



1280 Route 46 West, Suite 9, Parsippany NJ, 07054

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

Re: Notice of Exempt Modification Application
3965 Congress Street, Fairfield, CT 06824

October 12, 2017

Dear Ms. Bachman:

Sprint Spectrum Realty Company, L.P. ("Sprint"), is submitting to the Connecticut Siting Council for a Notice of Exempt Modification for Proposed Modifications to an Existing Telecommunications Facility located at the above-referenced site. Sprint currently maintains 3 existing panel antenna and 6 remote radio units at the 138.4' level of the Tower. Sprint proposes to add 3 panel antennas and 6 remote radio unit at 138.4' tower level as well as 1 fiber cable and 3 fiber jumpers, 30 antenna to RRU jumper cables, 4 new batteries in existing ground based battery cabinet and one new radio equipment in existing ground based radio cabinet.

The Sprint installation was initially approved on 4/02/1998 by Fairfield Zoning and a Fairfield Building permit was issued on 5/27/1998. The structural documents enclosed have been modified where necessary to reflect the current reality of the installations on the Tower.

If you have any questions, please feel free to contact me.

Thank you,

By: *Paul F. Sagristano*

Paul F. Sagristano
Cherundolo Consulting
917.841.0247
psagristano@lrivassoc.com



1280 Route 46 West, Suite 9, Parsippany NJ, 07054

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

October 16, 2017

Re: Notice of Exempt Modification –
Existing Sprint Telecommunication Facility
3965 Congress Street
Fairfield, CT 06824

Latitude : N41.1875
Longitude: W73.2991

Dear Ms. Bachman:

Sprint currently maintains 3 existing panel antenna and 6 remote radio units at the 139.4' centerline level of the existing monopole. Sprint proposes to add 3 panel antenna and 6 remote radio units at 139.4' centerline on the tower. Sprint further proposes to add 1 fiber cable, 30 antenna to RRU jumpers and 1 ground based Radio Unit in existing ground based cabinet and 4 new batteries in existing ground based battery cabinet. Sprint is performing a new high-performance upgrade for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

The facility noted above was approved by the Fairfield P&Z on April 2, 1998. A copy of this approval is attached. The original Building permit for Sprint's Tower installation was issued May 27, 1998, also attached.

Please accept this letter as notification to the Council, pursuant to R.C.S.A. Section 16-50j-73, for construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter is being sent to William Kessler, the Fire Marshall for the Fairfield Fire Department (the property owner), to Michael Tetreau, First Selectman of the Town of Fairfield and Jim Wendt, Planning director for the Town of Fairfield.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in Sprint's operations at the site. Also included is documentation of the structural sufficiency of the tower with proposed modifications to accommodate the revised antenna configuration.

Existing Facility

The Fairfield facility is located at 3965 Congress Street, Fairfield, CT, the Site coordinates are: N41. 1875, W – 73.2991. The facility is owned by the Town of Fairfield Fire Department, The existing facility consists of a 150' Monopole. Sprint currently operates wireless communications equipment on a concrete slab at the facility and has 3 antennas and 9 RRU's mounted on at a centerline of 138.4' feet.

Statutory Considerations

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

1. The height of the overall structure will be unaffected.
2. The proposed changes will not require an extension of the property boundaries.
3. The proposed additions will not increase the noise level at the existing facility by six decibels or more, or to levels that exceed state and/or local criteria
4. The changes will not increase the calculated “worst case” power density for the combined operations at the site to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, Sprint respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A Section §16-50j-72(b)(2).

Respectfully submitted,

Paul F. Sagristano

Paul F. Sagristano
Charles Cherundolo Consulting
917-841-0247
psagristano@lrvassoc.com

PFS/mtf

Additional Recipients:

Town of Fairfield – Michael Tetreau – First Selectman – Via Fed Ex
Town of Fairfield Fire Dept. – William Kessler – Fire Marshall - Via Fed Ex
Town of Fairfield – Planning Director – Jim Wendt – Via Fed Ex



October 19,2017

Dear Customer:

The following is the proof-of-delivery for tracking number **770506271874**.

Delivery Information:

Status:	Delivered	Delivered to:	Receptionist/Front Desk
Signed for by:	J.BEHRENS	Delivery location:	FAIRFIELD, CT
Service type:	FedEx Express Saver	Delivery date:	Oct 19, 2017 10:32
Special Handling:	Deliver Weekday		
	Direct Signature Required		

Signature image is available. In order to view image and detailed information, the shipper or payor account number of the shipment must be provided.

Shipping Information:

Tracking number:	770506271874	Ship date:	Oct 16, 2017
		Weight:	0.5 lbs/0.2 kg

Recipient:
FAIRFIELD, CT US

Shipper:
OLD LYME, CT US

Reference

CT03XC385 - CSC to Selectman

Thank you for choosing FedEx.



October 19,2017

Dear Customer:

The following is the proof-of-delivery for tracking number **770506336198**.

Delivery Information:

Status:	Delivered	Delivered to:	Receptionist/Front Desk
Signed for by:	J.BEHRENS	Delivery location:	FAIRFIELD, CT
Service type:	FedEx Express Saver	Delivery date:	Oct 19, 2017 10:32
Special Handling:	Deliver Weekday		
	Direct Signature Required		

Signature image is available. In order to view image and detailed information, the shipper or payor account number of the shipment must be provided.

Shipping Information:

Tracking number:	770506336198	Ship date:	Oct 16, 2017
		Weight:	0.5 lbs/0.2 kg

Recipient:
FAIRFIELD, CT US

Shipper:
OLD LYME, CT US

Reference

CT03XC385 - CSC to Planning

Thank you for choosing FedEx.



October 19, 2017

Dear Customer:

The following is the proof-of-delivery for tracking number **770506395911**.

Delivery Information:

Status:	Delivered	Delivered to:	Receptionist/Front Desk
Signed for by:	J.FAR	Delivery location:	140 REEF ROAD FAIRFIELD, CT 06824
Service type:	FedEx Express Saver	Delivery date:	Oct 19, 2017 13:50
Special Handling:	Deliver Weekday Direct Signature Required		



Shipping Information:

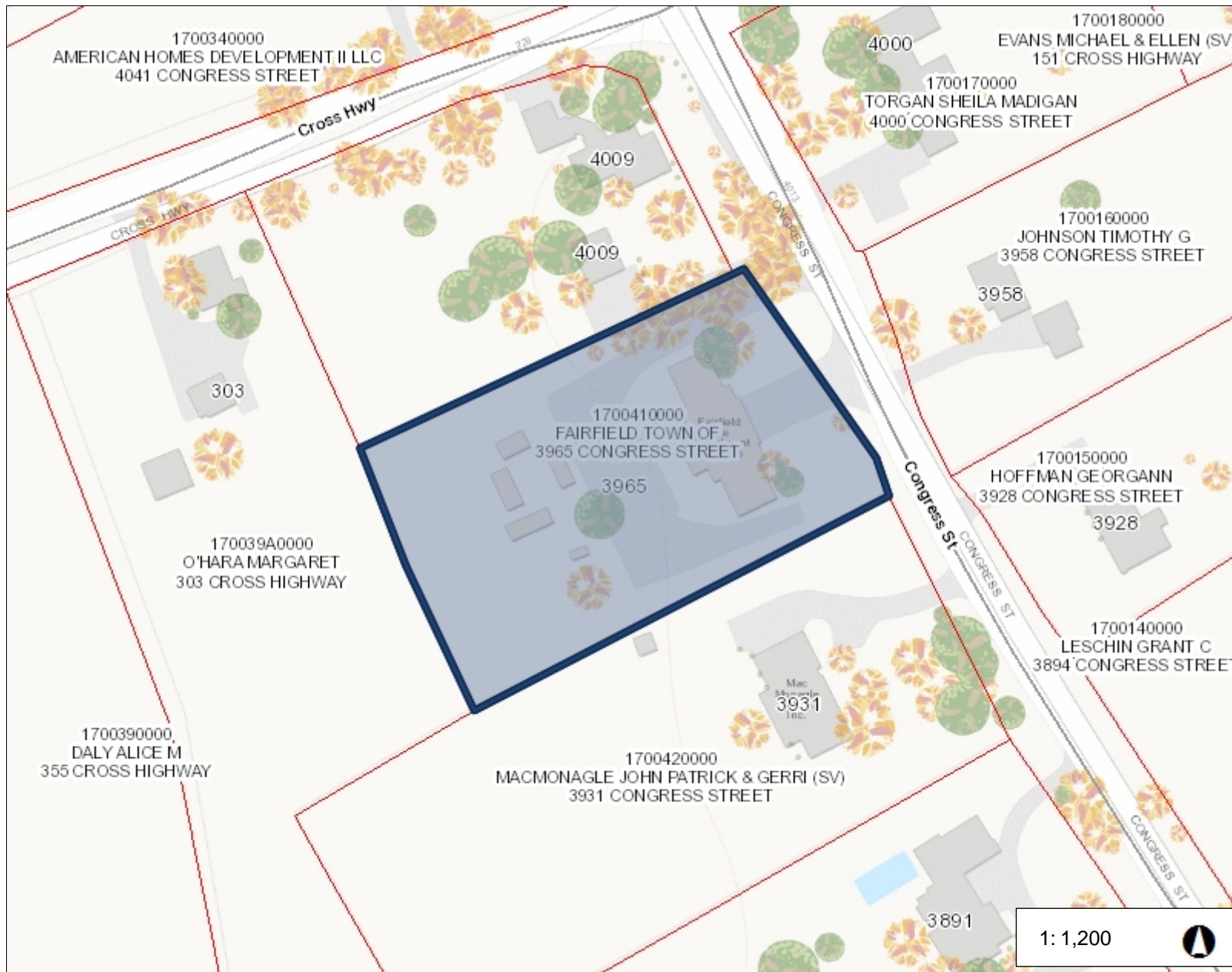
Tracking number:	770506395911	Ship date:	Oct 16, 2017
		Weight:	0.5 lbs/0.2 kg

Recipient:
William Kessler
Town of Fairfield
140 Reef Road
FAIRFIELD, CT 06824 US

Shipper:
Paul Sagristano
CCC
4 Davis Road West
Suite 5
OLD LYME, CT 06371 US
CT03XC385 - CSC to FD

Reference

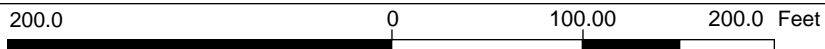
Thank you for choosing FedEx.



Legend

- Parcels
- Streetname
- Roadways
 - Local
 - Collector
 - Minor Collector
 - Minor Arterial
 - Major Collector
 - PA Other
 - PA Other Expwy
 - PA Interstate

1:1,200



WGS_1984_Web_Mercator_Auxiliary_Sphere
 Created by Greater Bridgeport Regional Council

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION



3965 CONGRESS STREET

Location 3965 CONGRESS STREET

Mblu 170/ 41/ / /

Acct# 05308

Owner FAIRFIELD TOWN OF

Assessment \$939,330

Appraisal \$1,341,900

PID 14189

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2016	\$508,400	\$833,500	\$1,341,900

Assessment			
Valuation Year	Improvements	Land	Total
2016	\$355,880	\$583,450	\$939,330

Owner of Record

Owner FAIRFIELD TOWN OF
Co-Owner
Address 725 OLD POST ROAD
FAIRFIELD, CT 06824

Sale Price \$0
Certificate
Book & Page 395/ 523
Sale Date

Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
FAIRFIELD TOWN OF	\$0		395/ 523	

Building Information

Building 1 : Section 1

Year Built: 1959
Living Area: 3,848
Replacement Cost: \$670,756
Building Percent 60
Good:
Replacement Cost
Less Depreciation: \$402,500

Building Attributes	
Field	Description

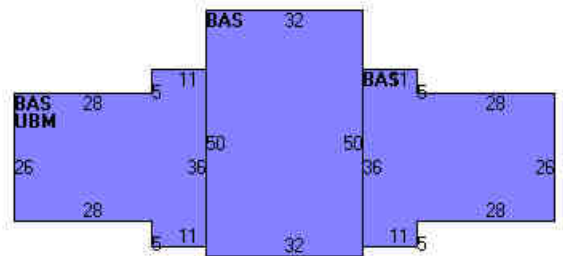
STYLE	Fire Station
MODEL	Ind/Comm
Stories:	1
Occupancy	1
Exterior Wall 1	Vinyl Siding
Exterior Wall 2	Brick/Masonry
Roof Structure	Gable/Hip
Roof Cover	Asphalt
Interior Wall 1	Minim/Masonry
Interior Wall 2	Plywood Panel
Interior Floor 1	Concr-Finished
Interior Floor 2	Vinyl/Asphalt
Heating Fuel	Gas
Heating Type	Hot Water
AC Type	None
Bldg Use	Fire Dept
Total Rooms	
Total Bedrms	00
Total Baths	0
Liv Area	
Effect Area	
1st Floor Use:	9032
Heat/AC	None
Frame Type	Masonry
Baths/Plumbing	Average

