STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

VIA ELECTRONIC MAIL

August 19, 2019

Craig A. Russo, P.E.
Engineer
T-Squared Site Services
2500 Highland Road, Suite 201
Hermitage, PA 16148

RE: **TS-SIGFOX-069-190712 –** Sigfox NIP, LLC request for an order to approve tower sharing at an existing telecommunications facility located at 1375 North Road, Dayville (Killingly), Connecticut.

Dear Mr. Russo:

The Connecticut Siting Council (Council) is in receipt of your correspondence of August 12, 2019 submitted in response to the Council's August 7, 2019 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman
Executive Director

MAB/IN/emr

Robidoux, Evan

From: Craig A. Russo, P.E. <craig.r@t-sqrd.com>
Sent: Monday, August 12, 2019 4:12 PM
To: Robidoux, Evan
Cc: CSC-DL Siting Council
Subject: RE: Council Incomplete Letter for TS-SIGFOX-069-190712-NorthRd-Killingly-(aka-Dayville)
Attachments: CT9123 Siting Council Narrative_submission 2.pdf

Good Afternoon Evan,

Please accept the attachment to this email as your digital copy of our resubmission of the above referenced tower share. We have made the requested corrections and placed them in today's mail. You should receive them in a day or two.

Thank you!

Craig A. Russo, P.E. | Engineer
T-Squared Site Services
724.308.7855 (o) | 724.333.0517 (m)

From: Robidoux, Evan <Evan.Robidoux@ct.gov>
Sent: Monday, July 15, 2019 4:03 PM
To: 'Craig A. Russo, P.E.' <craig.r@t-sqrd.com>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: Council Incomplete Letter for TS-SIGFOX-069-190712-NorthRd-Killingly-(aka-Dayville)

Please see the attached correspondence.

Evan Robidoux
Clerk Typist
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

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 1375 North Road, Dayville, CT 06241**

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 1375 North Road, Dayville, CT 06241(the "Property"). The existing 287-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 287-foot self-support tower located within an approximate 10,000 square foot compound positioned +/- 211-feet west of North 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 1375 North Road, Dayville, CT 06241 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 290-feet above ground level. They propose to add one (1) equipment cabinet within the adjacent utility building.

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

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

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

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

1. The proposed installation of one (1) omni antenna, one (1) line of coaxial cable; one (1) filter, and one (1) TMA on the existing tower at 290-feet above ground level, would have no visual impact on the area of the tower. Sigfox's cabinet will be installed within the facility compound. Sigfox's shared use of this tower therefore, does not cause any significant change or alteration in the physical or environmental characteristics of the existing site.

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

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

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

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

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

Conclusion

For the reasons discussed above, the proposed shared use of the existing Crown Castle tower at 1375 North Road, Dayville, CT 06241 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 Local Planning Department
Exhibit-6: Proof of Mailing to Tower Owner/Property Owner
Ehhibit-7: Proof of Mailing to Chief Elected Official

Copies to:

Ms. Juliet Hodge
Planning, Development & Zoning Official
North Stonington
40 Main Street
North Stonington, CT 06359

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

The Honorable Jonathan Cesolini, Chairman, Town of Killingly
Killingly Town Hall
172 Main Street
Killingly, CT 06239

EXHIBIT 1:

Compound Plan and Elevation Depicting the Planned Changes

T-Squared Site Services
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Hermitage, PA 16148 | 724.308.7855
www.t-sqrd.com

SIGFOX

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SITE NUMBER: CT9123

1375 NORTH ROAD
DAYVILLE, CT 06241
WINDHAM COUNTY

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

SITE INFORMATION

SCOPE OF WORK:	PROJECT CONSISTS OF INSTALLING THE FOLLOWING: • (1) PROCOM CXL-900-3LW OMNI ANTENNA • (1) LNA • (1) CAVITY FILTER • (1) 1/2" COAX CABLE • (1) RG6 CABLE • (1) EQUIPMENT CABINET FOR BASE STATION • (1) EQUIPMENT TABLE
SIGFOX SITE NUMBER:	CT9123
911 SITE ADDRESS	1375 NORTH ROAD DAYVILLE, CT 06241
TOWER OWNER: ADDRESS:	AMERICAN TOWER CORP. 116 HUNTINGTON AVE. 11TH FLOOR BOSTON, MA 02116
OWNER SITE NUMBER:	88011
LATITUDE (NAD 83): LONGITUDE (NAD 83):	41.871525° -71.82154444°
JURISDICTION:	WINDHAM COUNTY
PARCEL OWNER: ADDRESS:	AMERICAN TOWER CORP. 116 HUNTINGTON AVE. 11TH FLOOR BOSTON, MA 02116
GROUND ELEVATION:	745' AMSL
STRUCTURE TYPE:	SELF SUPPORT
STRUCTURE HEIGHT:	287' (AGL)

PROJECT TEAM

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

VICINITY MAP

CODE COMPLIANCE

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

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

DRAWING INDEX

Digitally signed by Gary Clower
DN: c=US, st=Pennsylvania, l=Hermitage, o=T-Squared Site Services, cn=Gary Clower, email=gary.c@t-sqrd.com
Date: 2019.01.30 15:14:55 -05'00'

DO NOT SCALE DRAWINGS

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

APPROVAL BLOCK

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

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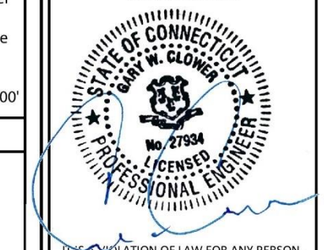
REVISIONS

DESCRIPTION	DATE	BY	REV
FINAL CD	1.29.19	KE	C
REVISED CD	1.29.19	KE	B
PRELIMINARY	01.28.19	JW	A

PROFESSIONAL SEAL



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

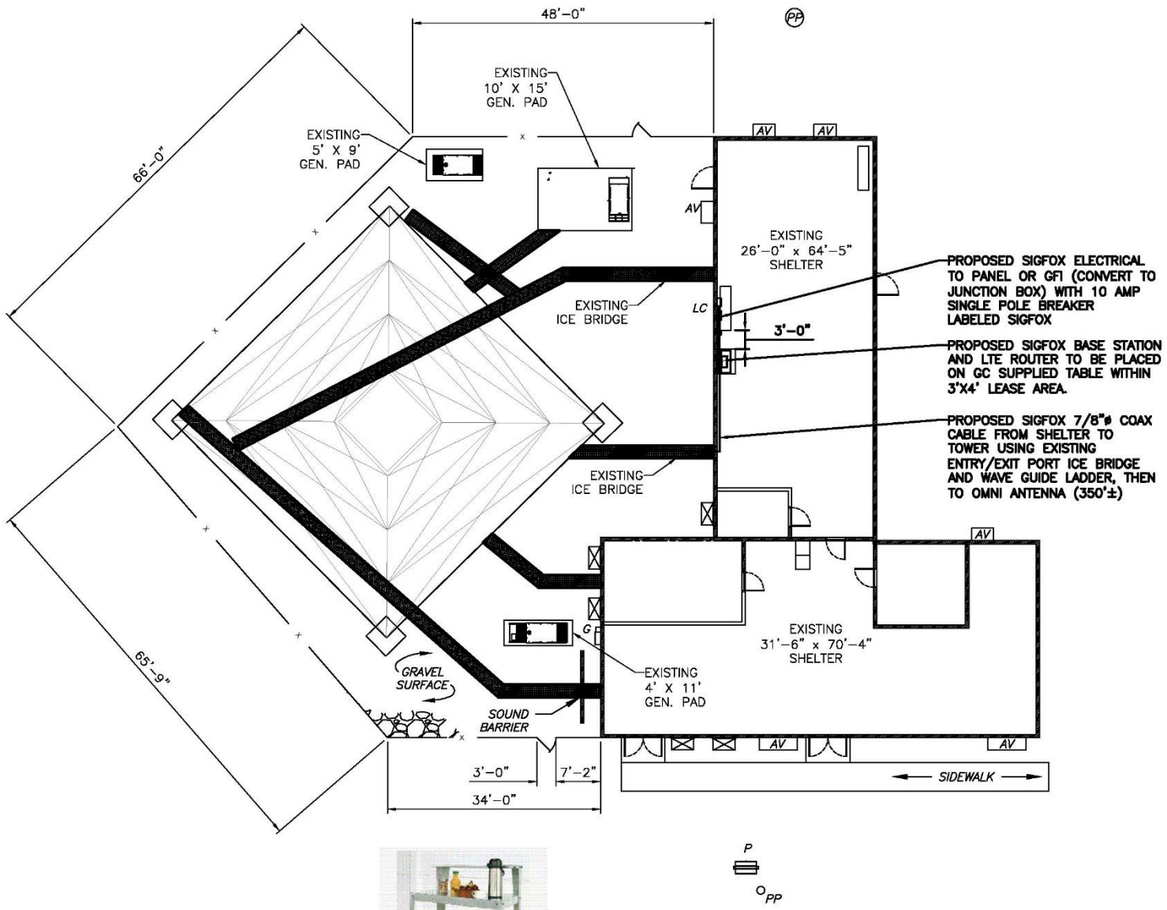
CT9123
1375 NORTH ROAD
DAYVILLE, CT 06241
WINDHAM COUNTY

SHEET TITLE

TITLE SHEET

SHEET NUMBER	
T-1	SCALE: AS NOTED
	DRAWN BY: JW
	CHECKED BY: KE
	DATE: 1/29/19

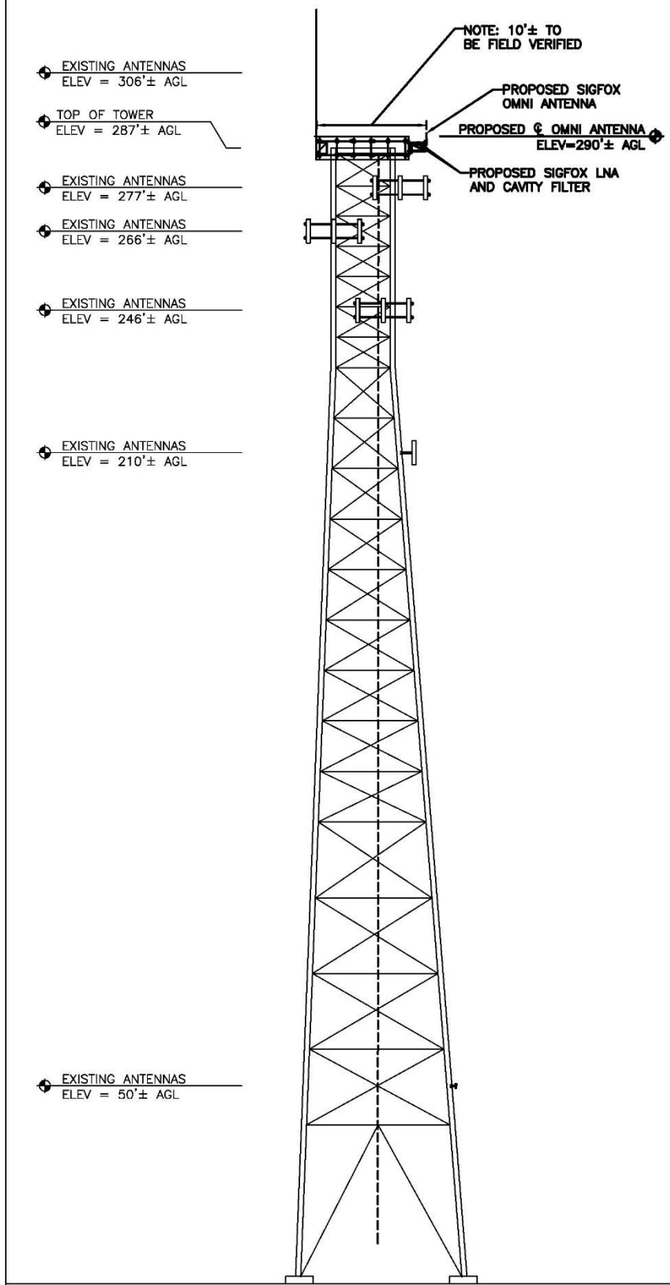
NOTE: POSSIBLE THAT THIS SITE CONTAINS ASBESTOS TILES ON THE WALLS AND OR FLOOR OF THE SHELTER – NO PENETRATION AND OR DISTRUBANCE OF THESE TILES WILL BE ALLOWED



NOTE: THE TABLE (PICTURED TO THE LEFT), PHOTO FROM HOME DEPOT, BELOW, WILL BE USED TO PLACE BASE STATION, LTE ROUTER. THIS TABLE TO BE PURCHASED AND SUPPLIED BY THE GENERAL CONTRACTOR (COST TO BE INCLUDED IN BUILD PRICE). ROUTING OF COAX SHOULD BE HANDLED WITH GENERAL CONTRACTOR PURCHASED AND SUPPLIED PEEL AND STICK HANGERS FOR WALL APPLICATIONS. THE SAME APPLICATION(S) WILL BE USED FOR ANY AND ALL ELECTRICAL RUNS.

1 COMPOUND PLAN

0' 2' 5' 10'
SCALE: 3/32"= 1'-0"



2 ELEVATION

NOT TO SCALE

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REVISIONS

DESCRIPTION	DATE	BY	REV
FINAL CD	1.29.19	KE	C
REVISED CD	1.29.19	KE	B
PRELIMINARY	01.28.19	JW	A

PROFESSIONAL SEAL

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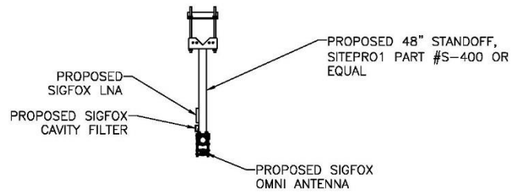
SITE INFORMATION

CT9123
1375 NORTH ROAD
DAYVILLE, CT 06241
WINDHAM COUNTY

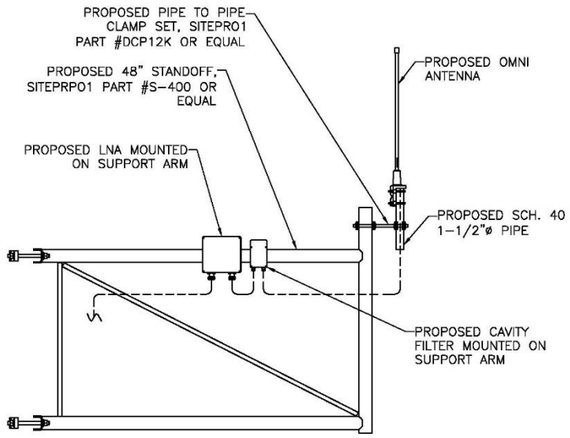
SHEET TITLE

COMPOUND PLAN & ELEVATION

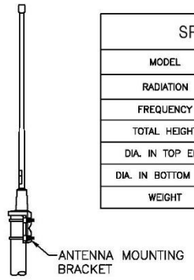
SHEET NUMBER	
C-1	SCALE: AS NOTED
	DRAWN BY: JW
	CHECKED BY: KE
	DATE: 1/29/19



1 PROPOSED ANTENNA PLAN
N.T.S.

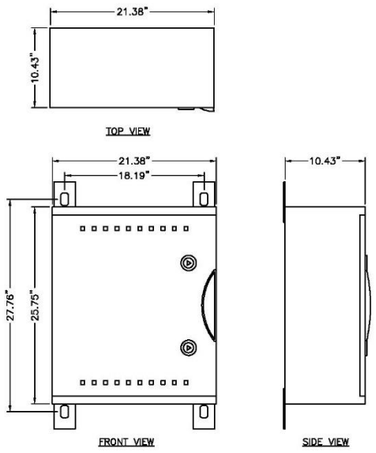


2 ANTENNA MOUNTING DETAIL
N.T.S.

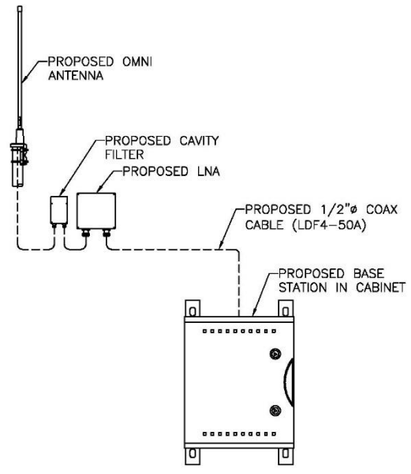


SPECIFICATIONS	
MODEL	CXL 900-3LW/...
RADIATION	OMNIDIRECTIONAL
FREQUENCY	WITHIN 824-960 MHz
TOTAL HEIGHT	700 MM (27.5")
DIA. IN TOP END	12 MM (0.47")
DIA. IN BOTTOM END	16 MM (0.63"
WEIGHT	660 G (1.5 LBS)

