------------|----------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 |
| Commscope | NNVV-65B-R4 | 240 | 0 | 2781 | 0.379624 | 0.037962 | 0.498966 | 0.049897 |
| Commscope | NNVV-65B-R4 | 240 | 120 | 2781 | 0.378349 | 0.037835 | 0.498966 | 0.049897 |
| Commscope | NNVV-65B-R4 | 240 | 240 | 2781 | 0.379624 | 0.037962 | 0.498966 | 0.049897 |

| | | | | | On A | Axis | Are | ea |
|--------------|-------------|------------------|----------------------------|----------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 |
| Commscope | NNVV-65B-R4 | 240 | 0 | 2781 | 0.379624 | 0.037962 | 0.498966 | 0.049897 |
| Commscope | NNVV-65B-R4 | 240 | 120 | 2781 | 0.378349 | 0.037835 | 0.498966 | 0.049897 |
| Commscope | NNVV-65B-R4 | 240 | 240 | 2781 | 0.379624 | 0.037962 | 0.498966 | 0.049897 |

| | | | | | On A | Axis | Are | ea |
|--------------|-------------|------------------|-------------------------------|-------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 |
| Commscope | NNVV-65B-R4 | 240 | 0 | 951 | 0.149581 | 0.02582 | 0.153157 | 0.026437 |
| Commscope | NNVV-65B-R4 | 240 | 120 | 951 | 0.149303 | 0.025772 | 0.153157 | 0.026437 |
| Commscope | NNVV-65B-R4 | 240 | 240 | 951 | 0.149581 | 0.02582 | 0.153157 | 0.026437 |

| | | | | | On A | Axis | Are | ea |
|--------------|-------------|------------------|-------------------------------|-------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 |
| Commscope | NNVV-65B-R4 | 240 | 0 | 951 | 0.149581 | 0.026029 | 0.153157 | 0.026651 |
| Commscope | NNVV-65B-R4 | 240 | 120 | 951 | 0.149303 | 0.025981 | 0.153157 | 0.026651 |
| Commscope | NNVV-65B-R4 | 240 | 240 | 951 | 0.149581 | 0.026029 | 0.153157 | 0.026651 |

| | | | | | On A | Axis | Arc | ea |
|--------------|----------------|------------------|-------------------------------|---------------------------------------|-----------------------------------|----------------|----------|----------|
| Antenna Make | Model | Height (feet) | Orientation (degrees true) | rientation Density Percent of Density | Max Power Density (μW/cm^2) | Percent of MPE | | |
| RFS | APXVTM14-C-I20 | 240 | 0 | 6168 | 0.376046 | 0.037605 | 0.710322 | 0.071032 |
| RFS | APXVTM14-C-I20 | 240 | 120 | 6168 | 0.375855 | 0.037585 | 0.710323 | 0.071032 |
| RFS | APXVTM14-C-I20 | 240 | 240 | 6168 | 0.376046 | 0.037605 | 0.710323 | 0.071032 |

T-Mobile BETHANY CT Carrier Summary

| | | | | | On A | Axis | Are | ea |
|--------------|----------------|------------------|----------------------------|----------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 | 220 | 0 | 1715 | 0.198739 | 0.042587 | 0.20323 | 0.043549 |
| ANDREW | LNX-6515DS-VTM | 220 | 120 | 1715 | 0.198687 | 0.042576 | 0.20323 | 0.043549 |
| ANDREW | LNX-6515DS-VTM | 220 | 240 | 1715 | 0.198739 | 0.042587 | 0.20323 | 0.043549 |

T-Mobile BETHANY CT Carrier Summary

| | | | | | On A | Axis | Arc | ea |
|--------------|-----------------------|------------------|----------------------------------|----------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 | APX16DWV-16DWVS-C-A20 | 220 | 0 | 2536 | 1.146883 | 0.114688 | 1.146883 | 0.114688 |
| RFS | APX16DWV-16DWVS-C-A20 | 220 | 120 | 2536 | 1.14662 | 0.114662 | 1.146883 | 0.114688 |
| RFS | APX16DWV-16DWVS-C-A20 | 220 | 240 | 2536 | 1.146883 | 0.114688 | 1.146883 | 0.114688 |