Building Photo



(<http://images.vgsi.com/photos2/FairfieldCTPhotos//\02\03\13\9>)

Building Layout



Building Sub-Areas (sq ft)			
Code	Description	Gross Area	Living Area
BAS	First Floor	3,848	3,848
UBM	Basement, Unfinished	1,124	0
		4,972	3,848

Extra Features

Extra Features				
Code	Description	Size	Value	Bldg #
SPR1	SPRINKLERS-WET	4972 S.F.	\$6,900	1

Land

Land Use

Use Code 9032
Description Fire Dept
Zone

Land Line Valuation

Size (Acres) 1.2
Depth 0
Assessed Value \$583,450

Neighborhood C6
Alt Land Appr No
Category

Appraised Value \$833,500

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV1	PAVING-ASPHALT			5000 S.F.	\$15,800	1
LT1	LIGHTS-IN W/PL			1 UNITS	\$700	1
SHD2	W/LIGHTS ETC			80 S.F.	\$1,200	1
GEN1	GENERATOR			1 UNITS	\$10,000	1
SHD5	CELL SHED			300 SF	\$16,200	1
SHD5	CELL SHED			300 SF	\$16,200	1
SHD5	CELL SHED			300 SF	\$16,200	1
SHD5	CELL SHED			300 SF	\$16,200	1
FN4	FENCE-8' CHAIN			600 L.F.	\$6,500	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2016	\$508,400	\$833,500	\$1,341,900
2015	\$508,400	\$833,500	\$1,341,900
2014	\$284,700	\$759,500	\$1,044,200

Assessment			
Valuation Year	Improvements	Land	Total
2016	\$355,880	\$583,450	\$939,330
2015	\$355,880	\$583,450	\$939,330
2014	\$199,290	\$531,650	\$730,940

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TOWN OF FAIRFIELD
Fairfield, Connecticut
ZONING BOARD OF APPEALS

~~ETD 385~~

NOTICE OF DECISION

On April 2, 1998 the Zoning Board of Appeals voted to **GRANT WITH CONDITIONS** your application for:

- | | | | |
|---------------------------|-------------------------------------|---|--------------------------|
| 1. Variance | <input checked="" type="checkbox"/> | 6. Reverse or modify decision of the Zoning Administrator | <input type="checkbox"/> |
| 2. Special exception | <input type="checkbox"/> | 7. Repairer's License - General Limited | <input type="checkbox"/> |
| 3. Liquor location | <input type="checkbox"/> | 8. New or Used car location | <input type="checkbox"/> |
| 4. Recertification of use | <input type="checkbox"/> | 9. Approval of location | <input type="checkbox"/> |
| 5. Extension of time | <input type="checkbox"/> | | |

pertaining to application of **Town of Fairfield, Stephen Verbil, ECC**
Address: **3965 Congress Street**
Case No.: **98-3-44**

INSTRUCTIONS UPON APPROVAL OF APPEAL
1. Notice of Filing is filed with Town Clerk's office.
2. Necessary Town permits are obtained prior to construction.

INSTRUCTIONS UPON COMPLETION OF AUTHORIZED CONSTRUCTION AND/OR REQUIRED IMPROVEMENTS BUT PRIOR TO COMMENCING APPROVED USE OR USES (OCCUPANCY).

1. An "A-2" As-Built Survey certified by a Connecticut registered land surveyor is required upon completion of construction and prior to final zoning inspection, issuance of Zoning compliance and Building Certificate of Occupancy.
2. A-2 As-Built surveys must comply with the Town Plan and Zoning Dept. As-Built survey requirements.
3. Standard and supplementary As-Built survey checklists are available for your surveyor at the Town Plan and Zoning Dept. office.
4. Surveys of parcels totally outside of Designated Flood Zones shall incorporate the requirements of the standard As-Built checklist.
5. Surveys of parcels partially or totally within Designated Flood Zones shall incorporate the requirements of both the standard As-Built checklist as well as the supplementary As-Built checklist.
6. Failure to provide the aforementioned As-Built information will inevitably result in withholding your Certificate of Zoning compliance and Building Certificate of Occupancy, (your right to occupy or use the building or premises legally and safely). It may also result in this office initiating enforcement action against the owner/applicant.

Conditions of Approval: Any waiver involving construction, new dwelling additions or alterations requires as "As Built" prior to issuance of a Certificate of Occupancy or Certificate of Zoning Compliance.

1. That the approval is granted on the condition of annual review by the ZBA and if it can be proven to the satisfaction of the ZBA that antennas have become more compact, than the antennas will be replaced.
2. Screening around the base of the antenna or the Douglas property, whichever Mrs. Douglas prefers.

ZONING BOARD OF APPEALS
William Burke
Secretary

**BUILDING PERMIT
TOWN OF FAIRFIELD
BUILDING DEPARTMENT
(203) 256-3036**

POST
UNSPICUOUSLY

Permit No. 28663 BUI
Issued Date 27-MAY-98

Map: 000 Lot: 000

Location: 3965 CONGRESS STREET

Owner's Name & Address: TOWN OF FAIRFIELD
725 OLD POST ROAD
FAIRFIELD CT 06430

Class of Work - Addition
Type of Occupancy - NON RES. & NON-HOUSEKEEPING BUILDINGS
Construction Type -

Description: 9 1/2 X 11 CONCRETE PAD WITH ELECTRICAL EQUIPMENT + 9 NEW
ANTENNAS ON EXISTING POLE

Contractor: SPRINT PCS
9 BARNES INDUSTRIAL ROAD

WORK TO BE DONE ACCORDING TO PLANS AND SPECIFICATIONS FILED WITH THE BUILDING
DEPT. ALL TOWN ORDINANCES AND BUILDING REGULATIONS AND STATE LAWS SHALL BE
COMPLIED WITH.

Estimated value of work by Building Official	\$49,000.00	Fee	\$394.00
		Pen	\$.00
		Total	\$394.00

RECORD OF PERMITS AND INSPECTIONS

footing/Foundation Inspection..	Date.	Approved	Yes	No
Plumbing Inspection.....	Date.....	Approved	Yes	No
Electrical Inspection.....	Date.....	Approved	Yes	No
Framing Inspection.....	Date.....	Approved	Yes	No
Siding Inspection.....	Date.....	Approved	Yes	No
Insulation Inspection.....	Date.....	Approved	Yes	No
Approved for Covering.....	Date.....	Approved	Yes	No

ANNUAL INSPECTION MUST BE CALLED FOR AND A CERTIFICATE OF OCCUPANCY OBTAINED
BEFORE THIS BUILDING IS OCCUPIED.

PER SEC. 29-265 STATE BUILDING CODE

JAMES GILLERAN
BUILDING OFFICIAL



RADIO FREQUENCY EMISSIONS ANALYSIS REPORT EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

SPRINT Existing Facility

Site ID: CT03XC385

Fairfield Fire Department
3965 Congress Street
Fairfield, CT 06824

September 15, 2017

EBI Project Number: 6217004056

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	19.37 %



September 15, 2017

SPRINT

Attn: RF Engineering Manager
1 International Boulevard, Suite 800
Mahwah, NJ 07495

Emissions Analysis for Site: **CT03XC385 – Fairfield Fire Department**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **3965 Congress Street, Fairfield, CT**, for the purpose of determining whether the emissions from the Proposed SPRINT Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

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

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 850 MHz Band is approximately $567 \mu\text{W}/\text{cm}^2$. The general population exposure limit for the 1900 MHz (PCS) and 2500 MHz (BRS) bands is $1000 \mu\text{W}/\text{cm}^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.



Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed SPRINT Wireless antenna facility located at **3965 Congress Street, Fairfield, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since SPRINT is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 1 CDMA channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.
- 2) 2 LTE channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.
- 3) 5 CDMA channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 16 Watts per Channel.
- 4) 2 LTE channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 5) 8 LTE channels (2500 MHz (BRS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.



- 6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 7) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antennas used in this modeling are the **RFS APXVSP18-C-A20 and the Commscope DB465B-2XR** for transmission in the 850 MHz, 1900 MHz (PCS) and 2500 MHz (BRS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 9) The antenna mounting height centerlines of the proposed antennas are **138.4 feet** above ground level (AGL) for **Sector A**, **138.4 feet** above ground level (AGL) for **Sector B** and **138.4 feet** above ground level (AGL) for Sector C.
- 10) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculations were done with respect to uncontrolled / general population threshold limits.



SPRINT Site Inventory and Power Data by Antenna

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	RFS APXVSPPI8-C-A20	Make / Model:	RFS APXVSPPI8-C-A20	Make / Model:	RFS APXVSPPI8-C-A20
Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd
Height (AGL):	138.4 feet	Height (AGL):	138.4 feet	Height (AGL):	138.4 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	10	Channel Count	10	Channel Count	10
Total TX Power(W):	220 Watts	Total TX Power(W):	220 Watts	Total TX Power(W):	220 Watts
ERP (W):	7,537.38	ERP (W):	7,537.38	ERP (W):	7,537.38
Antenna A1 MPE%	1.75 %	Antenna B1 MPE%	1.75 %	Antenna C1 MPE%	1.75 %
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Commscope DB465B-2XR	Make / Model:	Commscope DB465B-2XR	Make / Model:	Commscope DB465B-2XR
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	138.4 feet	Height (AGL):	138.4 feet	Height (AGL):	138.4 feet
Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)
Channel Count	8	Channel Count	8	Channel Count	8
Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts
ERP (W):	6,224.72	ERP (W):	6,224.72	ERP (W):	6,224.72
Antenna A2 MPE%	1.28 %	Antenna B2 MPE%	1.28 %	Antenna C2 MPE%	1.28 %

Site Composite MPE%	
Carrier	MPE%
SPRINT – Max per sector	3.03 %
AT&T	3.27 %
T-Mobile	0.54 %
Nextel	0.51 %
Town	0.13 %
Verizon Wireless	11.89 %
Site Total MPE %:	19.37 %

SPRINT Sector A Total:	3.03 %
SPRINT Sector B Total:	3.03 %
SPRINT Sector C Total:	3.03 %
Site Total:	19.37 %

SPRINT _ Max Values per Frequency Band / Technology Per Sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
Sprint 850 MHz CDMA	1	437.55	138.4	0.90	850 MHz	567	0.16%
Sprint 850 MHz LTE	2	437.55	138.4	1.79	850 MHz	567	0.32%
Sprint 1900 MHz (PCS) CDMA	5	622.47	138.4	6.38	1900 MHz (PCS)	1000	0.64%
Sprint 1900 MHz (PCS) LTE	2	1,556.18	138.4	6.38	1900 MHz (PCS)	1000	0.64%
Sprint 2500 MHz (BRS) LTE	8	778.09	138.4	12.77	2500 MHz (BRS)	1000	1.28%
						Total:*	3.03%

*NOTE: Totals may vary by 0.01% due to summing of remainders



Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the SPRINT facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

SPRINT Sector	Power Density Value (%)
Sector A:	3.03 %
Sector B:	3.03 %
Sector C:	3.03 %
SPRINT Maximum Total (per sector):	3.03 %
Site Total:	19.37 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **19.37 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

INFINIGY

FROM ZERO TO INFINIGY
the solutions are endless

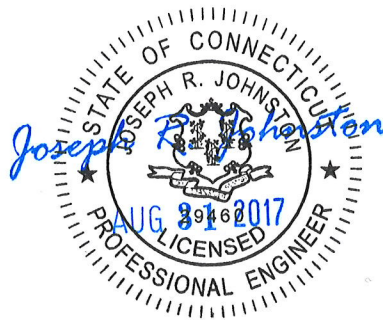
1033 WATERVLIIET SHAKER RD, ALBANY, NY 12205

Structural Analysis Report

August 31, 2017

Site Name	CT03XC385 - Fairfield Fire Department
Infinigy Job Number	333-000
Client	Cherundolo Consulting
Proposed Carrier	Sprint
Site Location	3965 Congress Street, Fairfield, CT 06824 Fairfield County 41° 11' 15.000" N NAD83 73° 17' 56.976" W NAD83
Structure Type	150' Monopole
Structural Usage Ratio	61.5%
Overall Result	Pass

Upon reviewing the results of this analysis, it is our opinion that the structure meets the specified TIA code requirements. The tower is therefore deemed adequate to support the existing and proposed loading as listed in this report.



Temitope Olaniyan
Structural Engineer I

AZ CA CO FL GA IL MD NC NH NJ NY TN TX WA

INFINIGY

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August 31, 2017

Introduction

Infinigy Engineering has been requested to perform a structural analysis on the existing 150' Monopole. All supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The tower was analyzed using tnxTower version 7.0.7.0 tower analysis software.