3 OMNI ANTENNA DETAIL
N.T.S.

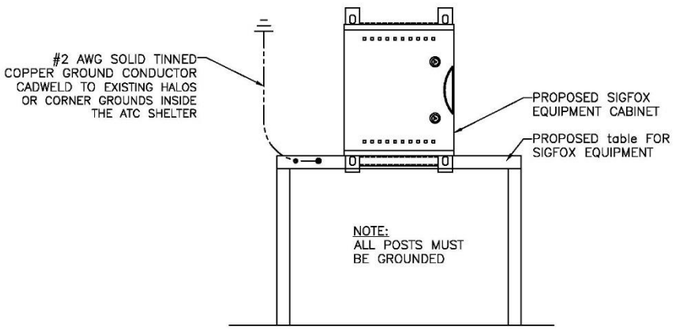


4 SIGFOX EQUIPMENT CABINET
N.T.S.



6 EQUIPMENT SCHEMATIC
N.T.S.

5 NOT USED
N.T.S.



7 H-FRAME / ICE BRIDGE DETAIL
N.T.S.

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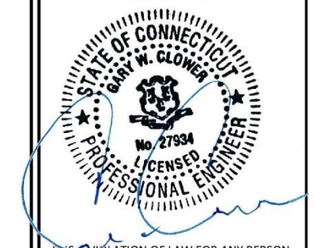
REVISIONS

DESCRIPTION	DATE	BY	REV
FINAL CD	1.29.19	KE	C
REVISED CD	1.29.19	KE	B
PRELIMINARY	01.28.19	JW	A

PROFESSIONAL SEAL



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SITE INFORMATION

CT9123
1375 NORTH ROAD
DAYVILLE, CT 06241
WINDHAM COUNTY

SHEET TITLE

ANTENNA PLAN AND DETAILS

SHEET NUMBER	
A-1	SCALE: AS NOTED
	DRAWN BY: JW
	CHECKED BY: KE
	DATE: 1/29/19

ELECTRICAL NOTES

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

ELECTRICAL PANEL

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

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

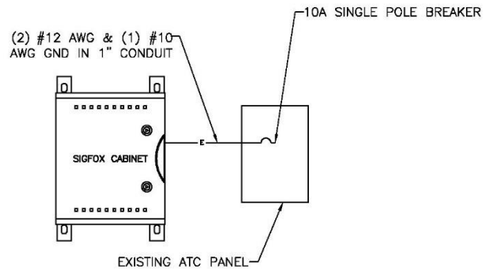
TOTAL CONNECTED LOAD (VA): 1,440
MAXIMUM LOAD CURRENT (A): 6
PANEL CAPACITY (A): 100
SPARE CAPACITY (A): 96

1 PANEL SCHEDULE
N.T.S.

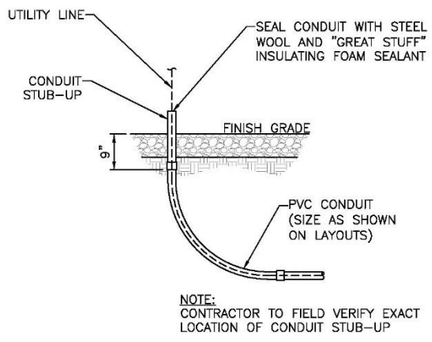
ELECTRICAL NOTES

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

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

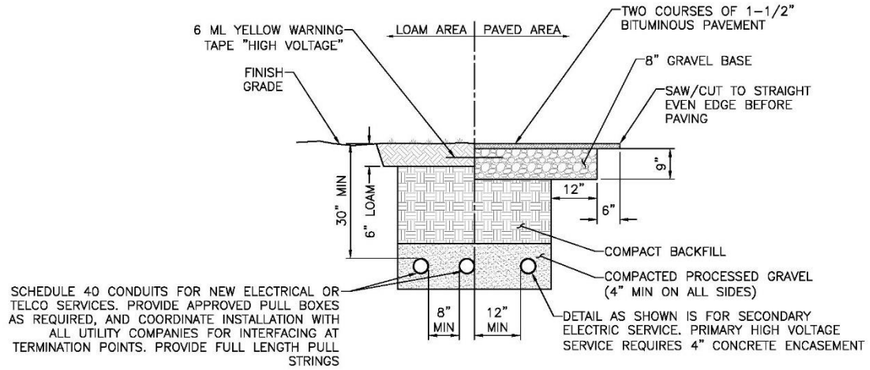


2 ELECTRICAL ONE-LINE DIAGRAM
N.T.S.



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

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



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

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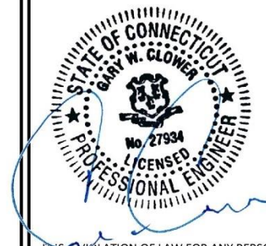
REVISIONS

DESCRIPTION	DATE	BY	REV
FINAL CD	1.29.19	KE	C
REVISED CD	1.29.19	KE	B
PRELIMINARY	01.28.19	JW	A

PROFESSIONAL SEAL



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SITE INFORMATION

CT9123
1375 NORTH ROAD
DAYVILLE, CT 06241
WINDHAM COUNTY

SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

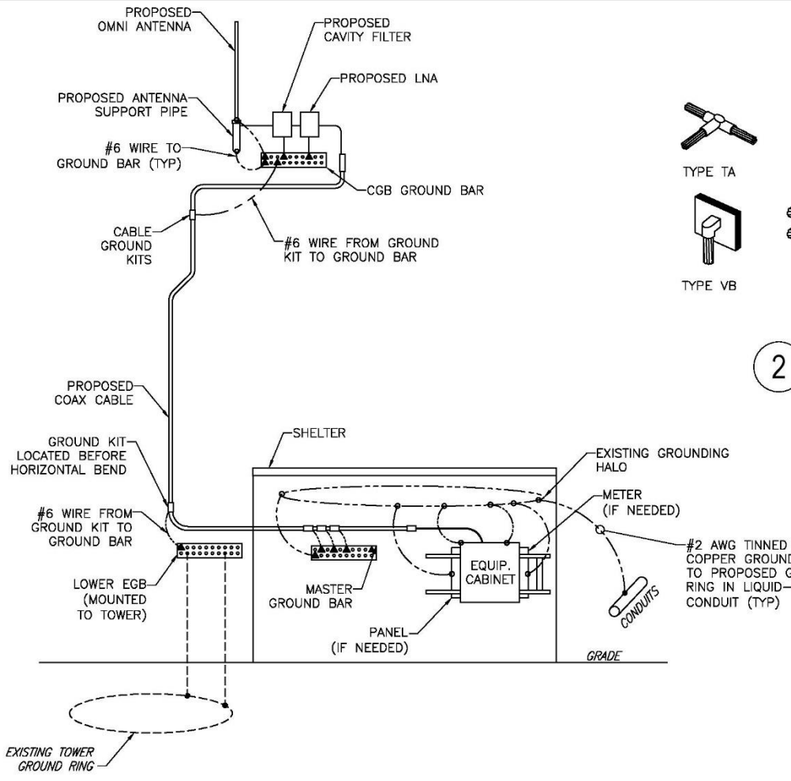
E-1

SCALE: AS NOTED
DRAWN BY: JW
CHECKED BY: KE
DATE: 1/29/19

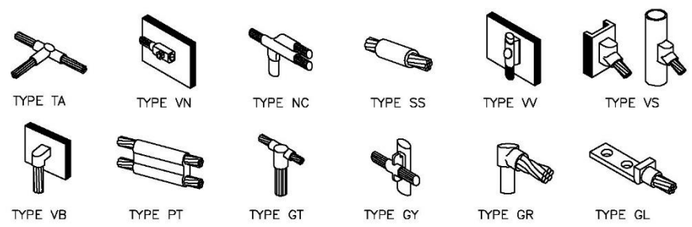
GROUNDING NOTES

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

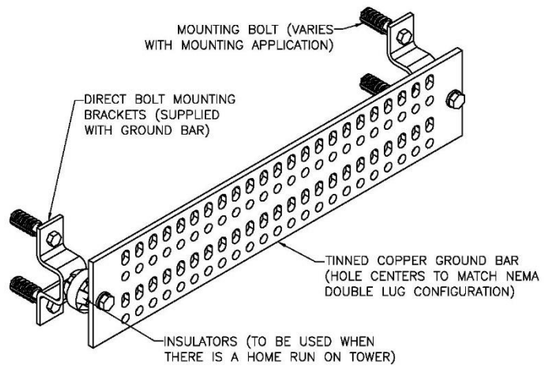
GROUNDING LEGEND	
▲	COMPRESSION FITTING CONNECTION
•	EXOTHERMIC WELD CONNECTION
— — — —	PROPOSED GROUND WIRING
————	EXISTING GROUND WIRING



1 GROUNDING RISER DIAGRAM
N.T.S.



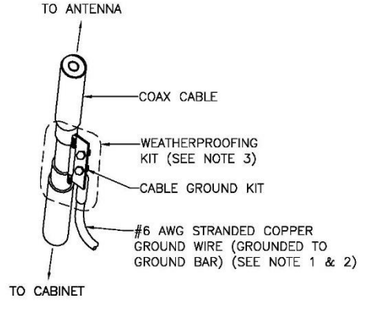
2 CADWELD GROUNDING CONNECTION DETAILS
N.T.S.



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

3 GROUND BAR DETAIL
N.T.S.

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



6 COAXIAL CABLE GROUNDING
N.T.S.

4 NOT USED
N.T.S.

5 NOT USED
N.T.S.

T-SQUARED SITE SERVICES
2500 HIGHLAND ROAD, SUITE 201
HERMITAGE, PA 16148
www.t-squared.com

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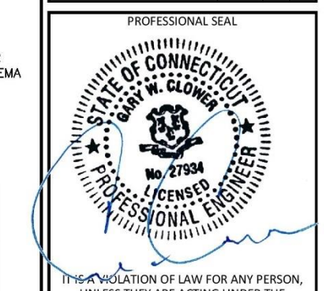
SIGFOX
One network A billion dreams
SIGFOX, INC.
545 BOYLSTON STREET
10TH FLOOR
BOSTON, MA. 02116

REVISIONS

DESCRIPTION	DATE	BY	REV
FINAL CD	1.29.19	KE	C
REVISED CD	1.29.19	KE	B
PRELIMINARY	01.28.19	JW	A

PROFESSIONAL SEAL



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

CT9123
1375 NORTH ROAD
DAYVILLE, CT 06241
WINDHAM COUNTY

SHEET TITLE

GROUNDING DETAILS

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

EXHIBIT 2:

Structural Modification Report

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

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**287.5 ft Self Supported Tower**
ATC Site Name	:	**EAST KILLINGLY NORTH, CT**
ATC Site Number	:	**88011**
Engineering Number	:	**OAA744466_C3_03**
Proposed Carrier	:	**SIGFOX S.A.**
Carrier Site Name	:	**CT9123_ATC_88011**
Carrier Site Number	:	**CT9123**
Site Location	:	**1375 North Road** **Killingly, CT 06241-1404** **41.871500,-71.821500**
County	:	**Windham**
Date	:	**August 2, 2019**
Max Usage	:	**99%**
Result	:	**Pass**

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

Reviewed By:

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32598
LICENSED
PROFESSIONAL ENGINEER

Authorized by "EOR"
Aug 2 2019 11:43 AM cosign

COA: PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 287.5 ft self supported tower to reflect the change in loading by SIGFOX S.A..

Supporting Documents

Tower Drawings	CSEI Analysis, ATC Eng. #26726321, dated September 13, 2006
Foundation Drawing	CSEI Analysis, ATC Eng. #26726321, dated September 13, 2006
Geotechnical Report	FDH Velocitel Project #17PXNW1600, dated February 27, 2017
Modifications	ATC Project #45432633, dated July 9, 2010 ATC Project #OAA686695_C6_04, dated November 28, 2016

Analysis

The tower was analyzed using Power Line Systems, Inc.'s tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	101 mph (3-Second Gust, V_{asd}) / 130 mph (3-Second Gust, V_{ult})
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:	B
Topographic Category:	1
Crest Height:	0 ft

***Wind speed and topographic effects have been adjusted per site specific wind study in accordance with ASCE 7-10 Section 26.5.3, IBC Section 1609.3, and TIA-222-G Section 2.6.6.2.5**

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.

Existing and Reserved Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
306.0	6	Alcatel-Lucent RRH2x50-08	Side Arm	(4) 1 1/4" Hybriflex Cable (6) 1 5/8" Coax	SPRINT NEXTEL
	3	Alcatel-Lucent 1900 MHz 4X45 RRH			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	RFS APXVTM14-ALU-I20			
	3	Commscope NNVV-65B-R4			
277.0	4	RFS APXVAA24_43-U-A20	Sector Frame	(4) 1 5/8" Hybriflex (1) 1/2" Coax	T-MOBILE
	4	RFS APX16DWV-16DWVS-E-A20			
	4	Ericsson AIR32 B66Aa/B2a			
	1	Commscope SHP2-13			
	4	Ericsson RRUS 11 B4			
	4	Ericsson RRUS 11 B12			
	8	Commscope CBC6AE7LQ-DS-43			
	4	Ericsson Radio 4478 B71			
266.0	4	Commscope JAHH-45B-R3B	Sector Frame	(1) 1 1/4" Hybriflex Cable (6) 1 5/8" Coax	VERIZON WIRELESS
	2	Commscope JAHH-65B-R3B			
	6	Amphenol Antel LPA-80063-4CF-EDIN-X			
	1	Raycap RC3DC-3315-PF-48			
	3	Samsung B2/B66A RRH-BR049			
	3	Commscope CBC78T-DS-43-2X			
	3	Samsung B5/B13 RRH-BR04C			
246.0	3	Raycap DC2-48-60-0-9E	Sector Frame	(1) 0.39" (10mm) Fiber Trunk (2) 0.78" (19.7mm) 8 AWG 6 (12) 2 1/4" Coax (1) 3" conduit	AT&T MOBILITY
	1	Raycap FC12-PC6-10E (20.35 lb)			
	3	Ericsson RRUS-11			
	6	Powerwave Allgon P65-15-XLH-RR			
	6	Powerwave Allgon TT19-08BP111-001			
	1	Kathrein Scala 800 10766			
	2	KMW AM-X-CD-17-65-00T-RET (96" Height)			
210.5	1	Andrew DB264	Flush	(1) 7/8" Coax	US DEPT OF JUSTICE
50.0	1	MicroPulse GPS-QBW-26N	Flush	(1) 1/2" Coax	VERIZON WIRELESS

Equipment to be Removed

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

Proposed Equipment

Elev.[1] (ft)	Qty	Antenna	Mount Type	Lines	Carrier
290.0	1	Procom CXL 900-3LW	Side Arm	(1) 7/8" Coax	SIGFOX S.A.
	1	Generic 5" x 3" x 2" Cavity Filter			
	1	Generic Low Noise Amplifier			

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

Install proposed coax anywhere on tower.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	82%	Pass
Diagonals	98%	Pass
Truss Diagonals	99%	Pass
Horizontals	89%	Pass
Truss Horizontals	99%	Pass
Anchor Bolts	52%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	355.7	76%
Axial (Kips)	478.7	10%

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.

American Tower Corp., Project: "080219-SIGFOX S.A.-OAA744466_C3_03"
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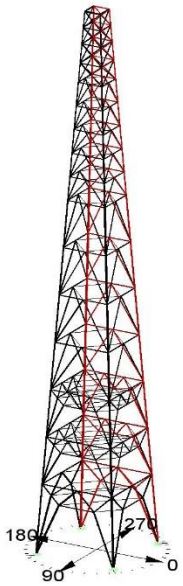
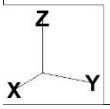
Undeformed geometry displayed





Project Name : 88011 - East Killingly North, CT
Project Notes: OAA720744_C3_02 - T-Mobile
Project File : \\americantower.com\cary\Structural_Reports\C-E\East Killingly North, CT (88011)\OAA744466 SIGFOX S.A\OAA744466_03_CUST_STRUCTRL\080219-SIGFOX S.A.-OAA744466_C3_03.tow
Date run : 10:27:35 AM Friday, August 2, 2019
by : Tower Version 15.30
Licensed to : American Tower Corp.

Successfully performed nonlinear analysis

The model has 0 warnings.

Member check option: ANSI/TIA 222-G-1
Connection rupture check: Not Checked
Crossing diagonal check: Fixed
Included angle check: None
Climbing load check: None
Redundant members checked with: Actual Force
Loads from file: \\americantower.com\cary\Structural_Reports\C-E\East Killingly North, CT (88011)\OAA744466 SIGFOX S.A\OAA744466_03_CUST_STRUCTRL\080219-SIGFOX S.A.-OAA744466_C3_03.eia

*** Analysis Results:

Maximum element usage is 99.35% for Angle "LH 3X" in load case "W -45"

Foundation Design Forces For All Load Cases:

Note: loads are factored.