T-Mobile BETHANY CT Carrier Summary

| | | | | | On A | Axis | Ar | ea |
|--------------|-----------------------|------------------|----------------------------------|----------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 | APX16DWV-16DWVS-C-A20 | 220 | 0 | 2536 | 0.230001 | 0.023 | 0.276447 | 0.027645 |
| RFS | APX16DWV-16DWVS-C-A20 | 220 | 120 | 2536 | 0.230031 | 0.023003 | 0.276447 | 0.027645 |
| RFS | APX16DWV-16DWVS-C-A20 | 220 | 240 | 2536 | 0.230001 | 0.023 | 0.276447 | 0.027645 |

| | | | | 92 5 | 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 | DB616E-BC | 213 | 0 | 100 | 0.056427 | 0.028214 | 0.056427 | 0.028214 | |

| | | | | | On A | Axis | Are | ea | |
|--------------|----------|------------------|-------------------------------|-------------|-----------------------------------|----------------|-----------------------------------|----------------|--|
| 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 | SC381-HL | 314 | 0 | 100 | 0.018089 | 0.00603 | 0.018089 | 0.00603 | |

| | | | | = | On A | Axis | Are | ea |
|--------------|---------|------------------|----------------------------|-------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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-L | 317 | 0 | 100 | 0.018646 | 0.009323 | 0.01908 | 0.00954 |
| SINCLAIR | SC281-L | 283 | 0 | 100 | 0.022672 | 0.011336 | 0.023033 | 0.011517 |

| | | | | | 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 |
| R&S | ADD090 | 340 | 0 | 4 | 0.001703 | 0.00017 | 0.001717 | 0.000172 |

Unknown Carrier BETHANY CT Carrier Summary

 Frequency:
 450
 MHz

 Maximum Permissible Exposure (MPE):
 300
 μW/cm²2

 Maximum power density at ground level:
 0.17775
 μW/cm²2

 Highest percentage of Maximum Permissible Exposure:
 0.05925
 %

| | | | | 14 | On Axis | | Are | ea |
|--------------|-------|---------------|----------------------------|-------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 | 291 | 0 | 100 | 0.084454 | 0.028151 | 0.084454 | 0.028151 |
| Generic | Omni | 266 | 0 | 100 | 0.095697 | 0.031899 | 0.095697 | 0.031899 |

| | | | On Axis A | | Arc | rea | | |
|--------------|-------------|------------------|-------------------------------|-------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 | P65-16-XL-2 | 184 | 0 | 3848 | 0.877337 | 0.087734 | 1.558678 | 0.155868 |
| Powerwave | P65-16-XL-2 | 184 | 120 | 3848 | 0.877337 | 0.087734 | 1.558678 | 0.155868 |
| Powerwave | P65-16-XL-2 | 184 | 240 | 3848 | 0.880697 | 0.08807 | 1.558678 | 0.155868 |

 Frequency:
 751
 MHz

 Maximum Permissible Exposure (MPE):
 500.67
 μW/cm²2

 Maximum power density at ground level:
 0.91417
 μW/cm²2

 Highest percentage of Maximum Permissible Exposure:
 0.18259
 %

| | | | | | 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 | P65-16-XL-2 | 184 | 0 | 2214 | 0.504855 | 0.100836 | 0.896925 | 0.179146 |
| Powerwave | P65-16-XL-2 | 184 | 120 | 2214 | 0.504855 | 0.100836 | 0.896925 | 0.179146 |
| Powerwave | P65-16-XL-2 | 184 | 240 | 2214 | 0.506789 | 0.101223 | 0.896925 | 0.179146 |

| | | | | - | 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 | DB844H90E-XY | 184 | 0 | 1268 | 0.609686 | 0.107592 | 0.882153 | 0.155674 |
| ANDREW | DB844H90E-XY | 184 | 0 | 1268 | 0.609686 | 0.107592 | 0.882153 | 0.155674 |
| ANDREW | DB844H90E-XY | 184 | 120 | 1268 | 0.610464 | 0.107729 | 0.882153 | 0.155674 |
| ANDREW | DB844H90E-XY | 184 | 120 | 1268 | 0.610464 | 0.107729 | 0.882153 | 0.155674 |
| ANDREW | DB844H90E-XY | 184 | 240 | 1268 | 0.609686 | 0.107592 | 0.882153 | 0.155674 |
| ANDREW | DB844H90E-XY | 184 | 240 | 1268 | 0.609686 | 0.107592 | 0.882153 | 0.155674 |

| | | | | et. | On A | Axis | Are | ea |
|--------------|-------------|------------------|-------------------------------|-------------|-----------------------------------|----------------|-----------------------------------|----------------|
| 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 |
| RYMSA | MG D3-800T0 | 184 | 0 | 4458 | 0.647299 | 0.06473 | 1.221447 | 0.122145 |
| RYMSA | MG D3-800T0 | 184 | 120 | 4458 | 0.647299 | 0.06473 | 1.221447 | 0.122145 |
| RYMSA | MG D3-800T0 | 184 | 240 | 4458 | 0.647299 | 0.06473 | 1.221447 | 0.122145 |



EXHIBIT 4:

Letter of Authorization



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 |



| 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.