Supporting Documentation

Antenna Loading	Sprint RFDS ID #45785, dated April 22, 2017
Previous Analysis	Infinigy Engineering Job #333-000, dated June 10, 2014
Construction Drawings	Infinigy Job #526-102, dated May 15, 2017

Analysis Code Requirements

Wind Speed	97 mph (3-Second Gust, V_{asd}) / 125 mph (3-Second Gust, V_{ult})
Wind Speed w/ ice	50 mph (3-Second Gust) w/ 3/4" ice
TIA Revision	ANSI/TIA-222-G
Adopted IBC	2012 IBC/2016 Connecticut State Building Code
Structure Class	II
Exposure Category	B
Topographic Category	1
Calculated Crest Height	0 ft

Conclusion

Upon reviewing the results of this analysis, it is our opinion that the structure meets the specified TIA code requirements. The tower is therefore deemed adequate to support the existing and proposed loading as listed in this report.

If you have any questions, require additional information, or actual conditions differ from those as detailed in this report please contact me via the information below:

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Existing and Reserved Loading

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Carrier
149.0	2	10' Dipole	T-Arms	(3) 1-5/8"	Tower of Fairfield
	1	Decibel DB810K			
	12	Decibel DB844H90E-XY		(12) 1-5/8"	Nextel
142.0	3	Alcatel Lucent 1900 MHz RRH	Side Arm	(3) 1-1/4" (3) 1-5/8" (3) 1-1/4" Hybriflex (3) 1-1/4" Fiber	Sprint
	3	Alcatel Lucent 800 MHz RRH			
138.4	3	RFS APXVSP18-C	Platform		
129.0	6	Ericsson RRUS 11	Platform	(12) 1-5/8"	ATT
	1	Raycap DC6-48-60-15-8F			
127.0	6	Powerwave 7770.0			
	3	Powerwave P65-16-XLH-RR			
	12	Powerwave LGP 21401 TMA			
113.0	3	RFS APX16DWV-16DWVS-E	Platform	(2) 1-5/8"	T-Mobile
	6	RFS ATMAWSD-1A20			
104.0	1	Celwave 1142-2B	Side Arm	(4) 7/8"	Town of Fairfield
	3	Andrew ASPA685	Side Arms		
80.0	6	Decibel DB948F85T2E-M	Platform	(12) 1-5/8"	Verizon Wireless
	2	Decibel DB846F65ZAXY			
	4	Decibel DB844H80E-XY			
40.0	1	GPS	Side Arm	(1) 1/2"	--

Proposed Loading

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Carrier
138.4	3	Commscope DT46B-2XR	-	(3) 1 1/4" Hybrid	Sprint
	3	Alcatel Lucent TD-RRH8X20			
	3	Alcatel Lucent RRH-2x50-800			

August 31, 2017

Final Configuration

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Carrier
149.0	2	10' Dipole	T-Arms	(3) 1-5/8"	Tower of Fairfield
	1	Decibel DB810K			
	12	Decibel DB844H90E-XY		(12) 1-5/8"	Nextel
142.0	3	Alcatel Lucent 1900 MHz RRH	Side Arm	(3) 1-1/4" (3) 1-5/8" (3) 1-1/4" Hybriflex (3) 1-1/4" Fiber (3) 1 1/4" Hybrid	Sprint
	3	Alcatel Lucent 800 MHz RRH			
138.4	3	RFS APXVSP18-C	Platform		
	3	Commscope DT46B-2XR			
	3	Alcatel Lucent RRH-2x50-800			
	3	Alcatel Lucent TD-RRH8X20			
129.0	6	Ericsson RRUS 11	Platform	(12) 1-5/8"	ATT
	1	Raycap DC6-48-60-15-8F			
127.0	6	Powerwave 7770.0			
	3	Powerwave P65-16-XLH-RR			
	12	Powerwave LGP 21401 TMA			
113.0	3	RFS APX16DWV-16DWVS-E	Platform	(2) 1-5/8"	T-Mobile
	6	RFS ATMAWSD-1A20			
104.0	1	Celwave 1142-2B	Side Arm	(4) 7/8"	Town of Fairfield
	3	Andrew ASPA685	Side Arms		
80.0	6	Decibel DB948F85T2E-M	Platform	(12) 1-5/8"	Verizon Wireless
	2	Decibel DB846F65ZAXY			
	4	Decibel DB844H80E-XY			
40.0	1	GPS	Side Arm	(1) 1/2"	--

Structure Usages

Pole (L2)	61.5	Pass
RATING =	61.5	Pass

Foundation Reactions

Reaction Data	Design Reactions	Analysis Reactions	Result
Moment (kip)	--	4545.1	--
Shear (kip)	--	50.9	--
Axial (kip)	--	62.8	--

The existing foundation, baseplate, and anchor bolts were not evaluated because no information was made available at the time of this analysis. We recommend a mapping of these elements of the structure prior to construction.

Deflection, Twist, and Sway

Antenna Elevation (ft)	Deflection (in)	Twist (°)	Sway (°)
138.4	16.898	0.0112	1.0655

*Per ANSI/TIA-222-G Section 2.8.2 maximum serviceability structural deflection limit is 3% of structure height.

*Per ANSI/TIA-222-G Section 2.8.2 maximum serviceability structural twist and sway limit is 4 degrees.

*Per ANSI/TIA-222-G Section 2.8.3 deflection, Twist, and sway values were calculated using a basic 3-second gust wind speed of 60 mph.

*It is the responsibility of the client to ensure their proposed and/or existing equipment will meet ANSI/TIA-222-G Annex D or other appropriate microwave signal degradation limits based on the provided values above.

Assumptions and Limitations

Our structural calculations are completed assuming all information provided to Infinigy Engineering is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of “like new” and all members and connections to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure’s condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report Infinigy Engineering should be notified immediately to complete a revised evaluation.

Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. Infinigy Engineering is not responsible for decisions made by others that are or are not based on our supplied assumptions and conclusions.

This report is an evaluation of the tower structure only and does not reflect adequacy of any existing antenna mounts, mount connections, or cable mounting attachments. These elements are assumed to be adequate for the purposes of this analysis and are assumed to have been installed per their manufacturer requirements.

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
10' Dipole (Town of Fairfield)	149	P45-17-XLH-RR (ATI)	127
10' Dipole (Town of Fairfield)	149	P45-17-XLH-RR (ATI)	127
DB810K (Town of Fairfield)	149	P45-17-XLH-RR (ATI)	127
(4) DB844H90E-XY (Nextel)	149	(2) 7700.00 (ATI)	127
(4) DB844H90E-XY (Nextel)	149	(2) 7700.00 (ATI)	127
(4) DB844H90E-XY (Nextel)	149	(2) 7700.00 (ATI)	127
Pipe T-Arm (Nextel)	149	(2) 7700.00 (ATI)	127
Pipe T-Arm (Nextel)	149	(2) 7700.00 (ATI)	127
Pipe T-Arm (Nextel)	149	Pipe Platform w/ Handrails (ATI)	125
1900 MHz RRH (Sprint)	142	APX16DWV-16DWVS-C (T-Mobile)	113
1900 MHz RRH (Sprint)	142	APX16DWV-16DWVS-C (T-Mobile)	113
1900 MHz RRH (Sprint)	142	APX16DWV-16DWVS-C (T-Mobile)	113
800 MHz RRH (Sprint)	142	Angle Platform w/ Handrails (T-Mobile)	113
800 MHz RRH (Sprint)	142	1142-2B (Town of Fairfield)	104
Pipe Side Arm (Sprint)	142	ASPA685 (Town of Fairfield)	104
Pipe Side Arm (Sprint)	142	ASPA685 (Town of Fairfield)	104
Pipe Side Arm (Sprint)	142	ASPA685 (Town of Fairfield)	104
APXVSP18-C-A20 (Sprint)	138.4	Pipe Side Arm (Town of Fairfield)	104
APXVSP18-C-A20 (Sprint)	138.4	Pipe Side Arm (Town of Fairfield)	104
APXVSP18-C-A20 (Sprint)	138.4	Pipe Side Arm (Town of Fairfield)	104
Angle Platform w/ Handrails (Sprint)	138.4	Pipe Side Arm (Town of Fairfield)	104
DT465B-2XR (Sprint)	138.4	DB846F65ZAXY (Verizon Wireless)	80
DT465B-2XR (Sprint)	138.4	DB844H80E-XY (Verizon Wireless)	80
DT465B-2XR (Sprint)	138.4	DB844H80E-XY (Verizon Wireless)	80
RRH2x50-800 (Sprint)	138.4	Pipe Low Profile Platform (Verizon Wireless)	80
RRH2x50-800 (Sprint)	138.4	DB948F85T2E-M (Verizon Wireless)	80
RRH2x50-800 (Sprint)	138.4	DB948F85T2E-M (Verizon Wireless)	80
TD-RRH8x20-25 (Sprint)	138.4	DB948F85T2E-M (Verizon Wireless)	80
TD-RRH8x20-25 (Sprint)	138.4	DB948F85T2E-M (Verizon Wireless)	80
TD-RRH8x20-25 (Sprint)	138.4	DB948F85T2E-M (Verizon Wireless)	80
(2) RRUS-11 (ATI)	129	DB948F85T2E-M (Verizon Wireless)	80
(2) RRUS-11 (ATI)	129	DB948F85T2E-M (Verizon Wireless)	80
(2) RRUS-11 (ATI)	129	DB846F65ZAXY (Verizon Wireless)	80
DC6-48-60-18-8F (ATI)	129	DB844H80E-XY (Verizon Wireless)	80
LGP21401 (ATI)	127	DB844H80E-XY (Verizon Wireless)	80
LGP21401 (ATI)	127	Pipe Side Arm	40
LGP21401 (ATI)	127	GPS	40
(2) 7700.00 (ATI)	127		

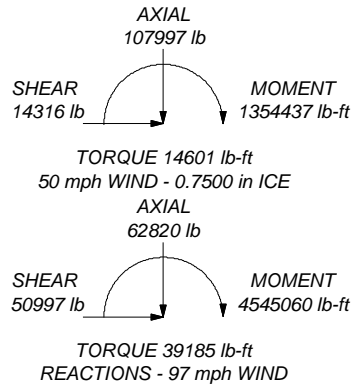
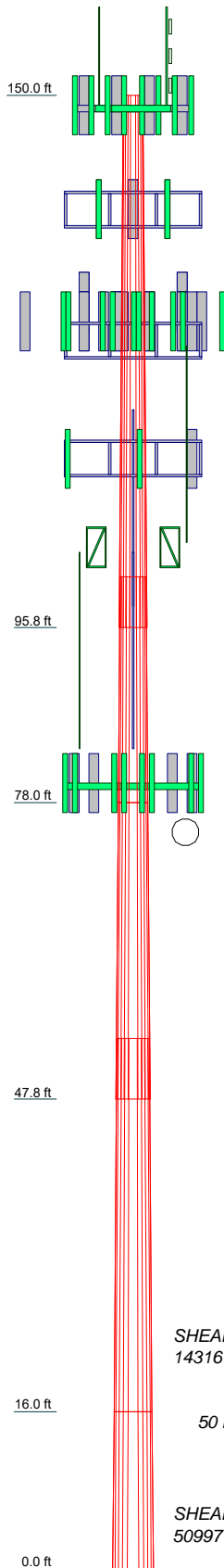
MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower designed for Exposure B to the TIA-222-G Standard.
2. Tower designed for a 97 mph basic wind in accordance with the TIA-222-G Standard.
3. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 60 mph wind.
5. Tower Structure Class II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. TOWER RATING: 61.5%

ALL REACTIONS
ARE FACTORED



Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (lb)
1	54.17	12	0.2813	5.16	23.6112	33.4690		4718.2
2	22.99	12	0.3750	31.9674	36.0843			3178.8
3	30.18	12	0.5335	6.18	36.0843	41.6440	A572-65	6762.2
4	38.00	12	0.6397	39.4365	46.6877			11299.4
5	16.00	12	0.7450	46.6877	49.6000			6190.6
								32149.3

Infinigy Engineering		
1033 Watervliet Shaker Road, Albany, NY 12205 Phone: (518) 690-0790 FAX:		
Job: 526-102	Project: CT03XC385 - Fairfield Fire Department	
Client: Sprint	Drawn by: TOLANIYAN	App'd:
Code: TIA-222-G	Date: 08/31/17	Scale: NTS
Path:		Dwg No. E-1

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	Client Sprint	Designed by TOLaniyan

Tower Input Data

There is a pole section.

This tower is designed using the TIA-222-G standard.

The following design criteria apply:

Basic wind speed of 97 mph.

Structure Class II.