Load Case	Foundation Description	Axial Force (kips)	Shear Force (kips)	Bending Moment (ft-k)	Foundation Usage %
W 0	0P	343.66	48.96	4.08	0.00
W 0	0X	330.88	48.19	3.84	0.00
W 0	0XY	-219.94	37.66	4.29	0.00
W 0	0Y	-219.00	38.12	4.47	0.00
W 180	0P	-216.70	38.03	4.55	0.00
W 180	0X	-216.98	37.53	4.36	0.00
W 180	0XY	336.72	48.16	3.90	0.00
W 180	0Y	340.57	48.82	4.13	0.00
W 45	0P	478.73	65.24	2.82	0.00
W 45	0X	60.37	20.21	4.85	0.00
W 45	0XY	-355.69	56.72	4.52	0.00
W 45	0Y	60.20	20.14	4.83	0.00
W -45	0P	64.09	21.08	5.07	0.00
W -45	0X	474.60	64.85	2.88	0.00
W -45	0XY	59.24	19.65	4.70	0.00
W -45	0Y	-354.32	56.80	4.59	0.00
W 90	0P	343.70	48.97	4.09	0.00
W 90	0X	-218.88	38.12	4.48	0.00
W 90	0XY	-219.90	37.64	4.28	0.00
W 90	0Y	338.68	48.17	3.83	0.00
W -90	0P	-216.74	38.04	4.56	0.00
W -90	0X	340.77	48.84	4.14	0.00
W -90	0XY	336.68	48.14	3.89	0.00
W -90	0Y	-217.10	37.52	4.35	0.00
W 0 Ice	0P	163.38	20.15	1.34	0.00
W 0 Ice	0X	159.74	19.86	1.23	0.00
W 0 Ice	0XY	35.18	3.45	2.11	0.00
W 0 Ice	0Y	37.88	3.52	2.19	0.00
W 180 Ice	0P	41.13	3.82	2.27	0.00
W 180 Ice	0X	38.43	3.73	2.20	0.00
W 180 Ice	0XY	156.66	19.78	1.20	0.00
W 180 Ice	0Y	159.96	20.00	1.32	0.00
W 45 Ice	0P	194.85	24.33	0.82	0.00
W 45 Ice	0X	98.84	11.84	1.89	0.00
W 45 Ice	0XY	3.79	2.44	2.24	0.00
W 45 Ice	0Y	98.68	11.82	1.88	0.00
W -45 Ice	0P	102.26	12.22	1.99	0.00
W -45 Ice	0X	191.36	24.11	0.76	0.00
W -45 Ice	0XY	99.97	11.77	1.83	0.00
W -45 Ice	0Y	6.59	2.32	2.31	0.00
W 90 Ice	0P	163.38	20.15	1.34	0.00
W 90 Ice	0X	38.03	3.54	2.19	0.00
W 90 Ice	0XY	35.18	3.45	2.11	0.00
W 90 Ice	0Y	159.57	19.85	1.22	0.00
W -90 Ice	0P	41.12	3.82	2.27	0.00
W -90 Ice	0X	160.13	20.01	1.32	0.00
W -90 Ice	0XY	156.65	19.77	1.20	0.00
W -90 Ice	0Y	38.27	3.71	2.19	0.00

Summary of Joint Support Reactions For All Load Cases:

Load Case	Joint Label	Long. Force (kips)	Tran. Force (kips)	Vert. Force (kips)	Shear Force (kips)	Tran. Moment (ft-k)	Long. Moment (ft-k)	Bending Moment (ft-k)	Vert. Moment (ft-k)	Found. Usage %
W 0	0P	-43.53	-22.41	-343.66	48.96	-1.42	-3.82	4.08	-2.14	0.00
W 0	0X	-42.46	22.78	-338.88	48.19	1.20	-3.65	3.84	2.14	0.00
W 0	0XY	-33.41	-17.37	219.94	37.66	0.29	-4.28	4.29	1.93	0.00
W 0	0Y	-34.15	16.93	219.00	38.12	-0.22	-4.47	4.47	-1.90	0.00
W 180	0P	34.15	16.72	216.70	38.03	-0.22	4.55	4.55	1.91	0.00
W 180	0X	33.40	-17.12	216.98	37.53	0.29	4.35	4.36	-1.94	0.00
W 180	0XY	42.50	22.66	-336.72	48.16	1.19	3.72	3.90	-2.15	0.00
W 180	0Y	43.48	-22.20	-340.57	48.82	-1.41	3.88	4.13	2.15	0.00
W 45	0P	-46.10	-46.16	-478.73	65.24	2.00	-1.99	2.82	-0.00	0.00
W 45	0X	-17.36	-10.36	-60.37	20.21	3.98	-2.77	4.85	2.96	0.00
W 45	0XY	-40.13	-40.09	355.69	56.72	3.19	-3.20	4.52	-0.00	0.00
W 45	0Y	-10.32	-17.30	-60.20	20.14	2.76	-3.97	4.83	-2.96	0.00
W -45	0P	-18.19	10.85	-64.09	21.08	-4.16	-2.89	5.07	-2.96	0.00
W -45	0X	-45.30	46.41	-474.60	64.85	-2.16	-1.86	2.86	0.00	0.00
W -45	0XY	-9.81	17.03	-59.24	19.65	-2.73	-3.83	4.70	2.98	0.00
W -45	0Y	-40.54	39.78	354.32	56.80	-3.16	-3.33	4.59	0.03	0.00
W 90	0P	-22.37	-43.57	-343.70	48.97	3.83	1.43	4.09	2.14	0.00
W 90	0X	16.89	-34.18	218.88	38.12	4.48	0.21	4.48	1.90	0.00
W 90	0XY	-17.40	-33.38	219.90	37.64	4.27	-0.29	4.28	-1.93	0.00
W 90	0Y	22.81	-42.43	-338.68	48.17	3.64	-1.19	3.83	-2.15	0.00
W -90	0P	16.69	34.18	216.74	38.04	-4.55	0.21	4.56	-1.91	0.00
W -90	0X	-22.17	43.52	-340.77	48.84	-3.89	1.42	4.14	-2.15	0.00
W -90	0XY	22.70	42.46	-336.68	48.14	-3.71	-1.18	3.89	2.15	0.00
W -90	0Y	-17.16	33.37	217.10	37.52	-4.34	-0.30	4.35	1.94	0.00
W 0 Ice	0P	-16.40	-11.71	-163.38	20.15	-1.32	0.20	1.34	-0.46	0.00
W 0 Ice	0X	-16.00	11.77	-159.74	19.86	1.21	0.23	1.23	0.45	0.00
W 0 Ice	0XY	-2.63	3.39	-35.18	3.45	0.92	-1.90	2.11	0.45	0.00
W 0 Ice	0Y	-2.64	-3.46	-37.88	3.52	-0.98	-1.96	2.19	-0.43	0.00
W 180 Ice	0P	0.62	-3.77	-41.13	3.82	-0.98	2.05	2.27	0.45	0.00
W 180 Ice	0X	0.65	3.67	-38.43	3.73	0.92	1.99	2.20	-0.46	0.00
W 180 Ice	0XY	16.02	11.59	-156.66	19.78	1.19	-0.13	1.20	-0.46	0.00
W 180 Ice	0Y	16.37	-11.48	-159.96	20.00	-1.31	-0.11	1.32	0.47	0.00
W 45 Ice	0P	-17.20	-17.21	-194.85	24.33	-0.58	0.58	0.82	0.00	0.00
W 45 Ice	0X	-10.99	4.40	-98.84	11.84	1.86	0.32	1.89	0.67	0.00
W 45 Ice	0XY	-1.73	-1.73	-3.79	2.44	1.58	-1.58	2.24	-0.00	0.00
W 45 Ice	0Y	4.40	-10.97	-98.68	11.82	-0.32	-1.85	1.88	-0.67	0.00
W -45 Ice	0P	-11.41	-4.36	-102.26	12.22	-1.97	0.29	1.99	-0.68	0.00
W -45 Ice	0X	-16.85	17.25	-191.36	24.11	0.48	0.60	0.76	-0.01	0.00
W -45 Ice	0XY	4.36	10.93	-99.97	11.77	0.25	-1.81	1.83	0.69	0.00
W -45 Ice	0Y	-1.60	1.68	-6.59	2.32	-1.65	-1.61	2.31	0.02	0.00
W 90 Ice	0P	-11.70	-16.41	-163.38	20.15	-0.20	1.33	1.34	0.46	0.00
W 90 Ice	0X	-3.48	-0.64	-38.03	3.54	1.96	0.98	2.19	0.43	0.00
W 90 Ice	0XY	3.39	-0.63	-35.18	3.45	1.90	-0.92	2.11	-0.45	0.00
W 90 Ice	0Y	11.77	-15.99	-159.57	19.85	-0.22	-1.20	1.22	-0.45	0.00
W -90 Ice	0P	-3.77	0.62	-41.12	3.82	-2.04	0.98	2.27	-0.44	0.00
W -90 Ice	0X	-11.48	16.38	-160.13	20.01	0.11	1.32	1.32	-0.47	0.00
W -90 Ice	0XY	11.61	16.01	-156.65	19.77	0.14	-1.19	1.20	0.46	0.00
W -90 Ice	0Y	3.66	0.64	-38.27	3.71	-1.99	-0.92	2.19	0.46	0.00

Summary of Joint Support Reactions For All Load Cases in Direction of Leg:

Load Case	Support Joint	Origin Joint	Member	Leg Dir.	Leg Force In Perpendicular To Leg (kips)	Residual Shear Horizontal To Leg - Res. (kips)	Residual Shear Horizontal To Leg - Long. (kips)	Residual Shear Horizontal To Leg - Tran. (kips)	Total Long. Force (kips)	Total Tran. Force (kips)	Total Vert. Force (kips)
W 0	0P	1P	L 1P	346.434	22.029	22.055	22.055	0.936	-43.53	-22.41	-343.66
W 0	0X	1X	L 1X	341.627	21.304	21.352	21.292	-1.602	-42.46	22.78	-338.88
W 0	0XY	1XY	L 1XY	-222.243	19.948	20.001	19.668	3.633	-33.41	-17.37	219.94
W 0	0Y	1Y	L 1Y	-221.330	20.668	20.721	20.464	-3.251	-34.15	16.93	219.00
W 180	0P	1P	L 1P	-219.030	20.805	20.857	-20.614	-3.176	34.15	16.72	216.70
W 180	0X	1X	L 1X	-219.280	20.104	20.157	-19.839	3.564	33.40	-17.12	216.98
W 180	0XY	1XY	L 1XY	339.472	21.472	21.520	-21.459	-1.619	42.50	22.66	-336.72
W 180	0Y	1Y	L 1Y	343.334	22.175	22.221	-22.202	0.918	43.48	-22.20	-340.57
W 45	0P	1P	L 1P	482.609	22.847	22.936	16.191	16.245	-46.10	-46.16	-478.73
W 45	0X	1X	L 1X	60.588	19.604	19.804	13.585	14.134	-17.36	-10.36	-60.37
W 45	0XY	1XY	L 1XY	-359.300	25.197	25.295	17.908	17.865	-40.13	-40.09	355.69
W 45	0Y	1Y	L 1Y	60.406	19.532	19.532	14.078	13.538	-10.32	-17.30	-60.20
W -45	0P	1P	L 1P	64.312	20.394	20.394	14.185	-14.652	-18.19	10.85	-64.09
W -45	0X	1X	L 1X	478.462	22.832	22.921	15.642	-16.734	-45.30	46.41	-474.60
W -45	0XY	1XY	L 1XY	59.484	18.977	18.977	13.513	-13.324	-9.81	17.03	-59.24
W -45	0Y	1Y	L 1Y	-357.947	25.396	25.495	18.407	-17.641	-40.54	39.78	354.32
W 90	0P	1P	L 1P	346.474	22.064	22.110	0.893	22.092	-22.37	-43.57	-343.70
W 90	0X	1X	L 1X	-221.207	20.700	20.753	-3.216	20.502	16.89	-34.18	218.88
W 90	0XY	1XY	L 1XY	-222.203	19.927	19.980	3.664	19.641	-17.40	-33.38	219.90
W 90	0Y	1Y	L 1Y	341.426	21.281	21.329	-1.645	21.265	22.81	-42.43	-338.68
W -90	0P	1P	L 1P	-219.069	20.827	20.880	-3.145	-20.642	16.69	34.18	216.74

W -90	OX	1X	L 1X	343.536	22.199	22.246	0.875	-22.229	-22.17	43.52	-340.77						
W -90	OXY	1XY	L 1XY	339.432	21.439	21.487	-1.662	-21.422	22.70	42.46	-336.68						
W -90	OY	1Y	L 1Y	-219.403	20.073	20.126	3.600	-19.802	-17.16	33.37	217.10						
W 0 Ice	OP	1P	L 1P	164.493	6.353	6.371	6.190	1.505	-16.40	-11.71	-163.38						
W 0 Ice	OX	1X	L 1X	160.852	6.259	6.278	6.017	-1.791	-16.00	11.77	-159.74						
W 0 Ice	OXY	1XY	L 1XY	35.212	3.069	3.071	2.830	-1.192	-0.63	3.39	-35.18						
W 0 Ice	OY	1Y	L 1Y	37.906	3.196	3.198	3.004	1.098	-0.64	-3.48	-37.88						
W 180 Ice	OP	1P	L 1P	41.163	3.408	3.410	-3.192	1.200	0.62	-3.77	-41.13						
W 180 Ice	OX	1X	L 1X	38.487	3.299	3.301	-3.047	-1.269	0.65	3.67	-38.43						
W 180 Ice	OXY	1XY	L 1XY	157.768	6.469	6.489	-6.232	-1.806	16.02	11.59	-156.66						
W 180 Ice	OY	1Y	L 1Y	161.076	6.531	6.549	-6.378	1.488	16.37	-11.48	-159.96						
W 45 Ice	OP	1P	L 1P	196.240	7.085	7.112	5.022	5.036	-17.20	-17.21	-194.85						
W 45 Ice	OX	1X	L 1X	99.419	5.129	5.133	4.815	1.778	-10.99	4.40	-98.84						
W 45 Ice	OXY	1XY	L 1XY	3.565	2.769	2.780	1.967	1.965	-1.73	-1.73	-3.79						
W 45 Ice	OY	1Y	L 1Y	99.255	5.118	5.122	1.763	4.809	4.40	-10.97	-98.68						
W -45 Ice	OP	1P	L 1P	102.843	5.416	5.420	5.024	-2.034	-11.41	-4.36	-102.26						
W -45 Ice	OX	1X	L 1X	192.736	7.180	7.208	4.894	-5.291	-16.85	17.25	-191.36						
W -45 Ice	OXY	1XY	L 1XY	96.553	5.194	5.198	1.637	-4.934	4.36	10.93	-95.97						
W -45 Ice	OY	1Y	L 1Y	6.356	2.892	2.903	2.010	-2.095	-1.60	1.68	-6.59						
W 90 Ice	OP	1P	L 1P	164.499	6.360	6.378	1.493	6.201	-11.70	-16.41	-163.38						
W 90 Ice	OX	1X	L 1X	38.063	3.208	3.210	1.102	3.015	-3.48	-5.64	-38.03						
W 90 Ice	OXY	1XY	L 1XY	35.219	3.069	3.071	-1.193	2.830	3.39	-0.63	-35.18						
W 90 Ice	OY	1Y	L 1Y	160.682	6.262	6.281	-1.804	6.016	11.77	-15.99	-159.57						
W -90 Ice	OP	1P	L 1P	41.156	3.409	3.411	1.200	-3.193	-3.77	0.62	41.12						
W -90 Ice	OX	1X	L 1X	161.246	6.529	6.547	1.476	-6.378	-11.48	16.38	-160.13						
W -90 Ice	OXY	1XY	L 1XY	157.762	6.462	6.481	-1.818	-6.221	11.61	16.01	-156.65						
W -90 Ice	OY	1Y	L 1Y	38.310	3.287	3.289	-1.265	-3.036	3.66	0.64	-38.27						

Overturning Moment Summary For All Load Cases:

Load Case	Transverse Moment (ft-k)	Longitudinal Moment (ft-k)	Torsional Moment (ft-k)	Resultant Moment (ft-k)	Transverse Force (kips)	Longitudinal Force (kips)	Vertical Force (kips)
W 0	128.408	-25191.859	58.550	25192.187	0.073	153.550	243.610
W 180	92.487	24955.824	-58.549	24955.995	-0.055	-153.528	243.610
W 45	18739.775	-18747.076	-4.485	26507.208	113.906	113.906	243.610
W -45	-18511.140	-18728.899	87.096	26333.134	-113.880	113.840	243.610
W 90	25184.601	-135.720	-64.901	25184.966	153.550	0.073	243.610
W -90	-24963.119	-99.804	64.900	24963.319	-153.528	-0.055	243.610
W 0 Ice	142.279	-5617.244	12.132	5619.046	0.015	33.665	396.175
W 180 Ice	134.881	5325.218	-12.130	5326.926	-0.011	-33.661	396.175
W 45 Ice	4288.107	-4295.448	-0.818	6069.492	25.515	25.515	396.175
W -45 Ice	-4009.344	-4291.663	17.936	5873.092	-25.505	25.501	396.175
W 90 Ice	5609.905	-149.624	-13.289	5611.900	33.665	0.015	396.175
W -90 Ice	-5332.565	-142.227	13.287	5334.462	-33.661	-0.011	396.175