NOTA

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

Notary Public _

My Commission Expires: March 14, 2028

^{*} American Tower as used herein is defined as American Tower Corporations and any of its affiliates or subsidiaries.



EXHIBIT 5:

Proof of Mailing to Local Land Use & Zoning Department



8/13/2019

FedEx Ship Manager - Print Your Label(s)



After printing this label:

- Use the 'Print' button on this page to print your label to your laser or inkjet printer.
 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.



8/13/2019

FedEx Ship Manager - Print Your Label(s)

FedEx.

Shipment Receipt

Address Information

Ship to: Ship from:

Ms. Isabel Kerns T-Squared Site Services, LLC

Bethany Zoning Department

Bethany Town Hall 2500 Highland Rd 40 Peck Road Suite 201 BETHANY, CT Hermitage, PA 06524-3322 16148

US US

203-393-2100 7243087855

Shipment Information:

Tracking no.: 775973044740 Ship date: 08/13/2019

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

Fodds 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 touring in the feed of the package, in cinicipating consoners in the control of the package, in cinicipating consoners interest, profit, attorney's feed, costs, and other terms of damage whether direct, incidental, consociated is limited to the greater of \$100 or the authorized declared value. Recovery carnot exceed actual documented loss. Maximum for set of the authorized value is \$1000, e.g., jewelry, precious metals, negotiable instruments and other terms isted in our Service Guide. White claims must be file within strict time limits, Consult the applicable Fedds Service Guide for details.

The estimated shipping charge may be different than the actual charges for your shipment. Differences may occur based on actual weight, dimensions, and other factors. Consult the applicable Fedds Service Guide.



EXHIBIT 6:

Proof of Mailing to Tower Owner/Property Owner



8/13/2019

FedEx Ship Manager - Print Your Label(s)



After printing this label:

- Use the 'Print' button on this page to print your label to your laser or inkjet printer.
 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.



8/13/2019

FedEx Ship Manager - Print Your Label(s)

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

WOBURN, MA

Suite 201

01801

Hermitage, PA 16148

US

16148 US

7819267485

7243087855

Shipment Information:

Tracking no.: 775973118480 Ship date: 08/13/2019

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

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 \$1000, e.g., jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits; Consult the applicable FedEx Service Guide for details.

The estimated shipping charge may be different than the actual charges for your shipment. Differences may occur based on actual weight, dimensions, and other factors. Consult the applicable FedEx Service Guide or the FedEx Rate Sheets for details on how shipping charges are calculated.



EXHIBIT 7:

Proof of Mailing to Chief Elected Official



8/13/2019

FedEx Ship Manager - Print Your Label(s)



After printing this label:

- Use the 'Print' button on this page to print your label to your laser or inkjet printer.
 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, respice metals, proceduled in the property of the package of extraordinary value is \$1,000, e.g. jewelry, respice metals, proceduled which the time limits on the property of the package of the package of extraordinary value is \$1,000 e.g. jewelry, respice 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.



8/13/2019

FedEx Ship Manager - Print Your Label(s)

Fed Shipment Receipt

Address Information

Ship to: Ship from:

Ms. Paula Cofrancesco, First T-Squared Site Services, LLC

Select

Town of Bethany

Bethany Town Hall 2500 Highland Rd

40 Peck Road Suite 201 BETHANY, CT Hermitage, PA

06524-3322 16148 US US

203-393-2100 7243087855

Shipment Information:

Tracking no.: 775973230245 Ship date: 08/13/2019

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

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 inthinsic value of the package, loss of sales, income interest, profit, attorney's tees, 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 carnot exceed actual documented loss. Maximum for items of extraordinary value is \$1000, e.g., jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits; Consult the applicable FedEx Service Guide for details.

The estimated shipping charge may be different than the actual charges for your shipment. Differences may occur based on actual weight, dimensions, and other factors. Consult the applicable FedEx Service Guide or the FedEx Rate Sheets for details on how shipping charges are calculated.