Exposure Category B.

Topographic Category 1.

Crest Height 0.00 ft.

Nominal ice thickness of 0.7500 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

<ul style="list-style-type: none"> Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification √ Use Code Stress Ratios √ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile √ Include Bolts In Member Capacity Leg Bolts Are At Top Of Section √ Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) SR Members Have Cut Ends SR Members Are Concentric 	<ul style="list-style-type: none"> Distribute Leg Loads As Uniform Assume Legs Pinned √ Assume Rigid Index Plate √ Use Clear Spans For Wind Area √ Use Clear Spans For KL/r √ Retension Guys To Initial Tension Bypass Mast Stability Checks √ Use Azimuth Dish Coefficients √ Project Wind Area of Appurt. √ Autocalc Torque Arm Areas Add IBC .6D+W Combination Sort Capacity Reports By Component √ Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder 	<ul style="list-style-type: none"> Use ASCE 10 X-Brace Ly Rules Calculate Redundant Bracing Forces Ignore Redundant Members in FEA SR Leg Bolts Resist Compression √ All Leg Panels Have Same Allowable Offset Girt At Foundation √ Consider Feed Line Torque √ Include Angle Block Shear Check Use TIA-222-G Bracing Resist. Exemption Use TIA-222-G Tension Splice Exemption <li style="text-align: center;">Poles Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets
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Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	150.00-95.83	54.17	5.16	12	23.6112	33.4690	0.2813	1.1252	A572-65 (65 ksi)
L2	95.83-78.00	22.99	0.00	12	31.9674	36.0843	0.3750	1.5000	A572-65 (65 ksi)
L3	78.00-47.82	30.18	6.18	12	36.0843	41.6440	0.5335	2.1340	A572-65

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	Client	Sprint		Designed by	TOLaniyan

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L4	47.82-16.00	38.00	0.00	12	39.4385	46.6877	0.6397	2.5588	(65 ksi) A572-65
L5	16.00-0.00	16.00		12	46.6877	49.6000	0.7450	2.9800	(65 ksi) A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	I/Q in ²	w in	w/t
L1	24.4441	21.1319	1468.0816	8.3521	12.2306	120.0335	2974.7313	10.4005	5.5739	19.815
	34.6497	30.0610	4226.1316	11.8812	17.3369	243.7645	8563.2885	14.7951	8.2158	29.207
L2	34.0517	38.1478	4859.8233	11.3101	16.5591	293.4834	9847.3195	18.7752	7.5623	20.166
	37.3572	43.1190	7018.0604	12.7839	18.6917	375.4647	14220.4930	21.2219	8.6656	23.108
L3	37.3572	61.0717	9851.9995	12.7272	18.6917	527.0798	19962.8219	30.0576	8.2408	15.447
	43.1130	70.6225	15234.7216	14.7176	21.5716	706.2400	30869.6763	34.7582	9.7308	18.24
L4	42.0503	79.9192	15355.8602	13.8900	20.4292	751.6638	31115.1358	39.3338	8.8551	13.843
	48.3347	94.8512	25671.4553	16.4852	24.1842	1061.4957	52017.3283	46.6829	10.7979	16.88
L5	48.3347	110.2119	29692.5597	16.4475	24.1842	1227.7654	60165.1760	54.2430	10.5157	14.115
	51.3497	117.1983	35704.6802	17.4901	25.6928	1389.6765	72347.3621	57.6814	11.2962	15.163

Tower Elevation	Gusset Area (per face)	Gusset Thickness	Gusset Grade	Adjust. Factor A _f	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals	Double Angle Stitch Bolt Spacing Horizontals	Double Angle Stitch Bolt Spacing Redundants
ft	ft ²	in					in	in	in
L1 150.00-95.83				1	1	1			
L2 95.83-78.00				1	1	1			
L3 78.00-47.82				1	1	1			
L4 47.82-16.00				1	1	1			
L5 16.00-0.00				1	1	1			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	C _A A _A	Weight plf
1 1/4	C	No	Inside Pole	138.00 - 3.00	3	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00

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	Client	Sprint	Designed by	Tolaniyan

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	C _{AA}		Weight plf
						In Face ft ²	Out Face ft ²	
1 5/8	A	No	Inside Pole	149.00 - 3.00	3	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
1 5/8	B	No	Inside Pole	149.00 - 10.00	12	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
1 5/8	C	No	Inside Pole	138.00 - 3.00	3	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
1 5/8	A	No	Inside Pole	125.00 - 10.00	12	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
1 5/8	A	No	CaAa (Out Of Face)	110.00 - 3.00	2	No Ice	0.20	1.04
						1/2" Ice	0.30	2.55
						1" Ice	0.40	4.68
1 5/8	A	No	CaAa (Out Of Face)	110.00 - 3.00	16	No Ice	0.20	1.04
						1/2" Ice	0.30	2.55
						1" Ice	0.40	4.68
1 5/8	C	No	Inside Pole	77.00 - 10.00	12	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
7/8	B	No	Inside Pole	104.00 - 3.00	4	No Ice	0.00	0.54
						1/2" Ice	0.00	0.54
						1" Ice	0.00	0.54
1/2	B	No	Inside Pole	40.00 - 3.00	1	No Ice	0.00	0.25
						1/2" Ice	0.00	0.25
						1" Ice	0.00	0.25

1 1/4	C	No	Inside Pole	139.00 - 3.00	3	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
						1" Ice	0.00	0.66
1-1/4" Hybrid	C	No	Inside Pole	139.00 - 3.00	3	No Ice	0.00	0.83
						1/2" Ice	0.00	0.83
						1" Ice	0.00	0.83
1 5/8	A	No	CaAa (Out Of Face)	138.00 - 3.00	3	No Ice	0.20	1.04
						1/2" Ice	0.30	2.55
						1" Ice	0.40	4.68

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight lb
L1	150.00-95.83	A	0.000	0.000	0.000	75.551	926.76
		B	0.000	0.000	0.000	0.000	681.21
		C	0.000	0.000	0.000	0.000	408.43
L2	95.83-78.00	A	0.000	0.000	0.000	74.137	667.56
		B	0.000	0.000	0.000	0.000	261.03
		C	0.000	0.000	0.000	0.000	170.79
L3	78.00-47.82	A	0.000	0.000	0.000	125.488	1129.94
		B	0.000	0.000	0.000	0.000	441.84
		C	0.000	0.000	0.000	0.000	653.26
L4	47.82-16.00	A	0.000	0.000	0.000	132.308	1191.34
		B	0.000	0.000	0.000	0.000	471.84
		C	0.000	0.000	0.000	0.000	701.92
L5	16.00-0.00	A	0.000	0.000	0.000	54.054	399.36

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	Project	CT03XC385 - Fairfield Fire Department	Date	09:45:07 08/31/17
	Client	Sprint	Designed by	TOlaniyan

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight lb
		B	0.000	0.000	0.000	0.000	106.21
		C	0.000	0.000	0.000	0.000	199.41

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight lb
L1	150.00-95.83	A	1.709	0.000	0.000	0.000	205.988	3962.46
		B		0.000	0.000	0.000	0.000	681.21
		C		0.000	0.000	0.000	0.000	408.43
L2	95.83-78.00	A	1.652	0.000	0.000	0.000	202.133	3646.45
		B		0.000	0.000	0.000	0.000	261.03
		C		0.000	0.000	0.000	0.000	170.79
L3	78.00-47.82	A	1.600	0.000	0.000	0.000	328.261	5749.91
		B		0.000	0.000	0.000	0.000	441.84
		C		0.000	0.000	0.000	0.000	653.26
L4	47.82-16.00	A	1.495	0.000	0.000	0.000	346.099	6062.37
		B		0.000	0.000	0.000	0.000	471.84
		C		0.000	0.000	0.000	0.000	701.92
L5	16.00-0.00	A	1.300	0.000	0.000	0.000	125.061	1892.41
		B		0.000	0.000	0.000	0.000	106.21
		C		0.000	0.000	0.000	0.000	199.41

Feed Line Center of Pressure

Section	Elevation ft	CP _X in	CP _Z in	CP _X Ice in	CP _Z Ice in
L1	150.00-95.83	0.0000	-1.4164	0.0000	-2.2740
L2	95.83-78.00	0.0000	-2.5128	0.0000	-3.3481
L3	78.00-47.82	0.0000	-2.6894	0.0000	-3.6450
L4	47.82-16.00	0.0000	-2.8632	0.0000	-3.9807
L5	16.00-0.00	0.0000	-2.6840	0.0000	-3.8380

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K _a No Ice	K _a Ice

Discrete Tower Loads

tnxTower Infinigy Engineering 1033 Watervliet Shaker Road, Albany, NY 12205 Phone: (518) 690-0790 FAX:	Job	526-102	Page	5 of 12
	Project	CT03XC385 - Fairfield Fire Department	Date	09:45:07 08/31/17
	Client	Sprint	Designed by	TOlaniyan

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Lateral Vert					
ft									
							ft ²	ft ²	lb
10' Dipole (Town of Fairfield)	A	From Leg	3.00	0.0000	149.00	No Ice	3.00	3.00	30.00
			0.00			1/2" Ice	4.03	4.03	51.79
			5.00			1" Ice	5.03	5.03	80.14
10' Dipole (Town of Fairfield)	B	From Leg	3.00	0.0000	149.00	No Ice	3.00	3.00	30.00
			0.00			1/2" Ice	4.03	4.03	51.79
			5.00			1" Ice	5.03	5.03	80.14
DB810K (Town of Fairfield)	C	From Leg	3.00	0.0000	149.00	No Ice	4.08	4.08	35.00
			0.00			1/2" Ice	5.73	5.73	65.18
			5.00			1" Ice	7.41	7.41	105.73
(4) DB844H90E-XY (Nextel)	A	From Leg	3.00	0.0000	149.00	No Ice	2.87	3.61	10.00
			0.00			1/2" Ice	3.18	3.92	35.38
			0.00			1" Ice	3.49	4.23	64.96
(4) DB844H90E-XY (Nextel)	B	From Leg	3.00	0.0000	149.00	No Ice	2.87	3.61	10.00
			0.00			1/2" Ice	3.18	3.92	35.38
			0.00			1" Ice	3.49	4.23	64.96
(4) DB844H90E-XY (Nextel)	C	From Leg	3.00	0.0000	149.00	No Ice	2.87	3.61	10.00
			0.00			1/2" Ice	3.18	3.92	35.38
			0.00			1" Ice	3.49	4.23	64.96
Pipe T-Arm (Nextel)	A	From Leg	0.00	0.0000	149.00	No Ice	9.70	3.30	250.00
			0.00			1/2" Ice	12.10	5.20	314.00
			0.00			1" Ice	14.50	7.10	378.00
Pipe T-Arm (Nextel)	B	From Leg	0.00	0.0000	149.00	No Ice	9.70	3.30	250.00
			0.00			1/2" Ice	12.10	5.20	314.00
			0.00			1" Ice	14.50	7.10	378.00
Pipe T-Arm (Nextel)	C	From Leg	0.00	0.0000	149.00	No Ice	9.70	3.30	250.00
			0.00			1/2" Ice	12.10	5.20	314.00
			0.00			1" Ice	14.50	7.10	378.00

1900 MHz RRH (Sprint)	A	From Leg	0.50	0.0000	142.00	No Ice	2.73	1.45	44.09
			0.00			1/2" Ice	2.96	1.64	62.32
			0.00			1" Ice	3.20	1.84	83.43
1900 MHz RRH (Sprint)	B	From Leg	0.50	0.0000	142.00	No Ice	2.73	1.45	44.09
			0.00			1/2" Ice	2.96	1.64	62.32
			0.00			1" Ice	3.20	1.84	83.43
1900 MHz RRH (Sprint)	C	From Leg	0.50	0.0000	142.00	No Ice	2.73	1.45	44.09
			0.00			1/2" Ice	2.96	1.64	62.32
			0.00			1" Ice	3.20	1.84	83.43
800 MHz RRH (Sprint)	A	From Leg	0.50	0.0000	142.00	No Ice	1.93	2.06	64.00
			0.00			1/2" Ice	2.11	2.24	86.12
			0.00			1" Ice	2.29	2.43	111.30
800 MHz RRH (Sprint)	B	From Leg	0.50	0.0000	142.00	No Ice	1.93	2.06	64.00
			0.00			1/2" Ice	2.11	2.24	86.12
			0.00			1" Ice	2.29	2.43	111.30
Pipe Side Arm (Sprint)	A	From Leg	0.50	0.0000	142.00	No Ice	1.77	5.20	150.00
			0.00			1/2" Ice	2.00	5.50	175.00
			0.00			1" Ice	2.50	6.00	200.00
Pipe Side Arm (Sprint)	B	From Leg	0.50	0.0000	142.00	No Ice	1.77	5.20	150.00
			0.00			1/2" Ice	2.00	5.50	175.00
			0.00			1" Ice	2.50	6.00	200.00
Pipe Side Arm (Sprint)	C	From Leg	0.50	0.0000	142.00	No Ice	1.77	5.20	150.00
			0.00			1/2" Ice	2.00	5.50	175.00
			0.00			1" Ice	2.50	6.00	200.00