EIA Sections Information:

Section Label	Top Z (ft)	Bottom Z (ft)	Joint Count	Member Count	Top Width (ft)	Bottom Width (ft)	Gross Area (ft^2)	Face Ar Adjust Factor	Face Ar Adjust Factor	Dead Load Factor
278.9-287.5	287.500	278.917	8	20	9.00	10.07	81.85	1.1220	1.1220	1.346
270.3-278.9	278.917	270.334	8	16	10.07	11.15	91.06	1.2150	1.2150	1.458
260.2-270.3	270.334	260.167	8	16	11.15	12.42	119.77	1.1970	1.1970	1.436
250.0-260.2	260.167	250.000	12	24	12.42	13.69	132.69	1.2030	1.2030	1.444
237.5-250.0	250.000	237.500	16	24	13.69	15.25	180.84	1.2010	1.2010	1.441
225.0-237.5	237.500	225.000	16	24	15.25	16.81	200.36	1.2070	1.2070	1.449
212.5-225.0	225.000	212.500	16	24	16.81	18.37	219.89	1.2130	1.2130	1.456
200.0-212.5	212.500	200.000	16	24	18.37	19.93	239.41	1.2200	1.2200	1.463
187.5-200.0	200.000	187.500	16	24	19.93	21.50	258.94	1.2250	1.2250	1.471
162.5-187.5	187.500	162.500	16	24	21.50	24.62	576.45	1.2550	1.2550	1.506
137.5-162.5	162.500	137.500	16	24	24.62	27.74	654.55	1.2700	1.2700	1.524
112.5-137.5	137.500	112.500	16	24	27.74	30.87	732.65	1.2790	1.2790	1.535
87.50-112.5	112.500	87.500	20	32	30.87	33.99	810.75	1.2930	1.2930	1.552
62.50-87.50	87.500	62.500	36	78	33.99	37.12	888.85	1.2300	1.2300	1.476
37.50-62.50	62.500	37.500	32	68	37.12	40.24	966.95	1.2330	1.2330	1.480
0.000-37.50	37.500	0.000	20	40	40.24	44.93	1596.86	1.2600	1.2600	1.512

Printed capacities do not include the strength factor entered for each load case.
The Group Summary reports on the member and load case that resulted in maximum usage which may not necessarily be the same as that which produces maximum force.

Group Summary (Compression Portion):

Group Label	Group Desc.	Angle Type	Angle Size	Steel Strength (ksi)	Max Usage %	Usage Cont-rol	Max Use In Comp. %	Comp. Control Member	Comp. Force (kips)	Comp. Control Load Case	L/r Capacity (kips)	Comp. Connect. Shear Capacity (kips)	Comp. Connect. Bearing Capacity (kips)	RLX	RLY	RLZ	L/r	KL/r	Length Comp. Member (ft)	Curve No.	No. Of Bolts Comp.
Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	80.27	Comp	80.27	L 1P	-392.648	W 45	489.140	0.000	0.000	0.250	0.250	0.250	72.40	72.40	37.646	1	0
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	73.50	Comp	73.50	L 2P	-341.153	W 45	464.151	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.097	1	0
Leg S3	L 8" x 8" x 1"	SAE	8X8X1	36.0	81.82	Comp	81.82	L 3P	-294.703	W 45	416.154	0.000	0.000	0.281	0.281	0.281	54.29	54.29	25.097	1	0
Leg S4	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	82.37	Comp	82.37	L 4P	-284.721	W 45	345.656	0.000	0.000	0.333	0.333	0.333	63.94	63.94	25.097	1	0
Leg S5	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	70.26	Comp	70.26	L 5P	-242.864	W 45	345.656	0.000	0.000	0.333	0.333	0.333	63.94	63.94	25.097	1	0
Leg S6	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	66.90	Comp	66.90	L 6P	-200.491	W 45	299.702	0.000	0.000	0.333	0.333	0.333	63.53	63.53	25.097	1	0
Leg S7	L 8" x 8" x 0.625"	SAE	8X8X0.63	36.0	63.21	Comp	63.21	L 7P	-159.135	W 45	251.760	0.000	0.000	0.333	0.333	0.333	63.53	63.53	25.097	1	0
Leg S8	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	62.48	Comp	62.48	L 8P	-137.386	W 45	219.890	0.000	0.000	0.500	0.500	0.500	64.35	64.35	12.549	1	0
Leg S9	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	53.52	Comp	52.52	L 9P	-115.478	W 45	219.890	0.000	0.000	0.500	0.500	0.500	64.35	64.35	12.549	1	0
Leg S10	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	56.87	Comp	56.87	L 10P	-95.627	W 45	168.140	0.000	0.000	0.500	0.500	0.500	63.81	63.81	12.549	1	0
Leg S11	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	45.07	Comp	45.07	L 11P	-75.786	W 45	168.140	0.000	0.000	0.500	0.500	0.500	63.81	63.81	12.549	1	0
Leg S12	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0	41.69	Comp	41.69	L 12P	-55.357	W 45	132.791	0.000	0.000	0.500	0.500	0.500	63.27	63.27	12.549	1	0
Leg S13	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	39.64	Comp	39.64	L 13P	-43.822	W 45	110.541	0.000	0.000	0.500	0.500	0.500	62.11	62.11	10.207	1	0
Leg S14	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	26.81	Comp	26.81	L 14P	-29.632	W 45	110.541	0.000	0.000	0.500	0.500	0.500	62.11	62.11	10.207	1	0
Leg S15	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	16.91	Comp	16.91	L 15P	-14.358	W 45	84.918	0.000	0.000	0.500	0.500	0.500	52.01	52.01	8.616	1	0
Leg S16	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	7.17	Comp	7.17	L 16P	-6.090	W 45	84.918	0.000	0.000	0.500	0.500	0.500	52.01	52.01	8.616	1	0
Diag S1	B/B L5"x5"x0.3125"	DAE	5X5X0.31	36.0	43.35	Comp	43.35	D 2X	-63.381	W -90	146.192	0.000	0.000	0.316	0.316	0.316	74.36	74.36	30.789	1	0
Diag S2	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	96.37	Comp	96.37	D 4X	-48.863	W -90	50.702	0.000	0.000	0.320	0.320	0.320	107.64	107.64	20.603	1	0
Diag S3	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	94.16	Comp	94.16	D 6X	-48.739	W -90	51.765	0.000	0.000	0.320	0.320	0.320	105.80	105.80	20.250	1	0
Diag S4	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	98.38	Comp	98.38	D 7X	-31.976	W -90	32.503	0.000	0.000	0.300	0.300	0.300	144.72	135.20	30.271	6	0
Diag S5	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	95.36	Comp	95.36	D 9X	-32.152	W -90	33.717	0.000	0.000	0.300	0.300	0.300	140.66	132.71	29.422	6	0
Diag S6	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	97.19	Comp	97.19	D 11X	-31.220	W -90	32.122	0.000	0.000	0.320	0.320	0.320	146.02	136.00	28.633	6	0
Diag S7	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	96.77	Comp	96.77	D 13X	-30.584	W -90	31.603	0.000	0.000	0.320	0.640	0.320	147.83	137.11	27.910	6	0
Diag S8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	74.67	Comp	74.67	D 15X	-18.192	W -90	24.365	0.000	0.000	0.500	1.000	0.500	166.43	148.55	16.504	6	0
Diag S9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	66.72	Comp	66.72	D 17X	-16.953	W -90	25.409	0.000	0.000	0.500	1.000	0.500	161.41	145.47	16.006	6	0
Diag S10	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	96.50	Comp	96.50	D 19X	-16.297	W -90	16.889	0.000	0.000	0.500	1.000	0.500	199.34	168.79	15.532	6	0
Diag S11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	91.54	Comp	91.54	D 21X	-16.130	W -90	17.621	0.000	0.000	0.500	1.000	0.500	193.58	165.25	15.083	6	0
Diag S12	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	85.24	D	23X	-15.842	W -90	18.351	0.000	0.000	0.500	1.000	0.500	188.18	161.93	14.662	6	0	
Diag S13	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	45.49	Comp	45.49	D 26X	-8.609	W -90	18.926	0.000	0.000	0.520	0.520	0.520	148.86	142.03	16.556	5	0
Diag S14	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	42.07	Comp	42.07	D 28X	-8.774	W -90	20.855	0.000	0.000	0.520	0.520	0.520	140.03	135.36	15.574	5	0
Diag S15	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	31.54	Comp	31.54	D 29X	-5.385	W 180	17.011	0.000	0.000	0.520	0.520	0.520	143.95	138.29	13.657	5	0
Diag S16	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	17.25	Comp	17.25	D 31X	-3.228	W 180	18.712	0.000	0.000	0.520	0.520	0.520	135.35	131.74	12.841	5	0
Horiz 1	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	80.53	H	2Y	-39.398	W -90	48.921	0.000	0.000	0.500	0.500	0.500	110.75	110.75	20.120	2	0	
Horiz 2	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	82.55	H	3P	-33.667	W -90	41.024	0.000	0.000	0.940	0.940	0.940	128.03	124.94	12.372	6	0	
Horiz 3	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	89.06	H	5P	-31.438	W -90	35.302	0.000	0.000	0.940	0.940	0.940	135.25	129.38	11.331	6	0	
Horiz 4	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	73.68	H	7P	-15.747	W -90	21.373	0.000	0.000	1.000	1.000	1.000	195.99	166.73	15.634	6	0	
Horiz 5	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	59.88	H	9P	-14.898	W -90	24.880	0.000	0.000	1.000	1.000	1.000	176.15	154.53	13.872	6	0	
Horiz 6	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	66.13	H	11P	-13.167	W -90	19.909	0.000	0.000	1.000	1.000	1.000	192.09	164.34	12.310	6	0	
Horiz 7	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	50.72	H	13P	-12.227	W -90	24.106	0.000	0.000	1.000	1.000	1.000	167.72	149.35	10.748	6	0	
Horiz 8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	40.27	H	15P	-10.760	W -90	26.721	0.000	0.000	1.000	1.000	1.000	155.53	141.85	9.967	6	0	
Horiz 9	B/B L2.5"x2.5"x0.25"	DAR	2.5X2.5X0.25	36.0	32.55	H	17P	-9.695	W -90	29.785	0.000	0.000	1.000	1.000	1.000	143.34	134.36	9.186	6	0	
Horiz 10	B/B L2.5"x2.5"x0.25"	DAR	2.5X2.5X0.25	36.0	26.22	H	19P	-8.664	W -90	33.649	0.000	0.000	1.000	1.000	1.000	131.16	126.86	8.405	6	0	
Horiz 11	B/B L2.5"x2.5"x0.25"	DAR	2.5X2.5X0.25	36.0	23.09	H	21P	-8.450	W -90	36.603	0.000	0.000	1.000	1.000	1.000	118.97	118.97	7.624	1	0	
Horiz 12	B/B L2.5"x2.5"x0.25"	DAR	2.5X2.5X0.25	36.0	16.75	H	23P	-7.086	W -90	42.308	0.000	0.000	1.000	1.000	1.000	106.78	106.78	6.843	1	0	
Horiz 13	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	9.10	Tens	7.83	H 29Y	-1.250	W 0	15.975	0.000	0.000	0.500	0.500	0.500	141.09	136.11	12.416	5	0
Horiz 14	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	2.72	Tens	0.77	H 27Y	-0.506	W 0	65.466	0.000	0.000	0.500	0.500	0.500	70.76	70.76	11.145	1	0
Horiz 15	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	3.20	Tens	0.05	H 30X	-0.010	W 90	20.588	0.000	0.000	0.500	0.500	0.500	114.46	117.23	10.073	3	0
Horiz 16	C8x11.5	CHN	C8x11.5	36.0	1.03	Comp	1.03	H 32X	-0.207	W 180	29.728	0.000	0.000	1.000	1.000	1.000	172.80	160.27	9.000	5	0
LD 1	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	36.0	55.70	Comp	55.70	LD 1X	-24.396	W -90	43.802	0.000	0.000	0.920	0.920	0.920	139.40	131.93	13.764	6	0
LD 2	B/B L4"x4"x0.3125"	DAE	4X4X0.31	36.0	80.71	Comp	80.71	LD 3X	-57.655	W -90	71.437	0.000	0.000	0.920	0.920	0.920	122.54	121.56	13.764	6	0
LD 4	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	99.25	Comp	99.25	LD 7X	-23.853	W -45	24.025	0.000	0.000	0.920	0.920	0.920	154.95	141.49	11.004	6	0
LD 5	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	90.70	Comp	90.70	LD 9X	-31.768	W -90	35.026	0.000	0.000	0.920	0.920	0.920	113.50	113.50	8.060	1	0
LD 6	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	89.72	Comp	89.72	LD 11P	-34.005	W -90	37.901	0.000	0.000	0.920	0.920	0.920	116.15	116.15	9.374	1	0
LD 7	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	94.13	Comp	94.13	LD 13X	-24.270	W -45	25.785	0.000	0.000	0.920	0.920	0.920	147.01	136.11	10.940	6	0
LD 8	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	88.00	Comp	88.00	LD 15X	-31.542	W -90	35.843	0.000	0.000	0.920	0.920	0.920	111.55	111.55	7.922	1	0
LD 9	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	65.12	Comp	65.12	LD 17P	-33.142	W -90	50.895	0.000	0.000	0.920	0.920	0.920	107.31	107.31	9.039	1	0
LM 1	B/B L2.5"x2.5"x0.25"	DAR	2.5X2.5X0.25	36.0	23.22	Tens	0.00	LM 2X	0.000		0.001	0.000	0.000	100.000	100.000	100.000	31396.62	19355.12	20.120	6	0
LM 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	99.35	Comp	99.35	LM 3X	-26.570	W -45	26.743	0.000	0.000	1.000	2.000	1.000	167.24	149.05	10.104	6	0
LM 3	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	86.59	Comp	86.59	LM 5X	-25.961	W -45	29.982	0.000	0.000	1.000	2.000	1.000	153.78	140.77	9.291	6	0
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	36.0	0.00		0.00	BR 9XY	-1.094	W 45	0.324	0.000	0.000	1.000	1.000	1.000	2.35	2.35	19.618	1	0

Group Summary (Tension Portion):

Group Label	Group Desc.	Angle Type	Angle Size	Steel Strength (ksi)	Max Usage %	Usage Cont-rol	Max Use In Tens. %	Tension Control Member	Tension Force (kips)	Tension Control Load Case	Net Section Capacity (kips)	Tension Connect. Shear Capacity (kips)	Tension Connect. Bearing Capacity (kips)	Tension Connect. Rupture Capacity (kips)	Length Tens. Member (ft)	No. Of Bolts	No. Of Holes	Hole Diameter (in)
Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	80.27	Comp	49.89	L 1XY	270.444	W 45	542.051	0.000	0.000	0.000	37.646	0	0.000	0
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	73.50	Comp	47.01	L 2XY	254.803	W 45	542.051	0.000	0.000	0.000	25.097	0	0.000	0
Leg S3	L 8" x 8" x 1"	SAE	8X8X1	36.0	70.82	Comp	45.41	L 3XY	220.691	W 45	485.999	0.000	0.000	0.000	25.097	0	0.000	0
Leg S4	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	82.37	Comp	50.32	L 4XY	215.712	W 45	428.651	0.000	0.000	0.000	25.097	0	0.000	0
Leg S5	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	70.26	Comp	42.47	L 5XY	182.027	W 45	428.651	0.000	0.000	0.000	25.097	0	0.000	0
Leg S6	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	66.90	Comp	39.93	L 6XY	148.059	W 45	370.655	0.000	0.000	0.000	25.097	0	0.000	0
Leg S7	L 8" x 8" x 0.625"	SAE	8X8X0.63	36.0	63.21	Comp	36.40	L 7XY	113.339	W 45	311.364	0.000	0.000	0.000	25.097	0	0.000	0
Leg S8	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	62.48	Comp	35.31	L 8XY	96.586	W 45	273.456	0.000	0.000	0.000	12.549	0	0.000	0