APXVSP18-C-A20 (Sprint)	A	From Leg	3.00	0.0000	138.40	No Ice	8.02	5.28	57.00
			0.00			1/2" Ice	8.48	5.74	106.52
			0.00			1" Ice	8.94	6.20	162.12
APXVSP18-C-A20	B	From Leg	3.00	0.0000	138.40	No Ice	8.02	5.28	57.00

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Project	CT03XC385 - Fairfield Fire Department	Date	09:45:07 08/31/17
Client	Sprint	Designed by	TOLaniyan

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			ft ft ft	°	ft	ft ²	ft ²	lb
(Sprint)			0.00			1/2" Ice	8.48	106.52
			0.00			1" Ice	8.94	162.12
APXVSP18-C-A20	C	From Leg	3.00	0.0000	138.40	No Ice	8.02	57.00
(Sprint)			0.00			1/2" Ice	8.48	106.52
			0.00			1" Ice	8.94	162.12
Angle Platform w/ Handrails	A	From Leg	0.00	0.0000	138.40	No Ice	42.40	2000.00
(Sprint)			0.00			1/2" Ice	48.40	2450.00
			0.00			1" Ice	54.40	2900.00

(2) RRUS-11	A	From Leg	0.50	0.0000	129.00	No Ice	3.79	55.00
(AT&T)			0.00			1/2" Ice	4.04	80.77
			0.00			1" Ice	4.29	109.98
(2) RRUS-11	A	From Leg	0.50	0.0000	129.00	No Ice	3.79	55.00
(AT&T)			0.00			1/2" Ice	4.04	80.77
			0.00			1" Ice	4.29	109.98
(2) RRUS-11	A	From Leg	0.50	0.0000	129.00	No Ice	3.79	55.00
(AT&T)			0.00			1/2" Ice	4.04	80.77
			0.00			1" Ice	4.29	109.98
DC6-48-60-18-8F	C	From Leg	0.50	0.0000	129.00	No Ice	2.90	32.80
(AT&T)			0.00			1/2" Ice	3.13	60.76
			0.00			1" Ice	3.37	92.36

(2) 7700.00	A	From Leg	3.00	0.0000	127.00	No Ice	1.45	22.00
(AT&T)			2.00			1/2" Ice	1.63	31.66
			0.00			1" Ice	1.82	43.84
(2) 7700.00	B	From Leg	3.00	0.0000	127.00	No Ice	1.45	22.00
(AT&T)			2.00			1/2" Ice	1.63	31.66
			0.00			1" Ice	1.82	43.84
(2) 7700.00	C	From Leg	3.00	0.0000	127.00	No Ice	1.45	22.00
(AT&T)			2.00			1/2" Ice	1.63	31.66
			0.00			1" Ice	1.82	43.84
(2) 7700.00	A	From Leg	3.00	0.0000	127.00	No Ice	1.45	22.00
(AT&T)			-6.00			1/2" Ice	1.63	31.66
			0.00			1" Ice	1.82	43.84
(2) 7700.00	B	From Leg	3.00	0.0000	127.00	No Ice	1.45	22.00
(AT&T)			-6.00			1/2" Ice	1.63	31.66
			0.00			1" Ice	1.82	43.84
(2) 7700.00	C	From Leg	3.00	0.0000	127.00	No Ice	1.45	22.00
(AT&T)			-6.00			1/2" Ice	1.63	31.66
			0.00			1" Ice	1.82	43.84
P45-17-XLH-RR	A	From Leg	3.00	0.0000	127.00	No Ice	11.02	53.00
(AT&T)			6.00			1/2" Ice	11.50	115.33
			0.00			1" Ice	11.99	184.05
P45-17-XLH-RR	B	From Leg	3.00	0.0000	127.00	No Ice	11.02	53.00
(AT&T)			6.00			1/2" Ice	11.50	115.33
			0.00			1" Ice	11.99	184.05
P45-17-XLH-RR	C	From Leg	3.00	0.0000	127.00	No Ice	11.02	53.00
(AT&T)			6.00			1/2" Ice	11.50	115.33
			0.00			1" Ice	11.99	184.05
LGP21401	A	From Leg	3.00	0.0000	127.00	No Ice	0.82	17.50
(AT&T)			0.00			1/2" Ice	0.94	23.31
			0.00			1" Ice	1.06	30.86
LGP21401	A	From Leg	3.00	0.0000	127.00	No Ice	0.82	17.50
(AT&T)			0.00			1/2" Ice	0.94	23.31
			0.00			1" Ice	1.06	30.86
LGP21401	A	From Leg	3.00	0.0000	127.00	No Ice	0.82	17.50
(AT&T)			0.00			1/2" Ice	0.94	23.31

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	Client	Sprint	Designed by	TOlaniyan

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft ²	ft ²	lb
***			0.00			1" Ice	1.06	0.54	30.86
Pipe Platform w/ Handrails (AT&T)	A	From Leg	0.00	0.0000	125.00	No Ice	27.20	27.20	2000.00
			0.00			1/2" Ice	34.20	34.20	2400.00
			0.00			1" Ice	41.20	41.20	2800.00

APX16DWV-16DWVS-C (T-Mobile)	A	From Leg	3.00	0.0000	113.00	No Ice	8.76	4.96	40.70
			6.00			1/2" Ice	9.18	5.35	96.98
			0.00			1" Ice	9.60	5.74	159.01
APX16DWV-16DWVS-C (T-Mobile)	B	From Leg	3.00	0.0000	113.00	No Ice	8.76	4.96	40.70
			6.00			1/2" Ice	9.18	5.35	96.98
			0.00			1" Ice	9.60	5.74	159.01
APX16DWV-16DWVS-C (T-Mobile)	C	From Leg	3.00	0.0000	113.00	No Ice	8.76	4.96	40.70
			6.00			1/2" Ice	9.18	5.35	96.98
			0.00			1" Ice	9.60	5.74	159.01
Angle Platform w/ Handrails (T-Mobile)	A	From Leg	3.00	0.0000	113.00	No Ice	42.40	42.40	2000.00
			0.00			1/2" Ice	48.40	48.40	2450.00
			0.00			1" Ice	54.40	54.40	2900.00

Pipe Side Arm (Town of Fairfield)	A	From Leg	3.00	0.0000	104.00	No Ice	1.77	5.20	150.00
			0.00			1/2" Ice	2.00	5.50	175.00
			0.00			1" Ice	2.50	6.00	200.00
Pipe Side Arm (Town of Fairfield)	A	From Leg	3.00	0.0000	104.00	No Ice	1.77	5.20	150.00
			0.00			1/2" Ice	2.00	5.50	175.00
			0.00			1" Ice	2.50	6.00	200.00
Pipe Side Arm (Town of Fairfield)	B	From Leg	3.00	0.0000	104.00	No Ice	1.77	5.20	150.00
			0.00			1/2" Ice	2.00	5.50	175.00
			0.00			1" Ice	2.50	6.00	200.00
Pipe Side Arm (Town of Fairfield)	C	From Leg	3.00	0.0000	104.00	No Ice	1.77	5.20	150.00
			0.00			1/2" Ice	2.00	5.50	175.00
			0.00			1" Ice	2.50	6.00	200.00
1142-2B (Town of Fairfield)	A	From Leg	5.00	0.0000	104.00	No Ice	3.12	3.12	10.00
			0.00			1/2" Ice	5.02	5.02	34.99
			4.00			1" Ice	6.94	6.94	71.78
ASPA685 (Town of Fairfield)	A	From Leg	5.00	0.0000	104.00	No Ice	7.29	7.29	21.40
			0.00			1/2" Ice	9.41	9.41	72.82
			-10.50			1" Ice	11.55	11.55	137.48
ASPA685 (Town of Fairfield)	B	From Leg	5.00	0.0000	104.00	No Ice	7.29	7.29	21.40
			0.00			1/2" Ice	9.41	9.41	72.82
			10.50			1" Ice	11.55	11.55	137.48
ASPA685 (Town of Fairfield)	C	From Leg	5.00	0.0000	104.00	No Ice	7.29	7.29	21.40
			0.00			1/2" Ice	9.41	9.41	72.82
			-10.50			1" Ice	11.55	11.55	137.48

DB948F85T2E-M (Verizon Wireless)	A	From Leg	3.00	0.0000	80.00	No Ice	1.92	3.26	8.50
			-4.00			1/2" Ice	2.22	3.56	27.57
			0.00			1" Ice	2.53	3.87	50.65
DB948F85T2E-M (Verizon Wireless)	B	From Leg	3.00	0.0000	80.00	No Ice	1.92	3.26	8.50
			-4.00			1/2" Ice	2.22	3.56	27.57
			0.00			1" Ice	2.53	3.87	50.65
DB948F85T2E-M (Verizon Wireless)	C	From Leg	3.00	0.0000	80.00	No Ice	1.92	3.26	8.50
			-4.00			1/2" Ice	2.22	3.56	27.57
			0.00			1" Ice	2.53	3.87	50.65
DB948F85T2E-M (Verizon Wireless)	A	From Leg	3.00	0.0000	80.00	No Ice	1.92	3.26	8.50
			4.00			1/2" Ice	2.22	3.56	27.57
			0.00			1" Ice	2.53	3.87	50.65
DB948F85T2E-M	B	From Leg	3.00	0.0000	80.00	No Ice	1.92	3.26	8.50

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			ft ft ft	°	ft	ft ²	ft ²	lb
(Verizon Wireless)			4.00			1/2" Ice	2.22	27.57
			0.00			1" Ice	2.53	50.65
DB948F85T2E-M (Verizon Wireless)	C	From Leg	3.00	0.0000	80.00	No Ice	1.92	8.50
			4.00			1/2" Ice	2.22	27.57
			0.00			1" Ice	2.53	50.65
DB846F65ZAXY (Verizon Wireless)	A	From Leg	3.00	0.0000	80.00	No Ice	7.03	20.90
			-6.00			1/2" Ice	7.49	69.79
			0.00			1" Ice	7.94	124.73
DB844H80E-XY (Verizon Wireless)	B	From Leg	3.00	0.0000	80.00	No Ice	2.87	10.00
			-6.00			1/2" Ice	3.18	36.27
			0.00			1" Ice	3.49	66.78
DB844H80E-XY (Verizon Wireless)	C	From Leg	3.00	0.0000	80.00	No Ice	2.87	10.00
			-6.00			1/2" Ice	3.18	36.27
			0.00			1" Ice	3.49	66.78
DB846F65ZAXY (Verizon Wireless)	A	From Leg	3.00	0.0000	80.00	No Ice	7.03	20.90
			6.00			1/2" Ice	7.49	69.79
			0.00			1" Ice	7.94	124.73
DB844H80E-XY (Verizon Wireless)	B	From Leg	3.00	0.0000	80.00	No Ice	2.87	10.00
			6.00			1/2" Ice	3.18	36.27
			0.00			1" Ice	3.49	66.78
DB844H80E-XY (Verizon Wireless)	C	From Leg	3.00	0.0000	80.00	No Ice	2.87	10.00
			6.00			1/2" Ice	3.18	36.27
			0.00			1" Ice	3.49	66.78
Pipe Low Profile Platform (Verizon Wirelss)	A	From Leg	0.00	0.0000	80.00	No Ice	21.70	1500.00
			0.00			1/2" Ice	27.20	1700.00
			0.00			1" Ice	32.70	1900.00

GPS	A	From Leg	2.00	0.0000	40.00	No Ice	0.43	10.00
			0.00			1/2" Ice	0.57	15.96
			0.00			1" Ice	0.69	23.49
Pipe Side Arm	A	From Leg	0.00	0.0000	40.00	No Ice	1.77	150.00
			0.00			1/2" Ice	2.00	175.00
			0.00			1" Ice	2.50	200.00

DT465B-2XR (Sprint)	A	From Leg	3.00	0.0000	138.40	No Ice	8.13	49.00
			0.00			1/2" Ice	8.59	99.31
			0.00			1" Ice	9.05	155.72
DT465B-2XR (Sprint)	B	From Leg	3.00	0.0000	138.40	No Ice	8.13	49.00
			0.00			1/2" Ice	8.59	99.31
			0.00			1" Ice	9.05	155.72
DT465B-2XR (Sprint)	C	From Leg	3.00	0.0000	138.40	No Ice	8.13	49.00
			0.00			1/2" Ice	8.59	99.31
			0.00			1" Ice	9.05	155.72
RRH2x50-800 (Sprint)	A	From Leg	3.00	0.0000	138.40	No Ice	1.70	53.00
			0.00			1/2" Ice	1.86	70.01
			0.00			1" Ice	2.03	89.71
RRH2x50-800 (Sprint)	B	From Leg	3.00	0.0000	138.40	No Ice	1.70	53.00
			0.00			1/2" Ice	1.86	70.01
			0.00			1" Ice	2.03	89.71
RRH2x50-800 (Sprint)	C	From Leg	3.00	0.0000	138.40	No Ice	1.70	53.00
			0.00			1/2" Ice	1.86	70.01
			0.00			1" Ice	2.03	89.71
TD-RRH8x20-25 (Sprint)	A	From Leg	3.00	0.0000	138.40	No Ice	4.05	70.00
			0.00			1/2" Ice	4.30	97.14
			0.00			1" Ice	4.56	127.80

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	Client	Sprint	Designed by	TOlaniyan

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			Horz Lateral	Vert						
			ft	ft	°	ft	ft ²	ft ²	lb	
TD-RRH8x20-25 (Sprint)	B	From Leg	3.00	0.00	0.0000	138.40	No Ice	4.05	1.53	70.00
			0.00	0.00			1/2" Ice	4.30	1.71	97.14
			0.00	0.00			1" Ice	4.56	1.90	127.80
TD-RRH8x20-25 (Sprint)	C	From Leg	3.00	0.00	0.0000	138.40	No Ice	4.05	1.53	70.00
			0.00	0.00			1/2" Ice	4.30	1.71	97.14
			0.00	0.00			1" Ice	4.56	1.90	127.80

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service

tnxTower Infinigy Engineering 1033 Watervliet Shaker Road, Albany, NY 12205 Phone: (518) 690-0790 FAX:	Job	526-102	Page	10 of 12	
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	Client	Sprint		Designed by	TOlaniyan

<i>Comb. No.</i>	<i>Description</i>
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Tower Deflections - Service Wind

<i>Section No.</i>	<i>Elevation</i>	<i>Horz. Deflection</i>	<i>Gov. Load Comb.</i>	<i>Tilt</i>	<i>Twist</i>
	<i>ft</i>	<i>in</i>		<i>°</i>	<i>°</i>
L1	150 - 95.83	19.583	39	1.1077	0.0120
L2	100.99 - 78	8.983	39	0.8603	0.0077
L3	78 - 47.82	5.287	39	0.6488	0.0045
L4	54 - 16	2.545	39	0.4372	0.0024
L5	16 - 0	0.210	39	0.1253	0.0005

Critical Deflections and Radius of Curvature - Service Wind

<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection</i>	<i>Tilt</i>	<i>Twist</i>	<i>Radius of Curvature</i>
<i>ft</i>			<i>in</i>	<i>°</i>	<i>°</i>	<i>ft</i>
149.00	10' Dipole	39	19.351	1.1041	0.0120	59516
142.00	1900 MHz RRH	39	17.727	1.0790	0.0115	37197
138.40	APXVSP18-C-A20	39	16.898	1.0655	0.0112	25653
129.00	(2) RRUS-11	39	14.764	1.0274	0.0105	14170
127.00	(2) 7700.00	39	14.319	1.0185	0.0104	12938
125.00	Pipe Platform w/ Handrails	39	13.878	1.0092	0.0102	11903
113.00	APX16DWV-16DWVS-C	39	11.324	0.9448	0.0091	8042
104.00	Pipe Side Arm	39	9.546	0.8837	0.0080	6474
80.00	DB948F85T2E-M	39	5.566	0.6677	0.0048	5744
40.00	GPS	39	1.384	0.3200	0.0016	6921

Maximum Tower Deflections - Design Wind

<i>Section No.</i>	<i>Elevation</i>	<i>Horz. Deflection</i>	<i>Gov. Load Comb.</i>	<i>Tilt</i>	<i>Twist</i>
	<i>ft</i>	<i>in</i>		<i>°</i>	<i>°</i>
L1	150 - 95.83	88.809	2	4.9797	0.0982
L2	100.99 - 78	41.102	2	3.9064	0.0666
L3	78 - 47.82	24.279	2	2.9661	0.0447
L4	54 - 16	11.716	2	2.0088	0.0268
L5	16 - 0	0.970	2	0.5781	0.0067

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	Client Sprint	Designed by TOLaniyan

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	150 - 95.83 (1)	TP33.469x23.6112x0.2813	23314.00	970555.00	0.024	84.69	2583841.67	0.000
L2	95.83 - 78 (2)	TP36.0843x31.9674x0.375	31851.80	1542810.00	0.021	84.56	4540075.00	0.000
L3	78 - 47.82 (3)	TP41.644x36.0843x0.5335	38513.90	2530710.00	0.015	84.45	8312791.33	0.000
L4	47.82 - 16 (4)	TP46.6877x39.4385x0.6397	47806.20	3495740.00	0.014	84.35	13221000.00	0.000
L5	16 - 0 (5)	TP49.6x46.6877x0.745	51017.10	4319340.00	0.012	84.34	17308500.00	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	150 - 95.83 (1)	0.065	0.508	0.000	0.024	0.000	0.573	1.000	4.8.2 ✓
L2	95.83 - 78 (2)	0.052	0.562	0.000	0.021	0.000	0.615	1.000	4.8.2 ✓
L3	78 - 47.82 (3)	0.035	0.513	0.000	0.015	0.000	0.549	1.000	4.8.2 ✓
L4	47.82 - 16 (4)	0.030	0.576	0.000	0.014	0.000	0.606	1.000	4.8.2 ✓
L5	16 - 0 (5)	0.025	0.532	0.000	0.012	0.000	0.558	1.000	4.8.2 ✓

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	150 - 95.83	Pole	TP33.469x23.6112x0.2813	1	-17652.30	271471.00	57.3	Pass
L2	95.83 - 78	Pole	TP36.0843x31.9674x0.375	2	-25542.90	491351.00	61.5	Pass
L3	78 - 47.82	Pole	TP41.644x36.0843x0.5335	3	-34304.90	980437.00	54.9	Pass
L4	47.82 - 16	Pole	TP46.6877x39.4385x0.6397	4	-54036.60	1797320.00	60.6	Pass
L5	16 - 0	Pole	TP49.6x46.6877x0.745	5	-62803.60	2499770.00	55.8	Pass
Summary								
Pole (L2)							61.5	Pass
RATING =							61.5	Pass

Sprint



PROJECT: 2.5 EQUIPMENT DEPLOYMENT
 SITE NAME: FAIRFIELD FIRE DEPARTMENT
 SITE CASCADE: CT03XC385
 SITE ADDRESS: 3965 CONGRESS STREET
 FAIRFIELD, CT 06824
 SITE TYPE: MONOPOLE TOWER
 MARKET: SOUTHERN CONNECTICUT

PLANS PREPARED FOR:

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

FROM ZERO TO INFINIGY
the solutions are endless

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 890-0790
JOB NUMBER 528-102

ENGINEERING LICENSE:

DRAWING NOTICE:
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REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR PERMIT	09/01/17	ASW	0

SITE NAME:
FAIRFIELD FIRE DEPARTMENT

SITE CASCADE:
CT03XC385

SITE ADDRESS:
 3965 CONGRESS STREET
 FAIRFIELD, CT 06824

SHEET DESCRIPTION:
TITLE SHEET & PROJECT DATA

SHEET NUMBER:
T-1

SITE INFORMATION

PROPERTY OWNER:
 TOWN OF FAIRFIELD
 725 OLD POST ROAD
 FAIRFIELD, CT 06824

LATITUDE (NAD83):
 41° 11' 15" N
 41.1875° N

LONGITUDE (NAD83):
 73° 17' 56.976" W
 -73.29916° W

COUNTY:
 FAIRFIELD

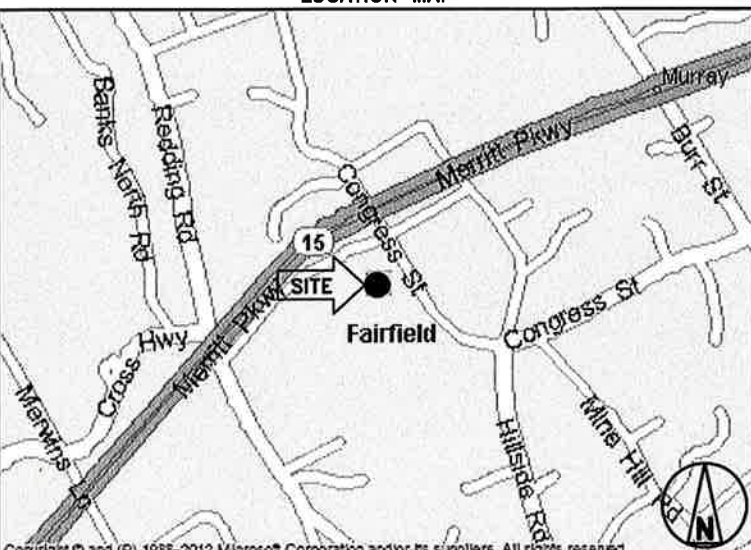
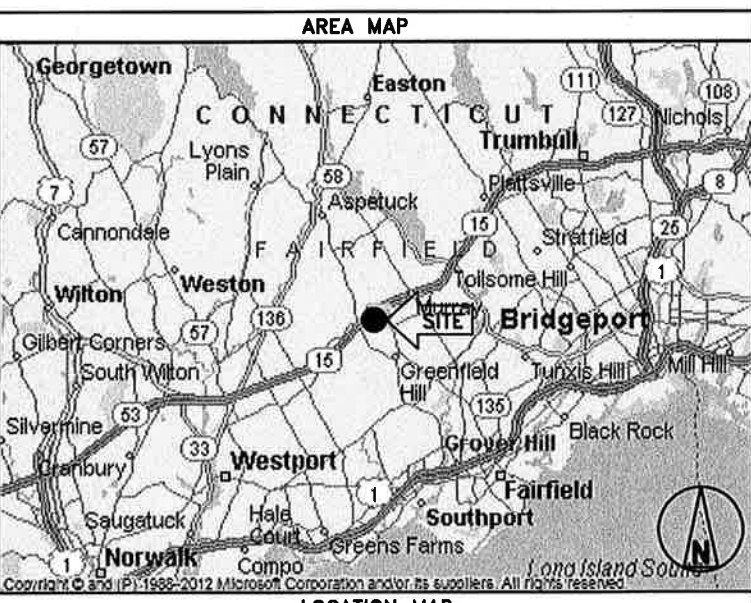
ZONING JURISDICTION:
 TOWN OF FAIRFIELD

ZONING DISTRICT:
 TBD

POWER COMPANY:
 CL&P
 (860) 947-2000

AAV PROVIDER:
 AT&T
 (800) 288-2020

SPRINT CM:
 GARY WOOD
 PHONE: (860) 940-9168
 gary.wood@sprint.com



PROJECT DESCRIPTION

SPRINT PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY.

- INSTALL 2.5 EQUIPMENT IN EXISTING N.V. MMBS CABINET
- INSTALL (3) PANEL ANTENNAS
- INSTALL (6) RRU'S TO TOWER
- INSTALL (30) JUMPER CABLES
- INSTALL (1) FIBER CABLE
- INSTALL (4) BATTERIES IN EXISTING BBU CABINET

THESE PLANS HAVE BEEN DEVELOPED FOR THE MODIFICATION OF AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY OWNED OR LEASED BY SPRINT IN ACCORDANCE WITH THE SCOPE OF WORK PROVIDED BY SPRINT. INFINIGY HAS INCORPORATED THIS SCOPE OF WORK IN THE PLANS. THESE PLANS ARE NOT FOR CONSTRUCTION UNLESS ACCOMPANIED BY A PASSING STRUCTURAL STABILITY ANALYSIS PREPARED BY A LICENSED STRUCTURAL ENGINEER. STRUCTURAL ANALYSIS MUST INCLUDE BOTH TOWER AND MOUNT.