Leg S9	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	52.52	Comp	29.14	L 9XY	79.689	W 45	273.456	0.000	0.000	0.000	12.549	0	0.000	0
Leg S10	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	56.87	Comp	30.14	L 10XY	62.790	W 45	208.332	0.000	0.000	0.000	12.549	0	0.000	0
Leg S11	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	45.07	Comp	22.09	L 11XY	46.011	W 45	208.332	0.000	0.000	0.000	12.549	0	0.000	0
Leg S12	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0	41.69	Comp	17.96	L 12XY	29.441	W 45	163.944	0.000	0.000	0.000	12.549	0	0.000	0
Leg S13	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	39.64	Comp	16.78	L 13XY	22.732	W 45	135.432	0.000	0.000	0.000	10.207	0	0.000	0
Leg S14	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	26.81	Comp	8.19	L 14XY	11.090	W 45	135.432	0.000	0.000	0.000	10.207	0	0.000	0
Leg S15	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	16.91	Comp	3.44	L 15XY	3.377	W 45	98.172	0.000	0.000	0.000	8.616	0	0.000	0
Leg S16	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	7.17	Comp	0.00	L 16Y	0.000		98.172	0.000	0.000	0.000	8.616	0	0.000	0
Diag S1	B/B L5"x5"x0.3125"	DAE	5X2X0.31	36.0	43.35	Comp	28.51	D 2P	55.885	W -90	196.020	0.000	0.000	0.000	30.789	0	0.000	0
Diag S2	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	96.37	Comp	44.76	D 4P	41.759	W -90	93.312	0.000	0.000	0.000	20.603	0	0.000	0
Diag S3	B/B L2.5"x3.5"x0.25"	DAS	3.5X2.5X0.25	36.0	94.16	Comp	44.19	D 6P	41.232	W -90	93.312	0.000	0.000	0.000	20.250	0	0.000	0
Diag S4	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	98.38	Comp	34.74	D 7P	29.599	W -90	85.212	0.000	0.000	0.000	30.271	0	0.000	0
Diag S5	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	95.36	Comp	34.89	D 9P	29.734	W -90	85.212	0.000	0.000	0.000	29.422	0	0.000	0
Diag S6	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	97.19	Comp	34.15	D 11P	29.102	W -90	85.212	0.000	0.000	0.000	28.633	0	0.000	0
Diag S7	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	96.77	Comp	34.16	D 13P	29.109	W -90	85.212	0.000	0.000	0.000	27.910	0	0.000	0
Diag S8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	74.67	Comp	22.07	D 15P	17.018	W -90	77.112	0.000	0.000	0.000	16.504	0	0.000	0
Diag S9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	66.72	Comp	20.63	D 17P	15.908	W -90	77.112	0.000	0.000	0.000	16.006	0	0.000	0
Diag S10	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	96.50	Comp	22.27	D 19P	15.367	W -90	69.012	0.000	0.000	0.000	15.532	0	0.000	0
Diag S11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	91.54	Comp	22.17	D 21P	15.302	W -90	69.012	0.000	0.000	0.000	15.083	0	0.000	0
Diag S12	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	85.24	Comp	21.60	D 23P	14.905	W -90	69.012	0.000	0.000	0.000	14.662	0	0.000	0
Diag S13	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	45.49	Comp	12.45	D 26X	6.819	W 90	54.756	0.000	0.000	0.000	16.556	0	0.000	0
Diag S14	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	42.07	Comp	12.47	D 28X	6.825	W 90	54.756	0.000	0.000	0.000	15.574	0	0.000	0
Diag S15	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	31.54	Comp	8.87	D 29Y	4.138	W 0	46.656	0.000	0.000	0.000	13.657	0	0.000	0
Diag S16	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	17.25	Comp	4.73	D 31Y	2.208	W 0	46.656	0.000	0.000	0.000	12.841	0	0.000	0
Horiz 1	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	80.53	Comp	43.60	H 1P	40.685	W 90	93.312	0.000	0.000	0.000	20.120	0	0.000	0
Horiz 2	B/B L3.5"x2.5"x0.25"	DAL	3.5X2.5X0.25	36.0	82.95	Comp	40.98	H 3X	38.239	W -90	93.312	0.000	0.000	0.000	12.372	0	0.000	0
Horiz 3	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	89.06	Comp	40.53	H 5X	34.533	W -90	85.212	0.000	0.000	0.000	11.331	0	0.000	0
Horiz 4	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	73.68	Comp	19.28	H 7X	16.431	W -90	85.212	0.000	0.000	0.000	15.434	0	0.000	0
Horiz 5	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	59.88	Comp	17.87	H 9P	15.224	W 90	85.212	0.000	0.000	0.000	13.872	0	0.000	0
Horiz 6	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	66.13	Comp	17.31	H 11X	13.346	W -90	77.112	0.000	0.000	0.000	12.310	0	0.000	0
Horiz 7	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	50.72	Comp	16.32	H 13P	12.587	W 90	77.112	0.000	0.000	0.000	10.748	0	0.000	0
Horiz 8	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	40.27	Comp	14.19	H 15X	10.941	W -90	77.112	0.000	0.000	0.000	9.967	0	0.000	0
Horiz 9	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	32.55	Comp	12.93	H 17P	9.969	W 90	77.112	0.000	0.000	0.000	9.186	0	0.000	0
Horiz 10	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	26.22	Comp	11.59	H 19X	8.937	W -90	77.112	0.000	0.000	0.000	8.405	0	0.000	0
Horiz 11	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	23.09	Comp	11.14	H 21P	8.591	W 90	77.112	0.000	0.000	0.000	7.624	0	0.000	0
Horiz 12	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	16.75	Comp	10.64	H 23P	8.203	W 90	77.112	0.000	0.000	0.000	6.843	0	0.000	0
Horiz 13	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	9.10	Tens	9.10	H 25P	3.861	W 0	42.444	0.000	0.000	0.000	12.416	0	0.000	0
Horiz 14	B/B L3"x2.5"x0.25"	DAL	3X2.5X0.25	36.0	2.72	Tens	2.72	H 27P	2.319	W 0	85.212	0.000	0.000	0.000	11.145	0	0.000	0
Horiz 15	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	3.20	Tens	3.20	H 29P	1.358	W 0	42.444	0.000	0.000	0.000	10.073	0	0.000	0
Horiz 16	C8x11.5	CHN	C8x11.5	36.0	1.03	Comp	0.49	H 32X	0.541	W 0	109.512	0.000	0.000	0.000	9.000	0	0.000	0
LD 1	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	36.0	55.70	Comp	27.19	LD 2Y	29.781	W -45	109.512	0.000	0.000	0.000	13.764	0	0.000	0
LD 2	B/B L4"x4"x0.3125"	DAE	4X4X0.31	36.0	80.71	Comp	34.42	LD 3P	53.526	W -90	155.520	0.000	0.000	0.000	13.764	0	0.000	0
LD 4	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	99.25	Comp	29.85	LD 8Y	20.598	W -45	69.012	0.000	0.000	0.000	11.004	0	0.000	0
LD 5	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	90.70	Comp	40.23	LD 9P	27.762	W -90	69.012	0.000	0.000	0.000	8.060	0	0.000	0
LD 6	B/B L4"x2"x0.25"	DAL	3X2X0.25	36.0	89.72	Comp	45.38	LD 11X	34.996	W -90	77.112	0.000	0.000	0.000	9.374	0	0.000	0
LD 7	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	94.13	Comp	31.00	LD 14Y	21.391	W -45	69.012	0.000	0.000	0.000	10.440	0	0.000	0
LD 8	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	88.00	Comp	39.69	LD 15P	27.390	W -90	69.012	0.000	0.000	0.000	7.922	0	0.000	0
LD 9	B/B L4"x3"x0.25"	DAE	3X3X0.25	36.0	65.12	Comp	36.38	LD 17X	33.948	W -90	93.312	0.000	0.000	0.000	9.039	0	0.000	0
LH 1	B/B L2.5"x2.5"x0.25"	DAE	2.5X2.5X0.25	36.0	23.02	Tens	23.02	LH 1Y	17.751	W 0	77.112	0.000	0.000	0.000	20.120	0	0.000	0
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	99.35	Comp	26.06	LH 4Y	22.208	W -45	85.212	0.000	0.000	0.000	10.104	0	0.000	0
LH 3	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	86.59	Comp	26.19	LH 6Y	22.313	W -45	85.212	0.000	0.000	0.000	9.291	0	0.000	0
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	36.0	0.00		0.00	BR 9X	0.948	W -45	0.324	0.000	0.000	0.000	19.618	0	0.000	0

*** Maximum Stress Summary for Each Load Case

Summary of Maximum Usages by Load Case:

Load Case	Maximum Usage %	Element Label	Element Type
W 0	97.49	D 8P	Angle
W 180	98.18	D 8Y	Angle
W 45	96.87	LH 3P	Angle
W -45	99.35	LH 3X	Angle
W 90	97.77	D 7P	Angle
W -90	98.38	D 7X	Angle
W 0 Ice	30.97	D 5P	Angle
W 180 Ice	31.70	D 5Y	Angle
W 45 Ice	33.85	L 1P	Angle
W -45 Ice	33.06	L 1X	Angle
W 90 Ice	31.04	D 6P	Angle
W -90 Ice	31.71	D 6X	Angle

*** Weight of structure (lbs):

Weight of Angles*Section DLF:	131305.8
Weight of Equipment:	140.0
Total:	131445.8

*** End of Report

Site #:	88011	Engineer:	AAV	Windspeed:	No Ice: 101 mph Ice: 50 mph
Name:	East Killingly North, CT	Date:	08/02/19	Carrier	SIGFOX S.A.

Taper:	-0.12496	Taper Change:	287.5 ft
FW @ Base:	44.93 ft	FW @ Top:	9 ft

Spreadsheet Version Last Updated: 11/12/2014

Joint Label	Symmetry Code	X Coord. (ft)	Y Coord. (ft)	Z Coord. (ft)	X Disp. Rest.	Y Disp. Rest.	Z Disp. Rest.	X Rot. Rest.	Y Rot. Rest.	Z Rot. Rest.	Drop Sub-Brace (Y or Blank)	# Vert	Drop (ft)	Height (ft)	Type	Count	Z-Elev. (ft)	FW (ft)	# Sub-Brace
0	XY-Symmetry	22.463	22.463	0	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed		3	9.375	37.5	1	1	0	44.926	3
1	XY-Symmetry	20.12	20.12	37.5	Free	Free	Free	Free	Free	Free			7.030	25	2	2	37.5	40.24	3
2	XY-Symmetry	18.558	18.558	62.5	Free	Free	Free	Free	Free	Free			7.030	25	2	3	62.5	37.116	3
3	XY-Symmetry	16.996	16.996	87.5	Free	Free	Free	Free	Free	Free				25	A	4	87.5	33.992	2
4	XY-Symmetry	15.434	15.434	112.5	Free	Free	Free	Free	Free	Free				25	A	5	112.5	30.868	2
5	XY-Symmetry	13.872	13.872	137.5	Free	Free	Free	Free	Free	Free				25	A	6	137.5	27.744	2
6	XY-Symmetry	12.31	12.31	162.5	Free	Free	Free	Free	Free	Free				25	A	7	162.5	24.62	2
7	XY-Symmetry	10.748	10.748	187.5	Free	Free	Free	Free	Free	Free				12.5	A	8	187.5	21.496	1
8	XY-Symmetry	9.967	9.967	200	Free	Free	Free	Free	Free	Free				12.5	A	9	200	19.934	1
9	XY-Symmetry	9.186	9.186	212.5	Free	Free	Free	Free	Free	Free				12.5	A	10	212.5	18.372	1
10	XY-Symmetry	8.405	8.405	225	Free	Free	Free	Free	Free	Free				12.5	A	11	225	16.81	1
11	XY-Symmetry	7.624	7.624	237.5	Free	Free	Free	Free	Free	Free				12.5	A	12	237.5	15.248	1
12	XY-Symmetry	6.843	6.843	250	Free	Free	Free	Free	Free	Free		1		10.167	X	13	250	13.686	1
13	XY-Symmetry	6.20776584	6.20776584	260.167	Free	Free	Free	Free	Free	Free		1		10.167	X	14	260.167	12.41553168	1
14	XY-Symmetry	5.57253168	5.57253168	270.334	Free	Free	Free	Free	Free	Free		1		8.583	X	15	270.334	11.14506336	1
15	XY-Symmetry	5.03626584	5.03626584	278.917	Free	Free	Free	Free	Free	Free				8.583	X	16	278.917	10.07253168	1
16	XY-Symmetry	4.5	4.5	287.5	Free	Free	Free	Free	Free	Free						17	287.5	9	
A1	Y-Symmetry	20.12	0	37.5	Free	Free	Free	Free	Free	Free									
A2	X-Symmetry	0	20.12	37.5	Free	Free	Free	Free	Free	Free									
A3	XY-Symmetry	18.558	6.186	62.5	Free	Free	Free	Free	Free	Free									
A4	XY-Symmetry	6.186	18.558	62.5	Free	Free	Free	Free	Free	Free									
A5	XY-Symmetry	16.996	5.665333333	87.5	Free	Free	Free	Free	Free	Free									
A6	XY-Symmetry	5.665333333	16.996	87.5	Free	Free	Free	Free	Free	Free									
A7	Y-Symmetry	15.434	0	112.5	Free	Free	Free	Free	Free	Free									
A8	X-Symmetry	0	15.434	112.5	Free	Free	Free	Free	Free	Free									
A9	Y-Symmetry	13.872	0	137.5	Free	Free	Free	Free	Free	Free									
A10	X-Symmetry	0	13.872	137.5	Free	Free	Free	Free	Free	Free									
A11	Y-Symmetry	12.31	0	162.5	Free	Free	Free	Free	Free	Free									
A12	X-Symmetry	0	12.31	162.5	Free	Free	Free	Free	Free	Free									
A13	Y-Symmetry	10.748	0	187.5	Free	Free	Free	Free	Free	Free									
A14	X-Symmetry	0	10.748	187.5	Free	Free	Free	Free	Free	Free									
A15	Y-Symmetry	9.967	0	200	Free	Free	Free	Free	Free	Free									
A16	X-Symmetry	0	9.967	200	Free	Free	Free	Free	Free	Free									
A17	Y-Symmetry	9.186	0	212.5	Free	Free	Free	Free	Free	Free									
A18	X-Symmetry	0	9.186	212.5	Free	Free	Free	Free	Free	Free									
A19	Y-Symmetry	8.405	0	225	Free	Free	Free	Free	Free	Free									
A20	X-Symmetry	0	8.405	225	Free	Free	Free	Free	Free	Free									
A21	Y-Symmetry	7.624	0	237.5	Free	Free	Free	Free	Free	Free									
A22	X-Symmetry	0	7.624	237.5	Free	Free	Free	Free	Free	Free									
A23	Y-Symmetry	6.843	0	250	Free	Free	Free	Free	Free	Free									
A24	X-Symmetry	0	6.843	250	Free	Free	Free	Free	Free	Free									
H1	XY-Symmetry	20.70575	10.06	28.125	Free	Free	Free	Free	Free	Free									
H2	XY-Symmetry	10.06	20.70575	28.125	Free	Free	Free	Free	Free	Free									
H5	XY-Symmetry	18.9972344	10.1042408	55.47	Free	Free	Free	Free	Free	Free									
H6	XY-Symmetry	10.1042408	18.9972344	55.47	Free	Free	Free	Free	Free	Free									
H7	Y-Symmetry	18.9972344	0	55.47	Free	Free	Free	Free	Free	Free									
H8	X-Symmetry	0	18.9972344	55.47	Free	Free	Free	Free	Free	Free									
H9	XY-Symmetry	17.4352344	9.2907512	80.47	Free	Free	Free	Free	Free	Free									
H10	XY-Symmetry	9.2907512	17.4352344	80.47	Free	Free	Free	Free	Free	Free									
H11	Y-Symmetry	17.4352344	0	80.47	Free	Free	Free	Free	Free	Free									
H12	X-Symmetry	0	17.4352344	80.47	Free	Free	Free	Free	Free	Free									

NOTES	
Types:	
1:	Built up Horizs. w/ A
2:	Built up Horizs. w/ M
A:	Typical A brace
X:	Typical X brace
Drop:	Use only for types 1 & 2

# Sections:	16

Legs

Site No.:	88011
Engineer:	AAV
Date:	08/02/2019
Carrier:	SIGFOX S.A.

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations *(ft)*	Type of Shape [1]	Diameter or Length *(in)*	Thickness [2] *(in)*	F_Y *(ksi)*
1	0.000-37.50	L	8	1.125	36
2	37.50-62.50	L	8	1.125	36
3	62.50-87.50	L	8	1	36
4	87.50-112.5	L	8	0.875	36
5	112.5-137.5	L	8	0.875	36
6	137.5-162.5	L	8	0.75	36
7	162.5-187.5	L	8	0.625	36
8	187.5-200.0	L	6	0.75	36
9	200.0-212.5	L	6	0.75	36
10	212.5-225.0	L	6	0.5625	36
11	225.0-237.5	L	6	0.5625	36
12	237.5-250.0	L	6	0.4375	36
13	250.0-260.2	L	5	0.4375	36
14	260.2-270.3	L	5	0.4375	36
15	270.3-278.9	L	5	0.3125	36
16	278.9-287.5	L	5	0.3125	36

Notes:

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

[2] For Solid Round Leg Shapes Thickness Equals Zero.