APPLICABLE CODES

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

- INTERNATIONAL BUILDING CODE (2012 IBC)
- TIA-EIA-222-G OR LATEST EDITION
- NFPA 780 - LIGHTNING PROTECTION CODE
- 2011 NATIONAL ELECTRIC CODE OR LATEST EDITION
- ANY OTHER NATIONAL OR LOCAL APPLICABLE CODES, MOST RECENT EDITIONS
- CT BUILDING CODE
- LOCAL BUILDING CODE
- CITY/COUNTY ORDINANCES

DRAWING INDEX

SHEET NO.	SHEET TITLE	REV.
T-1	TITLE SHEET & PROJECT DATA	0
SP-1	SPRINT SPECIFICATIONS	0
SP-2	SPRINT SPECIFICATIONS	0
SP-3	SPRINT SPECIFICATIONS	0
A-1	SITE PLAN	0
A-2	TOWER ELEVATION & CABLE PLAN	0
A-3	ANTENNA LAYOUT & MOUNTING DETAILS	0
A-4	COLOR CODING & NOTES	0
A-5	EQUIPMENT & MOUNTING DETAILS	0
A-6	CIVIL DETAILS	0
A-7	PLUMBING DIAGRAM	0
E-1	ELECTRICAL & GROUNDING PLAN	0
E-2	ELECTRICAL & GROUNDING DETAILS	0



THESE OUTLINE SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT STANDARD CONSTRUCTION SPECIFICATIONS, INCLUDING CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.

SECTION 01 100 – SCOPE OF WORK

PART 1 – GENERAL

- 1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT CONSTRUCTION STANDARDS FOR WIRELESS SITES, CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.
- 1.2 RELATED DOCUMENTS:
 - A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
 - B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.
- 1.3 PRECEDENCE: SHOULD CONFLICTS OCCUR BETWEEN THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES INCLUDING THE STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE CONSTRUCTION DRAWINGS, INFORMATION ON THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE. NOTIFY SPRINT CONSTRUCTION MANAGER IF THIS OCCURS.
- 1.4 NATIONALLY RECOGNIZED CODES AND STANDARDS:
 - A. THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL AND LOCAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
 - 1. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
 - 5. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
 - 3. GR-1089 CORE, ELECTROMAGNETIC COMPATIBILITY AND ELECTRICAL SAFETY -GENERIC CRITERIA FOR NETWORK TELECOMMUNICATIONS EQUIPMENT.
 - 4. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE - "NEC") AND NFPA 101 (LIFE SAFETY CODE).
 - 5. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM)
 - 6. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE)
 - 7. AMERICAN CONCRETE INSTITUTE (ACI)
 - 8. AMERICAN WIRE PRODUCERS ASSOCIATION (AWPA)
 - 9. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
 - 10. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
 - 11. PORTLAND CEMENT ASSOCIATION (PCA)
 - 12. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
 - 13. BRICK INDUSTRY ASSOCIATION (BIA)
 - 14. AMERICAN WELDING SOCIETY (AWS)
 - 15. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
 - 16. SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
 - 17. DOOR AND HARDWARE INSTITUTE (DHI)
 - 18. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
 - 19. APPLICABLE BUILDING CODES INCLUDING UNIFORM BUILDING CODE, SOUTHERN BUILDING CODE, BOCA, AND THE INTERNATIONAL BUILDING CODE.
- 1.5 DEFINITIONS:
 - A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.
 - B. COMPANY: SPRINT CORPORATION
 - C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
 - D. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.
 - E. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.
 - F. OFCI: OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT.
 - G. CONSTRUCTION MANAGER – ALL PROJECTS RELATED COMMUNICATION TO FLOW THROUGH SPRINT REPRESENTATIVE IN CHARGE OF PROJECT...

- 1.6 SITE FAMILIARITY: CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE SPRINT CONSTRUCTION MANAGER PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OR FIELD CONDITIONS.
- 1.7 POINT OF CONTACT: COMMUNICATION BETWEEN SPRINT AND THE CONTRACTOR SHALL FLOW THROUGH THE SINGLE SPRINT CONSTRUCTION MANAGER APPOINTED TO MANAGE THE PROJECT FOR SPRINT.
- 1.8 ON-SITE SUPERVISION: THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK.
- 1.9 DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE: THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS, STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION.
 - A. THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY IN RED PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE COMPANY OR COMPANY'S DESIGNATED REPRESENTATIVE TO BE FORWARDED TO THE COMPANY'S A&E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS.
 - B. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK. CONTRACTOR SHALL NOTIFY SPRINT CONSTRUCTION MANAGER OF ANY VARIATIONS PRIOR TO PROCEEDING WITH THE WORK.
 - C. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS NOTED OTHERWISE. SPACING BETWEEN EQUIPMENT IS THE REQUIRED CLEARANCE. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE SPRINT CONSTRUCTION MANAGER PRIOR TO PROCEEDING WITH THE WORK.
- 1.10 USE OF JOB SITE: THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS.
- 1.11 UTILITIES SERVICES: WHERE NECESSARY TO CUT EXISTING PIPES, ELECTRICAL WIRES, CONDUITS, CABLES, ETC., OF UTILITY SERVICES, OR OF FIRE PROTECTION OR COMMUNICATIONS SYSTEMS, THEY SHALL BE CUT AND CAPPED AT SUITABLE PLACES OR WHERE SHOWN. ALL SUCH ACTIONS SHALL BE COORDINATED WITH THE UTILITY COMPANY INVOLVED.
- 1.12 PERMITS / FEES: WHEN REQUIRED THAT A PERMIT OR CONNECTION FEE BE PAID TO A PUBLIC UTILITY PROVIDER FOR NEW SERVICE TO THE CONSTRUCTION PROJECT, PAYMENT OF SUCH FEE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 1.13 CONTRACTOR SHALL TAKE ALL MEASURES AND PROVIDE ALL MATERIAL NECESSARY FOR PROTECTING EXISTING EQUIPMENT AND PROPERTY.
- 1.14 METHODS OF PROCEDURE (MOPS) FOR CONSTRUCTION: CONTRACTOR SHALL PERFORM WORK AS DESCRIBED IN THE FOLLOWING INSTALLATION AND COMMISSIONING MOPS.

NOTE: IN SHORT-FORM SPECIFICATIONS ON THE DRAWINGS, A/E TO INSERT LIST OF APPLICABLE MOPS INCLUDING EN-2012-001, EN-2013-002, EL-0568, AND TS-0193
- 1.15 USE OF ELECTRONIC PROJECT MANAGEMENT SYSTEMS:

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

- 3.1 TEMPORARY UTILITIES AND FACILITIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS.
- 3.2 ACCESS TO WORK: THE CONTRACTOR SHALL PROVIDE ACCESS TO THE JOB SITE FOR AUTHORIZED COMPANY PERSONNEL AND AUTHORIZED REPRESENTATIVES OF THE ARCHITECT/ENGINEER DURING ALL PHASES OF THE WORK.
- 3.3 TESTING: REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HEREWITH, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD COMPANY CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR COMPANY'S TEST AGENCY.
- 3.4 DIMENSIONS: VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS.

3.5 EXISTING CONDITIONS: NOTIFY THE SPRINT CONSTRUCTION MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER.

SECTION 01 200 – COMPANY FURNISHED MATERIAL AND EQUIPMENT

PART 1 – GENERAL

- 1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.
- 1.2 RELATED DOCUMENTS:
 - A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
 - B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

- 3.1 RECEIPT OF MATERIAL AND EQUIPMENT:
 - A. A COMPANY FURNISHED MATERIAL AND EQUIPMENT IS IDENTIFIED ON THE RF DATA SHEET IN THE CONSTRUCTION DOCUMENTS.
 - B. THE CONTRACTOR IS RESPONSIBLE FOR SPRINT PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:
 - 1. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT.
 - 2. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES.
 - 3. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT.
 - 4. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO SPRINT OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH.
 - 5. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING.
 - 6. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE.
- 3.2 DELIVERABLES:
 - A. COMPLETE SHIPPING AND RECEIPT DOCUMENTATION IN ACCORDANCE WITH COMPANY PRACTICE.
 - B. IF APPLICABLE, COMPLETE LOST/STOLEN/DAMAGED DOCUMENTATION REPORT AS NECESSARY IN ACCORDANCE WITH COMPANY PRACTICE, AND AS DIRECTED BY COMPANY.
 - C. UPLOAD DOCUMENTATION INTO SPRINT SITE MANAGEMENT SYSTEM (SMS) AND/OR PROVIDE HARD COPY DOCUMENTATION AS REQUESTED.

SECTION 01 300 – CELL SITE CONSTRUCTION CO.

PART 1 – GENERAL

- 1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.
- 1.2 RELATED DOCUMENTS:
 - A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
 - B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.
- 1.3 NOTICE TO PROCEED
 - A. NO WORK SHALL COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF THE WORK ORDER.
 - B. UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE SPRINT WITH AN OPERATIONAL WIRELESS FACILITY.

PART 2 – PRODUCTS (NOT USED)

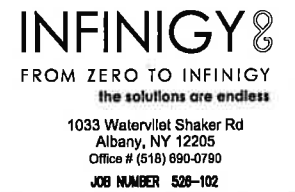
PART 3 – EXECUTION

- 3.1 FUNCTIONAL REQUIREMENTS:
 - A. THE ACTIVITIES DESCRIBED IN THIS PARAGRAPH REPRESENT MINIMUM ACTIONS AND PROCESSES REQUIRED TO SUCCESSFULLY COMPLETE THE WORK. THE ACTIVITIES DESCRIBED ARE NOT EXHAUSTIVE, AND CONTRACTOR SHALL TAKE ANY AND ALL ACTIONS AS NECESSARY TO SUCCESSFULLY COMPLETE THE CONSTRUCTION OF A FULLY FUNCTIONING WIRELESS FACILITY AT THE SITE IN ACCORDANCE WITH COMPANY PROCESSES.
 - B. SUBMIT SPECIFIC DOCUMENTATION AS INDICATED HEREIN, AND OBTAIN REQUIRED APPROVALS WHILE THE WORK IS BEING PERFORMED.
 - C. MANAGE AND CONDUCT ALL FIELD CONSTRUCTION SERVICE RELATED ACTIVITIES
 - D. PROVIDE CONSTRUCTION ACTIVITIES TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:



DRAWING NOTICE:

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REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR PERMIT	09/01/17	ASW	0

SITE NAME:

FAIRFIELD FIRE DEPARTMENT

SITE CASCADE:

CT03XC385

SITE ADDRESS:

**3965 CONGRESS STREET
FAIRFIELD, CT 06824**

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-1

CONTINUE FROM SP-1

1. PERFORM ANY REQUIRED SITE ENVIRONMENTAL MITIGATION.
2. PREPARE GROUND SITES; PROVIDE DE-GRUBBING; AND ROUGH AND FINAL GRADING, AND COMPOUND SURFACE TREATMENTS.
3. MANAGE AND CONDUCT ALL ACTIVITIES FOR INSTALLATION OF UTILITIES INCLUDING ELECTRICAL AND TELCO BACKHAUL.
4. INSTALL UNDERGROUND FACILITIES INCLUDING UNDERGROUND POWER AND COMMUNICATIONS CONDUITS, AND UNDERGROUND GROUNDING SYSTEM.
5. INSTALL ABOVE GROUND GROUNDING SYSTEMS.
6. PROVIDE NEW HVAC INSTALLATIONS AND MODIFICATIONS.
7. INSTALL "H-FRAMES", CABINETS AND SHELTERS AS INDICATED.
8. INSTALL ROADS, ACCESS WAYS, CURBS AND DRAINS AS INDICATED.
9. ACCOMPLISH REQUIRED MODIFICATION OF EXISTING FACILITIES.
10. PROVIDE ANTENNA SUPPORT STRUCTURE FOUNDATIONS.
11. PROVIDE SLABS AND EQUIPMENT PLATFORMS.
12. INSTALL COMPOUND FENCING, SIGHT SHIELDING, LANDSCAPING AND ACCESS BARRIERS.
13. PERFORM INSPECTION AND MATERIAL TESTING AS REQUIRED HEREINAFTER.
14. CONDUCT SITE RESISTANCE TO EARTH TESTING AS REQUIRED HEREINAFTER.
15. INSTALL FIXED GENERATOR SETS AND OTHER STANDBY POWER SOLUTIONS.
16. INSTALL TOWERS, ANTENNA SUPPORT STRUCTURES AND PLATFORMS ON EXISTING TOWERS AS REQUIRED.
17. INSTALL CELL SITE RADIOS, MICROWAVE, GPS, COAXIAL MAINLINE, ANTENNAS, CROSS BAND COUPLERS, TOWER TOP AMPLIFIERS, LOW NOISE AMPLIFIERS AND RELATED EQUIPMENT.
18. PERFORM, DOCUMENT, AND CLOSE OUT ANY CONSTRUCTION CONTROL DOCUMENTS THAT MAY BE REQUIRED BY GOVERNMENT AGENCIES AND LANDLORDS.
19. PERFORM ANTENNAL AND COAX SWEEP TESTING AND MAKE ANY AND ALL NECESSARY CORRECTIONS.
20. REMAIN ON SITE MOBILIZED THROUGHOUT HAND-OFF AND INTEGRATION TO ASSIST AS NEEDED UNTIL SITE IS DEEMED SUBSTANTIALLY COMPLETE AND PLACED "ON AIR."