[3] Adjust for Bent Plate Leg Shapes.

Diagonals

Site No.:	88011
Engineer:	AAV
Date:	08/02/2019
Carrier:	SIGFOX S.A.

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape [1]	Diameter [2] (in)	Web Length [3] (in)	Flange Length [3] (in)	Thickness (in)	F_y (ksi)	Is Diag. Tension Only? (Y/N)
1	0.000-37.50	2L		5	5	0.3125	36	
2	37.50-62.50	2L		2.5	3.5	0.25	36	
3	62.50-87.50	2L		2.5	3.5	0.25	36	
4	87.50-112.5	2L		2.5	3	0.25	36	
5	112.5-137.5	2L		2.5	3	0.25	36	
6	137.5-162.5	2L		2.5	3	0.25	36	
7	162.5-187.5	2L		2.5	3	0.25	36	
8	187.5-200.0	2L		2.5	2.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2	0.25	36	
11	225.0-237.5	2L		2.5	2	0.25	36	
12	237.5-250.0	2L		2.5	2	0.25	36	
13	250.0-260.2	L		3.5	3.5	0.25	36	
14	260.2-270.3	L		3.5	3.5	0.25	36	
15	270.3-278.9	L		3	3	0.25	36	
16	278.9-287.5	L		3	3	0.25	36	

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.

[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.:	88011
Engineer:	AAV
Date:	08/02/2019
Carrier:	SIGFOX S.A.

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations *(ft)*	Type of Shape [1]	Diameter [2] *(in)*	Web Length [3] *(in)*	Flange Length [3] *(in)*	Thickness *(in)*	F_y *(ksi)*	
1	0.000-37.50	2L		3.5	2.5	0.25	36	
2	37.50-62.50	2L		3.5	2.5	0.25	36	
3	62.50-87.50	2L		3	2.5	0.25	36	
4	87.50-112.5	2L		3	2.5	0.25	36	
5	112.5-137.5	2L		3	2.5	0.25	36	
6	137.5-162.5	2L		2.5	2.5	0.25	36	
7	162.5-187.5	2L		2.5	2.5	0.25	36	
8	187.5-200.0	2L		2.5	2.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2.5	0.25	36	
11	225.0-237.5	2L		2.5	2.5	0.25	36	
12	237.5-250.0	2L		2.5	2.5	0.25	36	
13	250.0-260.2	L		3	2.5	0.25	36	
14	260.2-270.3	2L		3	2.5	0.25	36	
15	270.3-278.9	L		3	2.5	0.25	36	
16	278.9-287.5	C		8	11.5		36	

Notes:

[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle, **2L** = Double-Angle, **C** = Channel, **W** = W Shape

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

[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.:	88011
Engineer:	AAV
Date:	08/02/2019
Carrier:	SIGFOX S.A.

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

Tower Built-up Diag. #	Section Elevations *(ft)*	Type of Shape [1]	Diameter [2] *(in)*	Web Length [3] *(in)*	Flange Length [3] *(in)*	Thickness *(in)*	F_y *(ksi)*
1	0.000-37.50	2L		3.5	3.5	0.25	36
2	0.000-37.50	2L		4	4	0.3125	36
3	37.50-62.50	2L		2.5	2	0.25	36
4	37.50-62.50	2L		2.5	2	0.25	36
5	37.50-62.50	2L		3	2	0.25	36
6	62.50-87.50	2L		2.5	2	0.25	36
7	62.50-87.50	2L		2.5	2	0.25	36
8	62.50-87.50	2L		3	3	0.25	36

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.

[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 Horizontals

Site No.:	88011
Engineer:	AAV
Date:	08/02/2019
Carrier:	SIGFOX S.A.

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations *(ft)*	Type of Shape [1]	Diameter [2] *(in)*	Web Length [3] *(in)*	Flange Length [3] *(in)*	Thickness *(in)*	F_y *(ksi)*	Is Horiz. Tension Only? *(Y/N)*
1	0.000-37.50	2L		2.5	2.5	0.25	36	Y
2	37.50-62.50	2L		2.5	3	0.25	36	
3	62.50-87.50	2L		2.5	3	0.25	36	

Notes:

[1] Type of Horizontal 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.

[3] Applies to Single-Angle and Double-Angle Shapes only.

[4] Applies to Double-Angle Shapes only.

[5] Applies to Single-Angle Shapes only.

Coax (p. 1 of 2)

Orig by MED, Improved by ABL. Last update 6/25/13 MED

Site No.:	88011
Engineer:	AAV
Date:	08/02/19
Carrier:	SIGFOX S.A.

Description	From (ft)	To (ft)	Quantity	Shape	Width or Diameter (in)	Perimeter (in)	Unit Weight (lb/ft)	Part of Face Solidity Ratio (Yes/No)	Include in Wind Load (Yes/No)
1 Ladder	0	287.5	1	Flat	1.5	6.0	6	Yes	Yes
2 COAX CAGE	8.3333	33.3333	2	Round	12	72.0	50	Yes	Yes
3 COAX CAGE	8.3333	33.3333	1	Round	12	72.0	50	Yes	Yes
4 WG1	5	266	1	Flat	1.5	6.0	6	Yes	Yes
5 WG2	5	246	1	Flat	1.5	6.0	6	Yes	Yes
6 WG3	5	277	1	Flat	1.5	6.0	6	Yes	Yes
7 SN1	5	287.5	1	Flat	3.06	16.3	4	Yes	Yes
8 SN2	5	287.5	1	Flat	3.72	25.8	4.92	Yes	Yes
9 TMO1	5	277	1	Flat	3.195	17.0	6.44	Yes	Yes
10 TMO2	5	277	1	Round	0.63	2.5	0.15	No	No
11 VZW1	5	266	1	Round	1.54	4.8	1	Yes	Yes
12 VZW2	5	266	6	Round	1.98	6.2	0.82	Yes	Yes
13 ATT1	5	246	1	Round	0.39	1.2	0.17	Yes	Yes
14 ATT2	5	246	2	Round	0.78	2.5	0.59	Yes	Yes
15 ATT3	5	246	1	Round	3.5	11.0	7.58	Yes	Yes
16 ATT4	5	246	1	Flat	14.46	50.1	43.8	Yes	Yes
17 SIGFOX	5	287.5	1	Round	1.09	4.4	0.33	Yes	Yes

Coax (p. 2 of 2)

Site No.:	88011
Engineer:	AAV
Date:	08/02/19
Carrier:	SIGFOX S.A.

		Exposure	B	α	7	$k_{z\,max}$	2.01
Tia Code:	TIA-222-G	Topo Cat:	1	z_g	1200	$k_{z\,min}$	0.7
f				K_e	0.9	K_t	

Description	From (ft)	To (ft)	Quantity	Face # (1-4, A-D)	Coax Width (in)	Coax Shape (Block / Flat / Ind)	% Exposed	Spacing (in)	Shape (Round/Flat)	Block Width (# coax)	Block Depth (# coax)	Perimeter (in)	Unit Weight (lb/ft)	In Face Zone (Yes/No)	Include in Wind Load (Yes/No)
Ladder	0	287.5	1	B	1.50	Flat	100		Flat	1	1	6.0	6	Yes	Yes
COAX CAGE	8.3333	33.3333	2	1	12.00	Ind	100		Round	2	1	37.7	25	Yes	Yes
COAX CAGE	8.3333	33.3333	2	3	12.00	Ind	100		Round	2	1	37.7	25	Yes	Yes
WG1	5	266	1	4	1.50	Flat	100		Flat	1	1	6.0	6	Yes	Yes
WG2	5	246	1	2	1.50	Flat	100		Flat	1	1	6.0	6	Yes	Yes
WG3	5	277	1	1	1.50	Flat	100		Flat	1	1	6.0	6	Yes	Yes
SN1	5	287.5	4	3	1.54	Block	50	1	Flat	2	2	16.3	4	Yes	Yes
SN2	5	287.5	6	3	1.98	Block	50	1	Flat	3	2	25.8	4.92	Yes	Yes
TMO1	5	277	4	1	1.63	Block	50	1	Flat	2	2	17.0	6.44	Yes	Yes
TMO2	5	277	1	1	0.63	Ind	100		Round	1	1	2.0	0.15	No	No
VZW1	5	266	1	4	1.54	Ind	100		Round	1	1	4.8	1	Yes	Yes
VZW2	5	266	6	4	1.98	Ind	100		Round	6	1	6.2	0.82	Yes	Yes
ATT1	5	246	1	2	0.39	Ind	100		Round	1	1	1.2	0.17	Yes	Yes
ATT2	5	246	2	2	0.78	Ind	100		Round	2	1	2.5	0.59	Yes	Yes
ATT3	5	246	1	2	3.50	Ind	100		Round	1	1	11.0	7.58	Yes	Yes
ATT4	5	246	12	2	2.38	Block	50	1	Flat	6	2	50.1	43.8	Yes	Yes
SIGFOX	5	287.5	1	1	1.09	Ind	100		Round	1	1	3.4	0.33	Yes	Yes
														No	No
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Dishes

Site No.:	88011
Engineer:	AAV
Date:	08/02/19
Carrier:	SIGFOX S.A.

Dish Types	
S	Standard
R	Standard w/ Radome
H	High Performance
G	Grid

Dish Number	Dish Elevation (ft)	Dish Dia. (ft)	Dish Angle (deg)	Dish Type	Joint Orientation	Equipment Staus
1	277	2	45	H	XY	Proposed
2						
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Equipment Label	Attach Label	Equipment Property Set	EIA Antenna Orientation Angle *(deg)*
2' HP 1 @ 277'	15XY	2 ft HP Dish	45

Joint Orientation			
	0°		
XY		Y	
90°			
X		P	

Site #:	88011
Name:	SIGFOX S.A.

Engineer:	AAV
Date:	08/02/19

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
L 1	Leg S1		XY-Symmetry	0P	1P	1	4	0.25	0.25	0.25
L 2	Leg S2		XY-Symmetry	1P	2P	1	4	0.2812	0.2812	0.2812
L 3	Leg S3		XY-Symmetry	2P	3P	1	4	0.2812	0.2812	0.2812
L 4	Leg S4		XY-Symmetry	3P	4P	1	4	0.333333333	0.333333333	0.333333333
L 5	Leg S5		XY-Symmetry	4P	5P	1	4	0.333333333	0.333333333	0.333333333
L 6	Leg S6		XY-Symmetry	5P	6P	1	4	0.333333333	0.333333333	0.333333333
L 7	Leg S7		XY-Symmetry	6P	7P	1	4	0.333333333	0.333333333	0.333333333
L 8	Leg S8		XY-Symmetry	7P	8P	1	4	0.5	0.5	0.5
L 9	Leg S9		XY-Symmetry	8P	9P	1	4	0.5	0.5	0.5
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
D 1	Diag S1		XY-Symmetry	0P	H2P	1	6	0.316	0.316	0.316
D 2	Diag S1		XY-Symmetry	0P	H1P	1	6	0.316	0.316	0.316
D 3	Diag S2		XY-Symmetry	1P	H6P	1	6	0.32	0.32	0.32
D 4	Diag S2		XY-Symmetry	1P	H5P	1	6	0.32	0.32	0.32
D 5	Diag S3		XY-Symmetry	2P	H10P	1	6	0.32	0.32	0.32
D 6	Diag S3		XY-Symmetry	2P	H9P	1	6	0.32	0.32	0.32
D 7	Diag S4		XY-Symmetry	3P	A7P	1	6	0.3	0.3	0.3
D 8	Diag S4		XY-Symmetry	3P	A8P	1	6	0.3	0.3	0.3
D 9	Diag S5		XY-Symmetry	4P	A9P	1	6	0.3	0.3	0.3
D 10	Diag S5		XY-Symmetry	4P	A10P	1	6	0.3	0.3	0.3
D 11	Diag S6		XY-Symmetry	5P	A11P	1	6	0.32	0.32	0.32
D 12	Diag S6		XY-Symmetry	5P	A12P	1	6	0.32	0.32	0.32
D 13	Diag S7		XY-Symmetry	6P	A13P	1	6	0.32	0.64	0.32
D 14	Diag S7		XY-Symmetry	6P	A14P	1	6	0.32	0.64	0.32
D 15	Diag S8		XY-Symmetry	7P	A15P	1	6	0.5	1	0.5
D 16	Diag S8		XY-Symmetry	7P	A16P	1	6	0.5	1	0.5
D 17	Diag S9		XY-Symmetry	8P	A17P	1	6	0.5	1	0.5
D 18	Diag S9		XY-Symmetry	8P	A18P	1	6	0.5	1	0.5
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
D 24	Diag S12		XY-Symmetry	11P	A24P	1	6	0.5	1	0.5
D 25	Diag S13		XY-Symmetry	12P	13Y	2	5	0.52	0.52	0.52
D 26	Diag S13		XY-Symmetry	12P	13X	2	5	0.52	0.52	0.52
D 27	Diag S14		XY-Symmetry	13P	14Y	2	5	0.52	0.52	0.52
D 28	Diag S14		XY-Symmetry	13P	14X	2	5	0.52	0.52	0.52
D 29	Diag S15		XY-Symmetry	14P	15Y	2	5	0.52	0.52	0.52
D 30	Diag S15		XY-Symmetry	14P	15X	2	5	0.52	0.52	0.52
D 31	Diag S16		XY-Symmetry	15P	16Y	2	5	0.52	0.52	0.52
D 32	Diag S16		XY-Symmetry	15P	16X	2	5	0.52	0.52	0.52
H 1	Horiz 1		XY-Symmetry	1P	A1P	1	6	0.5	0.5	0.5
H 2	Horiz 1		XY-Symmetry	1P	A2P	1	6	0.5	0.5	0.5
H 3	Horiz 2		XY-Symmetry	2P	A3P	1	6	0.94	0.94	0.94
H 4	Horiz 2		XY-Symmetry	2P	A4P	1	6	0.94	0.94	0.94
H 5	Horiz 3		XY-Symmetry	3P	A5P	1	6	0.94	0.94	0.94
H 6	Horiz 3		XY-Symmetry	3P	A6P	1	6	0.94	0.94	0.94
H 7	Horiz 4		XY-Symmetry	4P	A7P	1	6	1	1	1
H 8	Horiz 4		XY-Symmetry	4P	A8P	1	6	1	1	1
H 9	Horiz 5		XY-Symmetry	5P	A9P	1	6	1	1	1
H 10	Horiz 5		XY-Symmetry	5P	A10P	1	6	1	1	1
H 11	Horiz 6		XY-Symmetry	6P	A11P	1	6	1	1	1
H 12	Horiz 6		XY-Symmetry	6P	A12P	1	6	1	1	1
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

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
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		Y-Symmetry	13P	13X	3	5	0.5	0.5	0.5
H 26	Horiz 13		X-Symmetry	13P	13Y	3	5	0.5	0.5	0.5
H 27	Horiz 14		Y-Symmetry	14P	14X	1	6	0.5	0.5	0.5
H 28	Horiz 14		X-Symmetry	14P	14Y	1	6	0.5	0.5	0.5
H 29	Horiz 15		Y-Symmetry	15P	15X	3	5	0.5	0.5	0.5
H 30	Horiz 15		X-Symmetry	15P	15Y	3	5	0.5	0.5	0.5
H 31	Horiz 16		Y-Symmetry	16P	16X	3	5	1	1	1
H 32	Horiz 16		X-Symmetry	16P	16Y	3	5	1	1	1
H 35	Horiz 2		Y-Symmetry	A3P	A3X	1	6	1	1	1
H 36	Horiz 2		X-Symmetry	A4P	A4Y	1	6	1	1	1
H 37	Horiz 3		Y-Symmetry	A5P	A5X	1	6	1	1	1
H 38	Horiz 3		X-Symmetry	A6P	A6Y	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		XY-Symmetry	H5P	H7P	1	6	1	2	1
LH 4	LH 2		XY-Symmetry	H6P	H8P	1	6	1	2	1
LH 5	LH 3		XY-Symmetry	H9P	H11P	1	6	1	2	1
LH 6	LH 3		XY-Symmetry	H10P	H12P	1	6	1	2	1
LD 1	LD 1		XY-Symmetry	H1P	1P	1	6	0.92	0.92	0.92
LD 2	LD 1		XY-Symmetry	H2P	1P	1	6	0.92	0.92	0.92
LD 3	LD 2		XY-Symmetry	H1P	A1P	1	6	0.92	0.92	0.92
LD 4	LD 2		XY-Symmetry	H2P	A2P	1	6	0.92	0.92	0.92
LD 7	LD 4		XY-Symmetry	H5P	2P	1	6	0.92	0.92	0.92
LD 8	LD 4		XY-Symmetry	H6P	2P	1	6	0.92	0.92	0.92
LD 9	LD 5		XY-Symmetry	H5P	A3P	1	6	0.92	0.92	0.92
LD 10	LD 5		XY-Symmetry	H6P	A4P	1	6	0.92	0.92	0.92
LD 11	LD 6		XY-Symmetry	A3P	H7P	1	6	0.92	0.92	0.92
LD 12	LD 6		XY-Symmetry	A4P	H8P	1	6	0.92	0.92	0.92
LD 13	LD 7		XY-Symmetry	H9P	3P	1	6	0.92	0.92	0.92
LD 14	LD 7		XY-Symmetry	H10P	3P	1	6	0.92	0.92	0.92
LD 15	LD 8		XY-Symmetry	H9P	A5P	1	6	0.92	0.92	0.92
LD 16	LD 8		XY-Symmetry	H10P	A6P	1	6	0.92	0.92	0.92
LD 17	LD 9		XY-Symmetry	A5P	H11P	1	6	0.92	0.92	0.92
LD 18	LD 9		XY-Symmetry	A6P	H12P	1	6	0.92	0.92	0.92
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 4	DUM 1		XY-Symmetry	A3P	A4XY	1	4	1	1	1
BR 5	DUM 1		XY-Symmetry	A5P	A6P	1	4	1	1	1
BR 6	DUM 1		XY-Symmetry	A5P	A6XY	1	4	1	1	1
BR 7	DUM 1		XY-Symmetry	A7P	A8P	1	4	1	1	1
BR 9	DUM 1		XY-Symmetry	A9P	A10P	1	4	1	1	1
BR 11	DUM 1		XY-Symmetry	A11P	A12P	1	4	1	1	1
BR 13	DUM 1		XY-Symmetry	A13P	A14P	1	4	1	1	1
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

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
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 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 66	DUM 1		XY-Symmetry	H7P	H8P	1	4	1	1	1
BR 67	DUM 1		XY-Symmetry	H9P	H10P	1	4	1	1	1
BR 68	DUM 1		XY-Symmetry	H9P	H10XY	1	4	1	1	1
BR 69	DUM 1		XY-Symmetry	H11P	H12P	1	4	1	1	1

Task:	Determine Point Loads	
Tower Height:	287.5	ft
Gh:	0.85	
Wind Speed:	100.697567	mph, Vasd
Ice Wind Speed:	50	
Ice Density:	56	
Tower Type:	S	

Ice Thick:	0.75	in
Topographic Category (1-4):	1	
Exposure Category (B-D):	B	
Structure Class (1-3):	2	
Height of Crest (H) if Topo Cat. >1:	0	ft
Load Factor; Wind:	1.6	
Load Factor; Dead:	1.2	

Site No.:	88011
Engineer:	AAV
Date:	08/02/2019
Carrier:	SIGFOX S.A.

No.	Carrier	Elevation (ft)	Quantity	# of Azimuths		Manufacturer	Model	Height (in)	Width (in)	Depth (in)	Weight (lbs/ea)	Flat/Round (F/R)	Reduction	C_AA_C (ft^2)	Weight (k)	Ka
1		287.5	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		287.5	1	4			Platform w/ HR						1.000	80.00	9.00	1
2		270	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		270	1	4			Catwalk						1.000	70.00	8.00	1
3		237.5	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		237.5	1	1			Rest Platform						1.000	15.00	0.50	1
4		200	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		200	1	3			Access Platform						1.000	45.00	5.00	1
5		187.5	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		187.5	1	1			Rest Platform						1.000	15.00	0.50	1
6		137.5	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		137.5	1	1			Rest Platform						1.000	15.00	0.50	1
7		87.5	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		87.5	1	3			Access Platform						1.000	45.00	5.00	1
8		37.5	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
		37.5	1	1			Rest Platform						1.000	15.00	0.50	1
9																1
																1
10	Sprint Nextel	287.5	6	3		Alcatel-Lucent	RRH2x50-08	15.7	13	9.8	52.9	F	0.500			0.8
	Sprint Nextel	287.5	3	3		Alcatel-Lucent	1900 MHz 4X45 RRH						0.500	2.32	0.06	0.8
11	Sprint Nextel	287.5	3	3		Alcatel-Lucent	TD-RRH8x20-25 w/ Solar Shield	26.1	18.6	6.7	70	F	0.500			0.8
	Sprint Nextel	287.5	3	3		RFS	APXVTM14-ALU-I20						0.660	6.37	0.06	0.8
12	Sprint Nextel	287.5	3	3		Commscope	NNVV-65B-R4	72	19.6	7.8	77.4	F	0.640			0.8
	Sprint Nextel	287.5	3	3			Round Sector Frame						0.750	14.40	0.30	0.75
13	T-Mobile	277	8	4		Commscope	CBC6AE71Q-DS-43	10.5	7.1	7	23.6	F	0.500			0.8
	T-Mobile	277	4	4		Ericsson	Radio 4478 B71						0.500	1.65	0.06	0.8
14	T-Mobile	277	4	4		Ericsson	RRUS 11 B12	19.7	17	7.2	50.7	F	0.500			0.8
	T-Mobile	277	4	4		Ericsson	RRUS 11 B4						0.500	2.79	0.05	0.8
15	T-Mobile	277	4	4		Ericsson	AIR32 B66Aa/B2a	56.6	12.9	8.7	132.2	F	0.780			0.8
	T-Mobile	277	4	4		RFS	APX16DWV-16DWVS-E-A20						0.700	6.59	0.04	0.8
16	T-Mobile	277	4	4		RFS	APXVAA24_43-U-A20	96	24	8.5	101.4	F	0.720			0.8
	T-Mobile	277	4	4			Flat Sector Frame						0.670	17.90	0.40	0.75
17	AT&T Mobility	246	6	3		Powerwave Allgon	TT19-08BP111-001	9.9	6.7	5.4	16	F	0.500			0.8
	AT&T Mobility	246	3	3		Raycap	DC2-48-60-0-9E						0.500	0.88	0.02	0.8
18	AT&T Mobility	246	1	1		Raycap	FC12-PC6-10E	15.5	16.3	6.6	20.4	F	0.500			0.8
	AT&T Mobility	246	3	3		Ericsson	RRUS-11						0.500	3.79	0.06	0.8
19	AT&T Mobility	246	6	3		Powerwave Allgon	P65-15-XLH-RR	51	12	6	41	F	0.660			0.8
	AT&T Mobility	246	1	1		Kathrein Scala	800 10766						0.680	11.31	0.06	0.8
20	AT&T Mobility	246	2	2		KMW	AM-X-CD-17-65-00T-RET	96	11.8	6	59.5	F	0.680			0.8
	AT&T Mobility	246	3	3			Flat Sector Frame						0.670	17.90	0.40	0.75
21	US DOJ	210	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
	US DOJ	210	1	1		Andrew	DB264						1.000	5.63	0.04	1
22	US DOJ	210	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
	US DOJ	210	1	1			Flat Side Arm						1.000	6.30	0.15	1
23	Verizon Wireless	50	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
	Verizon Wireless	50	1	1		MicroPulse	GPS-QBW-26N						1.000	0.09	0.00	1
24	Verizon Wireless	50	1	1			-	0.0001	0.0001	0.0001	0.0001	F	0.000			1
	Verizon Wireless	50	1	1			Stand-Off						1.000	2.50	0.08	1
25	SIGFOX S.A.	290	1	1				0.0001	0.0001	0.0001	0.0001	F	0.000			1
	SIGFOX S.A.	290	1	1		Procom	CXL 900-3LW						1.000	0.13	0.00	1
26	SIGFOX S.A.	290	1	1		Generic	5" x 3" x 2" Cavity Filter	5.3	3.2	1.9	1.5	F	1.000			1
	SIGFOX S.A.	290	1	1									0.000	0.00	0.00	1
27	SIGFOX S.A.	290	1	1		Generic	Low Noise Amplifier	5	4	2	2	F	1.000			1
	SIGFOX S.A.	290	1	1			Side Arm						1.000	6.30	0.15	1
28	VERIZON WIRELESS	266	3	3		Samsung	B2/B66A RRH-BR049	15	15	10	84.4	F	0.500			0.8
	VERIZON WIRELESS	266	1	1									0.000	0.00	0.00	1
29	VERIZON WIRELESS	266	3	3		Samsung	B5/B13 RRH-BR04C	15	15	8.1	70.3	F	0.500			0.8
	VERIZON WIRELESS	266	1	1									0.000	0.00	0.00	1
30	VERIZON WIRELESS	266	2	2		Raycap	RC3DC-3315-PF-48	28.9	15.7	10.3	32	F	0.670			0.8
	VERIZON WIRELESS	266	1	1									0.000	0.00	0.00	1
31	VERIZON WIRELESS	266	6	3		Amphenol Antel	LPA-80063-4CF-EDIN-X	47.4	15.2	13.1	20	F	0.750			0.8
	VERIZON WIRELESS	266	1	1									0.000	0.00	0.00	1
32	VERIZON WIRELESS	266	2	2		Commscope	JAHH-65B-R3B	72	13.8	8.2	60.6	F	0.690			0.8
	VERIZON WIRELESS	266	1	1									0.000	0.00	0.00	1
33	VERIZON WIRELESS	266	4	3		Commscope	JAHH-45B-R3B	72	18	7	83.8	F	0.630			0.8
	VERIZON WIRELESS	266	3	3			Flat Sector Frames						0.670	17.90	0.40	0.75
34	VERIZON WIRELESS	266	3	3	Proposed	Commscope	CBC78T-DS-43-2X	9.6	6.9	6.4	20.7	F	0.500			0.8
	VERIZON WIRELESS	266	1	1									0.000	0.00	0.00	1
35																1
																1
36																1
																1
37																1
																1
38																1
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39																1
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46																1
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47																1
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48																1
																1
49																1
																1
50																1
																1

No.	Elevation	C_AA_C	C_AA_C (Ice)	Force	Force (Ice)	Weight	Weight (Ice)	60 Azi	Force	F (Ice)	Height	Sum of Forces (No I	
	(ft)	(ft^2)	(ft^2)	(lb)	(lb)	(lb)	(lb)	Mult.	mean	mean	Flag	60 Azi.	180 Azi.
1	287.5	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00			
	287.5	80.00	108.00	3207.921	667.328	10800	14040	1.00	1764.36	367.03	1.5034783	3207.921154	
2	270	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5034793		
	270	70.00	94.50	2757.015	573.528	9600	12480	1.00	1516.36	315.44	1.5037037	2757.015087	
3	237.5	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5037047		
	237.5	15.00	20.25	569.532	118.477	600	780	1.00	313.24	65.16	1.5042105	569.5318722	
4	200	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5042115		
	200	45.00	60.75	1626.730	338.401	6000	7800	1.00	894.70	186.12	1.5050000	1626.729704	
5	187.5	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5050010		
	187.5	15.00	20.25	532.336	110.739	600	780	1.00	292.78	60.91	1.5053333	532.3361207	
6	137.5	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5053343		
	137.5	15.00	20.25	487.193	101.348	600	780	1.00	267.96	55.74	1.5072727	487.1925388	
7	87.5	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5072737		
	87.5	45.00	60.75	1284.511	267.211	6000	7800	1.00	706.48	146.97	1.5114286	1284.510619	
8	37.5	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5114296		
	37.5	15.00	20.25	336.109	69.919	600	780	1.00	184.86	38.46	1.5266667	336.1090605	
9								1.00			1.5266677		
								1.00					
10	287.5	4.08	5.82	163.684	35.957	381	522	1.00	90.03	19.78			
	287.5	3.48	4.70	111.636	23.223	216	281	1.00	61.40	12.77		275.319833	
11	287.5	4.85	6.47	194.665	39.992	252	431	1.00	107.07	22.00			
	287.5	12.61	17.03	404.602	84.167	202	263	1.00	222.53	46.29		874.5867718	
12	287.5	18.85	23.16	755.803	143.101	279	710	1.00	415.69	78.71			
	287.5	32.40	43.74	974.406	202.701	1080	1404	1.00	535.92	111.49	1.5034783	2604.796155	
13	277	2.29	3.21	90.724	19.629	227	300	1.00	49.90	10.80	1.5034793		
	277	3.30	4.46	104.742	21.789	288	374	1.00	57.61	11.98	1.5034793	195.4655759	
14	277	4.47	6.10	177.162	37.299	243	383	1.00	97.44	20.51	1.5034803		
	277	5.58	7.53	177.109	36.843	243	316	1.00	97.41	20.26	1.5036101	549.7370135	
15	277	16.25	20.30	644.665	124.122	635	985	1.00	354.57	68.27	1.5036111		
	277	18.45	24.91	585.667	121.833	195	254	1.00	322.12	67.01	1.5036101	1780.068928	
16	277	46.69	55.69	1852.601	340.480	487	1179	1.00	1018.93	187.26	1.5036111		
	277	47.97	64.76	1427.467	296.949	1920	2496	1.00	785.11	163.32	1.5036101	5060.137347	
17	246	1.33	2.18	50.878	12.890	115	161	1.00	27.98	7.09	1.5036111		
	246	1.32	1.78	40.500	8.425	72	94	1.00	22.27	4.63	1.5040650	91.37790467	
18	246	0.84	1.18	32.299	6.955	24	97	1.00	17.76	3.82	1.5040660		
	246	5.69	7.67	174.426	36.285	216	281	1.00	95.93	19.96	1.5040650	298.1025482	
19	246	17.20	21.83	659.811	129.008	295	528	1.00	362.90	70.95	1.5040660		
	246	7.69	10.38	235.967	49.087	72	94	1.00	129.78	27.00	1.5040650	1193.880616	
20	246	12.31	13.82	471.981	81.702	143	496	1.00	259.59	44.94	1.5040660		
	246	35.98	48.57	1034.905	215.286	1440	1872	1.00	569.20	118.41	1.5040650	2700.766116	
21	210	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5040660		
	210	5.63	7.60	206.379	42.932	48	62	1.00	113.51	23.61	1.5047619	206.3789333	
22	210	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5047629		
	210	6.30	8.51	230.939	48.041	180	234	1.00	127.02	26.42	1.5047619	437.3180594	
23	50	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5047629		
	50	0.09	0.12	2.189	0.455			1.00	1.20	0.25	1.5200000	2.189415822	
24	50	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5200010		
	50	2.50	3.38	60.817	12.651	96	125	1.00	33.45	6.96	1.5200000	63.00652198	
25	290	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5200010		
	290	0.13	0.18	5.226	1.087	2	2	1.00	2.87	0.60	1.5034483	5.225783087	
26	290	0.14	0.31	5.681	1.925	2	9	1.00	3.12	1.06	1.5034493		
	290	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5034483	10.90714727	
27	290	0.17	0.35	6.700	2.153	2	10	1.00	3.68	1.18	1.5034493		
	290	6.30	8.51	253.249	52.682	180	234	1.00	139.29	28.98	1.5034483	270.8563572	
28	266	2.25	3.18	88.241	19.195	304	432	1.00	48.53	10.56	1.5034493		
	266	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5037594	88.24123635	
29	266	2.25	3.18	88.241	19.195	253	368	1.00	48.53	10.56	1.5037604		
	266	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5037594	176.4824727	
30	266	4.05	5.45	158.964	32.933	77	227	1.00	87.43	18.11	1.5037604		
	266	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5037594	335.4469553	
31	266	22.11	28.58	867.096	172.729	144	407	1.00	476.90	95.00	1.5037604		
	266	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5037594	1202.543255	
32	266	10.06	12.07	394.580	72.943	145	466	1.00	217.02	40.12	1.5037604		
	266	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5037594	1597.123552	
33	266	22.98	28.09	901.331	169.765	402	827	1.00	495.73	93.37	1.5037604		
	266	35.98	48.57	1058.277	220.148	1440	1872	1.00	582.05	121.08	1.5037594	3556.731984	
34	266	0.72	1.09	28.112	6.574	75	114	1.00	15.46	3.62	1.5037604		
	266	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	1.5037594	3584.843681	
35					#VALUE!			1.00	#VALUE!	#VALUE!	1.5037604		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
36					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
37					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
38					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
39					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
40					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
41					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
42					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
43					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
44					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
45					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
46					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
47					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
48					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
49					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	
50					#VALUE!			1.00	#VALUE!	#VALUE!	#DIV/0!		
								1.00	#VALUE!	#VALUE!	#DIV/0!	#VALUE!	

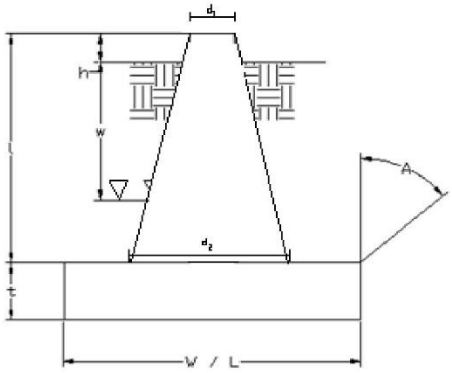
Foundation

Site No.:	88011
Engineer:	AAV
Date:	08/02/19
Carrier:	SIGFOX S.A.

Design Loads (Factored)

Compression/Leg:	478.73	k
Uplift/Leg:	355.69	k
Shear/Leg	65.24	k

Face Width @ Top of Pier (d_1):	3.50	ft
Face Width @ Bottom of Pier (d_2):	7.50	ft
Total Length of Pier (l):	8.50	ft
Height of Pedestal Above Ground (h):	0.50	ft
Width of Pad (W):	14.75	ft
Length of Pad (L):	14.75	ft
Thickness of Pad (t):	3.25	ft
Water Table Depth (w):	99.00	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Soil (Above Water Table):	120.0	pcf
Unit Weight of Soil (Below Water Table):	57.6	pcf
Friction Angle of Uplift (A):	30	°
Ultimate Compressive Bearing Pressure:	30000	psf
Ultimate Skin Friction:	1007	psf



Volume Pier (Total):	268.46	ft³
Volume Pad (Total):	707.08	ft³
Volume Soil (Total):	2747.35	ft³
Volume Pier (Buoyant):	0.00	ft³
Volume Pad (Buoyant):	0.00	ft³
Volume Soil (Buoyant):	0.00	ft³
Weight Pier:	40.27	k
Weight Pad:	106.06	k
Weight Soil:	329.68	k
Uplift Skin Friction:	144.82	k

Uplift Check

ϕs Uplift Resistance (k)	Ratio	Result
465.62	0.76	**OK**

Axial Check

ϕs Axial Resistance (k)	Ratio	Result
4895.16	0.10	**OK**

Anchor Bolt Check

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

Usage Ratio	Result
0.52	**OK**

EXHIBIT 3:

General Power Density Table report (RF Emissions Analysis Report)

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

RF EMISSIONS COMPLIANCE REPORT

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

ATC Site Name: East Killingly North
Sigfox S.A. Site Name: CT9123_ATC_88011
Sigfox S.A. Site #: CT9123
1375 NORTH ROAD
DAYVILLE, CT
2/7/2019

Report Status:

Sigfox S.A. Is Compliant

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

Prepared By:

Sitesafe, LLC

8618 Westwood Center Drive,
Suite 315

Vienna, VA 22182

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

Engineering Statement in Re:
Electromagnetic Energy Analysis
T-Squared Site Services
DAYVILLE, 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 "East Killingly North" ("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 1.561% 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
East Killingly North
Site Summary

Carrier	Area Maximum Percentage MPE
AT&T Mobility, LLC	0.219 %
AT&T Mobility, LLC	0.162 %
AT&T Mobility, LLC	0.154 %
AT&T Mobility, LLC	0.187 %
Sigfox S.A. (Proposed)	0 %
Sprint	0.031 %
Sprint	0.031 %
Sprint	0.018 %
Sprint	0.018 %
Sprint	0.056 %
T-Mobile	0.048 %
T-Mobile	0.062 %
T-Mobile	0.094 %
T-Mobile	0.054 %
US Department of Justice	0.024 %
Verizon Wireless	0.096 %
Verizon Wireless	0.139 %
Verizon Wireless	0.051 %
Verizon Wireless	0.117 %
Composite Site MPE:	1.561 %

AT&T Mobility, LLC
East Killingly North
Carrier Summary

Frequency:	2100	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	2.19239	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.21924	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density (µW/cm^2)**	**Percent of MPE**	**Max Power Density (µW/cm^2)**	**Percent of MPE**
Kathrein-Scala	80010766	246	0	6013	1.999551	0.199955	2.010628	0.201063
KMW	AM-X-CD-17-65-0ET	246	120	5422	0.689152	0.068915	0.696437	0.069644
KMW	AM-X-CD-17-65-0ET	246	240	5422	0.685398	0.06854	0.696437	0.069644

AT&T Mobility, LLC
East Killingly North
Carrier Summary

Frequency:	737	MHz
Maximum Permissible Exposure (MPE):	491.33	µW/cm^2
Maximum power density at ground level:	0.79354	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.16151	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density (µW/cm^2)**	**Percent of MPE**	**Max Power Density (µW/cm^2)**	**Percent of MPE**
Kathrein-Scala	80010766	246	0	3768	0.425493	0.0866	0.74463	0.151553
KMW	AM-X-CD-17-65-0ET	246	120	4668	0.429029	0.087319	0.434473	0.088427
KMW	AM-X-CD-17-65-0ET	246	240	4668	0.428973	0.087308	0.434473	0.088427

AT&T Mobility, LLC
East Killingly North
Carrier Summary

Frequency:	1900	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	1.53628	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.15363	%

					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	P65-15-XLH-RR	246	0	4945	0.771052	0.077105	1.40348	0.140348
Powerwave	P65-15-XLH-RR	246	120	4945	0.771052	0.077105	1.40348	0.140348
Powerwave	P65-15-XLH-RR	246	240	4945	0.767132	0.076713	1.40348	0.140348

AT&T Mobility, LLC
East Killingly North
Carrier Summary

Frequency:	850	MHz
Maximum Permissible Exposure (MPE):	566.67	µW/cm^2
Maximum power density at ground level:	1.06098	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.18723	%

					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	P65-15-XLH-RR	246	0	1456	1.050109	0.185313	1.058475	0.18679
Powerwave	P65-15-XLH-RR	246	120	1456	1.050109	0.185313	1.058475	0.18679
Powerwave	P65-15-XLH-RR	246	240	1456	1.051448	0.18555	1.058475	0.18679

Sigfox S.A. (Proposed)
East Killingly North
Carrier Summary

Frequency:	905.2	MHz
Maximum Permissible Exposure (MPE):	603.47	µW/cm^2
Maximum power density at ground level:	0.00063	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.0001	%

					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**
Procom	CXL 900-3LW	290	0	1.22	0.000631	0.000105	0.000631	0.000105

Sprint
East Killingly North
Carrier Summary

Frequency:	1990	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.30589	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.03059	%

					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**
Commscope	NNVV-65B-R4	306	0	2781	0.237177	0.023718	0.303292	0.030329
Commscope	NNVV-65B-R4	306	120	2781	0.236543	0.023654	0.303292	0.030329
Commscope	NNVV-65B-R4	306	240	2781	0.237177	0.023718	0.303292	0.030329

Sprint
East Killingly North
Carrier Summary

Frequency:	1900	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.30589	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.03059	%

					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**
Commscope	NNVV-65B-R4	306	0	2781	0.237177	0.023718	0.303292	0.030329
Commscope	NNVV-65B-R4	306	120	2781	0.236543	0.023654	0.303292	0.030329
Commscope	NNVV-65B-R4	306	240	2781	0.237177	0.023718	0.303292	0.030329

Sprint
East Killingly North
Carrier Summary

Frequency:	869	MHz
Maximum Permissible Exposure (MPE):	579.33	µW/cm^2
Maximum power density at ground level:	0.10237	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.01767	%

					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**
Commscope	NNVV-65B-R4	306	0	951	0.091588	0.015809	0.092383	0.015946
Commscope	NNVV-65B-R4	306	120	951	0.091588	0.015809	0.092383	0.015946
Commscope	NNVV-65B-R4	306	240	951	0.091413	0.015779	0.092383	0.015946

Sprint
East Killingly North
Carrier Summary

Frequency:	862	MHz
Maximum Permissible Exposure (MPE):	574.67	µW/cm^2
Maximum power density at ground level:	0.10237	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.01781	%

					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**
Commscope	NNVV-65B-R4	306	0	951	0.091588	0.015938	0.092383	0.016076
Commscope	NNVV-65B-R4	306	120	951	0.091588	0.015938	0.092383	0.016076
Commscope	NNVV-65B-R4	306	240	951	0.091413	0.015907	0.092383	0.016076

Sprint
East Killingly North
Carrier Summary

Frequency:	2500	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.55889	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.05589	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density (µW/cm^2)**	**Percent of MPE**	**Max Power Density (µW/cm^2)**	**Percent of MPE**
RFS	APXVTM14-C-I20	306	0	6168	0.230297	0.02303	0.43079	0.043079
RFS	APXVTM14-C-I20	306	120	6168	0.230297	0.02303	0.43079	0.043079
RFS	APXVTM14-C-I20	306	240	6168	0.230208	0.023021	0.43079	0.043079

T-Mobile
East Killingly North
Carrier Summary

Frequency:	700	MHz
Maximum Permissible Exposure (MPE):	466.67	µW/cm^2
Maximum power density at ground level:	0.22604	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.04844	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density (µW/cm^2)**	**Percent of MPE**	**Max Power Density (µW/cm^2)**	**Percent of MPE**
RFS	APXVAA24-43-U-A20	277	0	1497	0.11526	0.024699	0.185669	0.039786
RFS	APXVAA24-43-U-A20	277	90	1497	0.11526	0.024699	0.185669	0.039786
RFS	APXVAA24-43-U-A20	277	180	1497	0.11526	0.024699	0.185669	0.039786
RFS	APXVAA24-43-U-A20	277	270	1497	0.11526	0.024699	0.185669	0.039786

T-Mobile
East Killingly North
Carrier Summary

Frequency:	600	MHz
Maximum Permissible Exposure (MPE):	400	µW/cm^2
Maximum power density at ground level:	0.24978	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.06244	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density (µW/cm^2)**	**Percent of MPE**	**Max Power Density (µW/cm^2)**	**Percent of MPE**
RFS	APXVAA24-43-U-A20	277	0	1301	0.119347	0.029837	0.202879	0.05072
RFS	APXVAA24-43-U-A20	277	90	1301	0.119347	0.029837	0.202879	0.05072
RFS	APXVAA24-43-U-A20	277	180	1301	0.119347	0.029837	0.202879	0.05072
RFS	APXVAA24-43-U-A20	277	270	1301	0.119347	0.029837	0.202879	0.05072

T-Mobile
East Killingly North
Carrier Summary

Frequency:	2100	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.94359	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.09436	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density (µW/cm^2)**	**Percent of MPE**	**Max Power Density (µW/cm^2)**	**Percent of MPE**
Ericsson	AIR 32 B2A-B66AA	277	0	2313	0.602369	0.060237	0.602369	0.060237
Ericsson	AIR 32 B2A-B66AA	277	90	2313	0.602369	0.060237	0.602369	0.060237
Ericsson	AIR 32 B2A-B66AA	277	180	2313	0.602369	0.060237	0.602369	0.060237
Ericsson	AIR 32 B2A-B66AA	277	270	2313	0.602369	0.060237	0.602369	0.060237

T-Mobile
East Killingly North
Carrier Summary

Frequency:	1900	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.54139	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.05414	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density (µW/cm^2)**	**Percent of MPE**	**Max Power Density (µW/cm^2)**	**Percent of MPE**
Ericsson	AIR 32 B2A-B66AA	277	0	2313	0.138434	0.013843	0.159642	0.015964
RFS	APX16DWV-16DWVS-C-A20	277	0	2536	0.145595	0.01456	0.173407	0.017341
Ericsson	AIR 32 B2A-B66AA	277	90	2313	0.138434	0.013843	0.159642	0.015964
RFS	APX16DWV-16DWVS-C-A20	277	90	2536	0.145595	0.01456	0.173407	0.017341
Ericsson	AIR 32 B2A-B66AA	277	180	2313	0.138434	0.013843	0.159642	0.015964
RFS	APX16DWV-16DWVS-C-A20	277	180	2536	0.145595	0.01456	0.173407	0.017341
Ericsson	AIR 32 B2A-B66AA	277	270	2313	0.138434	0.013843	0.159642	0.015964
RFS	APX16DWV-16DWVS-C-A20	277	270	2536	0.145595	0.01456	0.173407	0.017341

US Department of Justice
East Killingly North
Carrier Summary

Frequency:	150	MHz
Maximum Permissible Exposure (MPE):	200	µW/cm^2
Maximum power density at ground level:	0.04841	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.0242	%

					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	DB264	210	0	100	0.048408	0.024204	0.048408	0.024204

Verizon Wireless
East Killingly North
Carrier Summary

Frequency:	2100	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	0.95755	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.09575	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density (µW/cm^2)**	**Percent of MPE**	**Max Power Density (µW/cm^2)**	**Percent of MPE**
ANDREW	SBNHH-1D65B	267	0	5154	0.59012	0.059012	0.916785	0.091679
ANDREW	SBNHH-1D65B	267	120	5154	0.591092	0.059109	0.916785	0.091679
ANDREW	SBNHH-1D65B	267	240	5154	0.59012	0.059012	0.916785	0.091679

Verizon Wireless
East Killingly North
Carrier Summary

Frequency:	1900	MHz
Maximum Permissible Exposure (MPE):	1000	µW/cm^2
Maximum power density at ground level:	1.3904	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.13904	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density (µW/cm^2)**	**Percent of MPE**	**Max Power Density (µW/cm^2)**	**Percent of MPE**
ANDREW	SBNHH-1D65B	267	0	4583	1.053228	0.105323	1.370923	0.137092
ANDREW	SBNHH-1D65B	267	120	4583	1.053228	0.105323	1.370923	0.137092
ANDREW	SBNHH-1D65B	267	240	4583	1.038438	0.103844	1.370923	0.137092

Verizon Wireless
East Killingly North
Carrier Summary

Frequency:	751	MHz
Maximum Permissible Exposure (MPE):	500.67	µW/cm^2
Maximum power density at ground level:	0.25421	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.05077	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density (µW/cm^2)**	**Percent of MPE**	**Max Power Density (µW/cm^2)**	**Percent of MPE**
ANDREW	SBNHH-1D65B	267	0	1362	0.131614	0.026288	0.214655	0.042874
ANDREW	SBNHH-1D65B	267	120	1362	0.131438	0.026253	0.214655	0.042874
ANDREW	SBNHH-1D65B	267	240	1362	0.131614	0.026288	0.214655	0.042874

Verizon Wireless
East Killingly North
Carrier Summary

Frequency:	850	MHz
Maximum Permissible Exposure (MPE):	566.67	µW/cm^2
Maximum power density at ground level:	0.66388	µW/cm^2
Highest percentage of Maximum Permissible Exposure:	0.11715	%

					On Axis		Area	
Antenna Make	**Model**	**Height (feet)**	**Orientation (degrees true)**	**ERP (Watts)**	**Max Power Density (µW/cm^2)**	**Percent of MPE**	**Max Power Density (µW/cm^2)**	**Percent of MPE**
Antel	LPA-80063-4CF	267	0	1596	0.234813	0.041438	0.322334	0.056882
Antel	LPA-80063-4CF	267	0	1596	0.234813	0.041438	0.322334	0.056882
Antel	LPA-80063-4CF	267	120	1596	0.234813	0.041438	0.322334	0.056882
Antel	LPA-80063-4CF	267	120	1596	0.234813	0.041438	0.322334	0.056882
Antel	LPA-80063-4CF	267	240	1596	0.2346	0.0414	0.322334	0.056882
Antel	LPA-80063-4CF	267	240	1596	0.2346	0.0414	0.322334	0.056882

EXHIBIT 4:

Letter of Authorization

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

AMERICAN TOWER®
CORPORATION

LETTER OF AUTHORIZATION

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

ADDRESS: See Site List Below

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

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

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

Sites Authorized (continued on the next page):

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

AMERICAN TOWER®
CORPORATION

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

Signature: _____

Margaret Robinson, Senior Counsel
US Tower Division

NOTARY BLOCK

COMMONWEALTH OF MASSACHUSETTS
County of Middlesex

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

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

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

Notary Public _____
My Commission Expires: March 14, 2025

* 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 Planning Department

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

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

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

FedEx Shipment Receipt

Address Information

Ship to:	**Ship from:**
Ann-Marie L. Aubrey	T-Squared Site Services, LLC
Killingly Town Hall	
172 Main Street	2500 Highland Rd
	Suite 201
KILLINGLY, CT	Hermitage, PA
06239	16148
US	US
(860) 779-5311	7243087855

Shipment Information:
Tracking no.: 775654244638
Ship date: 07/08/2019
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 6:

Proof of Mailing to Tower Owner/Property Owner

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

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

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

FedEx Shipment Receipt

Address Information

Ship to:	**Ship from:**
Mr. Jason Hastie	T-Squared Site Services, LLC
American Tower Corp.	
10 Presidential Way	2500 Highland Rd
	Suite 201
WOBURN, MA	Hermitage, PA
01801	16148
US	US
7819267485	7243087855

Shipment Information:
Tracking no.: 775654177740
Ship date: 07/08/2019
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

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

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

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

FedEx Shipment Receipt

Address Information

Ship to:	**Ship from:**
The Honorable Jonathan Cesolini	T-Squared Site Services, LLC
Town of Killingly	
Killingly Town Hall	2500 Highland Rd
172 Main Street	Suite 201
KILLINGLY, CT	Hermitage, PA
06239	16148
US	US
(860) 779-5300	7243087855

Shipment Information:
Tracking no.: 775964041676
Ship date: 08/12/2019
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.