3.2 GENERAL REQUIREMENTS FOR CIVIL CONSTRUCTION:

- A. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.
- B. EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.
- C. CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.
1. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
 2. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.
- D. CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION
- E. CONDUCT TESTING AS REQUIRED HEREIN.

3.3 DELIVERABLES:

- A. CONTRACTOR SHALL REVIEW, APPROVE, AND SUBMIT TO SPRINT SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS AS REQUIRED HEREINAFTER
- B. PROVIDE DOCUMENTATION INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING. DOCUMENTATION SHALL BE FORWARDED IN ORIGINAL FORMAT AND/OR UPLOADED INTO SMS.
1. ALL CORRESPONDENCE AND PRELIMINARY CONSTRUCTION REPORTS.
 2. PROJECT PROGRESS REPORTS.
 3. CIVIL CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 4. ELECTRICAL SERVICE COMPLETION DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).

5. LINES AND ANTENNA INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
6. POWER INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
7. TELCO READY DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
8. PPC (OR SHELTER) INSTALL DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
9. TOWER CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
10. TOWER CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
11. BTS AND RADIO EQUIPMENT DELIVERED AT SITE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
12. NETWORK OPERATIONS HANDOFF CHECKLIST (HOC WALK) COMPLETE (UPLOAD FORM IN SMS)
13. CIVIL CONSTRUCTION COMPLETE DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
14. SITE CONSTRUCTION PROGRESS PHOTOS UNLOADED INTO SMS.

SECTION 01 400 - SUBMITTALS & TESTS

PART 1 - GENERAL

- 1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.
- 1.2 RELATED DOCUMENTS:
- A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
- B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HERewith.
- 1.3 SUBMITTALS:
- A. THE WORK IN ALL ASPECTS SHALL COMPLY WITH THE CONSTRUCTION DRAWINGS AND THESE SPECIFICATIONS.
- B. SUBMIT THE FOLLOWING TO COMPANY REPRESENTATIVE FOR APPROVAL
1. CONCRETE MIX-DESIGNS FOR TOWER FOUNDATIONS, ANCHORS PIERS, AND CONCRETE PAVING.
 2. CONCRETE BREAK TESTS AS SPECIFIED HEREIN.
 3. SPECIAL FINISHES FOR INTERIOR SPACES, IF ANY.
 4. ALL EQUIPMENT AND MATERIALS SO IDENTIFIED ON THE CONSTRUCTION DRAWINGS.
 5. CHEMICAL GROUNDING DESIGN
- D. ALTERNATES: AT THE COMPANY'S REQUEST, ANY ALTERNATIVES TO THE MATERIALS OR METHODS SPECIFIED SHALL BE SUBMITTED TO SPRINT'S CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO BEING SHIPPED TO SITE. SPRINT WILL REVIEW AND APPROVE ONLY THOSE REQUESTS MADE IN WRITING. NO VERBAL APPROVALS WILL BE CONSIDERED. SUBMITTAL FOR APPROVAL SHALL INCLUDE A STATEMENT OF COST REDUCTION PROPOSED FOR USE OF ALTERNATE PRODUCT.

1.4 TESTS AND INSPECTIONS:

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTS, INSPECTIONS AND PROJECT DOCUMENTATION.
- B. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
1. COAX SWEEPS AND FIBER TESTS PER TS-0200 REV 4 ANTENNA LINE ACCEPTANCE STANDARDS.
 2. AGL, AZIMUTH AND DOWNTILT USING ELECTRONIC COMMERCIAL MADE-FOR-THE-PURPOSE ANTENNA ALIGNMENT TOOL.
 3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.
- C. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:
1. AZIMUTH, DOWNTILT, AGL - UPLOAD REPORT FROM ANTENNA ALIGNMENT TOOL TO SITERRA TASK 465. INSTALLED AZIMUTH, DOWNTILT, AND AGL MUST CONFORM TO THE RF DATA SHEETS. SWEEP AND FIBER TESTS
 2. SCANABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
 3. ALL AVAILABLE JURISDICTIONAL INFORMATION
 4. PDF SCAN OF REDLINES PRODUCED IN FIELD

5. ELECTRONIC AS-BUILT DRAWINGS IN AUTOCAD AND PDF FORMATS. ANY FIELD CHANGE MUST BE REFLECTED BY MODIFYING THE PLANS, ELEVATIONS, AND DETAILS IN THE DRAWING SETS. GENERAL NOTES INDICATING MODIFICATIONS WILL NOT BE ACCEPTED. CHANGES SHALL BE HIGHLIGHTED AS "CLOUDS" IDENTIFIED AS THE "AS-BUILT" CONDITION.
6. LIEN WAIVERS
7. FINAL PAYMENT APPLICATION
8. REQUIRED FINAL CONSTRUCTION PHOTOS
9. CONSTRUCTION AND COMMISSIONING CHECKLIST COMPLETE WITH NO DEFICIENT ITEMS
10. ALL POST NTP TASKS INCLUDING DOCUMENT UPLOADS COMPLETED IN SITERRA (SPRINTS DOCUMENT REPOSITORY OF RECORD).

1.5 COMMISSIONING: PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPs

1.6 INTEGRATION: PERFORM ALL INTEGRATION ACTIVITIES AS REQUIRED BY APPLICABLE MOPs

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 REQUIREMENTS FOR TESTING:

A. THIRD PARTY TESTING AGENCY:

1. WHEN THE USE OF A THIRD PARTY INDEPENDENT TESTING AGENCY IS REQUIRED, THE AGENCY THAT IS SELECTED MUST PERFORM SUCH WORK ON A REGULAR BASIS IN THE STATE WHERE THE PROJECT IS LOCATED AND HAVE A THOROUGH UNDERSTANDING OF LOCAL AVAILABLE MATERIALS, INCLUDING THE SOIL, ROCK, AND GROUNDWATER CONDITIONS.
2. THE THIRD PARTY TESTING AGENCY IS TO BE FAMILIAR WITH THE APPLICABLE REQUIREMENTS FOR THE TESTS TO BE DONE, EQUIPMENT TO BE USED, AND ASSOCIATED HEALTH AND SAFETY ISSUES.
3. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASHTO, AND OTHER METHODS IS NEEDED.
4. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASHTO, AND OTHER METHODS IS NEEDED.

3.2 REQUIRED TESTS:

A. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. CONCRETE CYLINDER BREAK TESTS FOR THE TOWER AND ANCHOR FOUNDATIONS AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
2. ASPHALT ROADWAY COMPACTED THICKNESS, SURFACE SMOOTHNESS, AND COMPACTED DENSITY TESTING AS SPECIFIED IN SECTION: HOT MIX ASPHALT PAVING.
3. FIELD QUALITY CONTROL TESTING AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
4. TESTING REQUIRED UNDER SECTION: AGGREGATE BASE FOR ACCESS ROADS, PADS AND ANCHOR LOCATIONS
5. STRUCTURAL BACKFILL COMPACTION TESTS FOR THE TOWER FOUNDATION.
6. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.
7. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
8. GROUNDING AT ANTENNA MASTS FOR GPS AND ANTENNAS
9. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

3.3 REQUIRED INSPECTIONS

A. SCHEDULE INSPECTIONS WITH COMPANY REPRESENTATIVE.

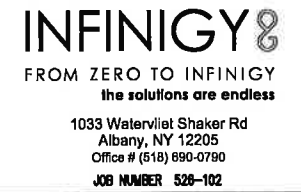
B. CONDUCT INSPECTIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. GROUNDING SYSTEM INSTALLATION PRIOR TO EARTH CONCEALMENT DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
2. FORMING FOR CONCRETE AND REBAR PLACEMENT PRIOR TO POUR DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
3. COMPACTION OF BACKFILL MATERIALS; AGGREGATE BASE FOR ROADS, PADS, AND ANCHORS; ASPHALT PAVING; AND SHAFT BACKFILL FOR CONCRETE AND WOOD POLES, BY INDEPENDENT THIRD PARTY AGENCY.
4. PRE- AND POST-CONSTRUCTION ROOFTOP AND STRUCTURAL INSPECTIONS ON EXISTING FACILITIES.
5. TOWER ERECTION SECTION STACKING AND PLATFORM ATTACHMENT DOCUMENTED BY DIGITAL PHOTOGRAPHS BY THIRD PARTY AGENCY.
6. ANTENNA AZIMUTH, DOWN TILT AND PER SUNLIGHT TOOL SUNSIGHT INSTRUMENTS - ANTENNA ALIGNMENT TOOL (AAT)

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FAIRFIELD, CT 06824

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-2

CONTINUE FROM SP-2

7. VERIFICATION DOCUMENTED WITH THE ANTENNA CHECKLIST REPORT, BY A&E, SITE DEVELOPMENT REP, OR RF REP.
 8. FINAL INSPECTION CHECKLIST AND HANDOFF WALK (HOC). SIGNED FORM SHOWING ACCEPTANCE BY FIELD OPS IS TO BE UPLOADED INTO SMS.
 9. COAX SWEEP AND FIBER TESTING DOCUMENTS SUBMITTED VIA SMS FOR RF APPROVAL.
 10. SCAN-ABLE BARCODE PHOTOGRAPHS OF TOWER TOP AND INACCESSIBLE SERIALIZED EQUIPMENT
 11. ALL AVAILABLE JURISDICTIONAL INFORMATION
 12. PDF SCAN OF REDLINES PRODUCED IN FIELD
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL CORRECTIONS TO ANY WORK IDENTIFIED AS UNACCEPTABLE IN SITE INSPECTION ACTIVITIES AND/OR AS A RESULT OF TESTING.
- D. CONSTRUCTION INSPECTIONS AND CORRECTIVE MEASURES SHALL BE DOCUMENTED BY THE CONTRACTOR WITH WRITTEN REPORTS AND PHOTOGRAPHS. PHOTOGRAPHS MUST BE DIGITAL AND OF SUFFICIENT QUALITY TO CLEARLY SHOW THE SITE CONSTRUCTION. PHOTOGRAPHS MUST CLEARLY IDENTIFY THE PHOTOGRAPHED ITEM AND BE LABELED WITH THE SITE CASCADE NUMBER, SITE NAME, DESCRIPTION, AND DATE.
- 3.4 DELIVERABLES: TEST AND INSPECTION REPORTS AND CLOSEOUT DOCUMENTATION SHALL BE UPLOADED TO THE SMS AND/OR FORWARDED TO SPRINT FOR INCLUSION INTO THE PERMANENT SITE FILES.
- A. THE FOLLOWING TEST AND INSPECTION REPORTS SHALL BE PROVIDED AS APPLICABLE.
1. CONCRETE MIX AND CYLINDER BREAK REPORTS.
 2. STRUCTURAL BACKFILL COMPACTION REPORTS.
 3. SITE RESISTANCE TO EARTH TEST.
 4. ANTENNA AZIMUTH AND DOWN TILT VERIFICATION
 5. TOWER ERECTION INSPECTIONS AND MEASUREMENTS DOCUMENTING TOWER INSTALLED PER SUPPLIER'S REQUIREMENTS AND THE APPLICABLE SECTIONS HEREIN.
 6. COAX CABLE SWEEP TESTS PER COMPANY'S "ANTENNA LINE ACCEPTANCE STANDARDS".
- B. REQUIRED CLOSEOUT DOCUMENTATION INCLUDES THE FOLLOWING:
1. TEST WELLS AND TRENCHES: PHOTOGRAPHS OF ALL TEST WELLS; PHOTOGRAPHS SHOWING ALL OPEN EXCAVATIONS AND TRENCHING PRIOR TO BACKFILLING SHOWING A TAPE MEASURE VISIBLE IN THE EXCAVATIONS INDICATING DEPTH.
 2. CONDUITS, CONDUCTORS AND GROUNDING: PHOTOGRAPHS SHOWING TYPICAL INSTALLATION OF CONDUCTORS AND CONNECTORS; PHOTOGRAPHS SHOWING TYPICAL BEND RADIUS OF INSTALLED GROUND WIRES AND GROUND ROD SPACING;
 3. CONCRETE FORMS AND REINFORCING: CONCRETE FORMING AT TOWER AND EQUIPMENT/SHELTER PAD/FOUNDATIONS - PHOTOGRAPHS SHOWING ALL REINFORCING STEEL, UTILITY AND CONDUIT STUB OUTS; PHOTOGRAPHS SHOWING CONCRETE POUR OF SHELTER SLAB/FOUNDATION, TOWER FOUNDATION AND GUY ANCHORS WITH VIBRATOR IN USE; PHOTOGRAPHS SHOWING EACH ANCHOR ON GUYED TOWERS, BEFORE CONCRETE POUR.
 4. TOWER, ANTENNAS AND MAINLINE: INSPECTION AND PHOTOGRAPHS OF SECTION STACKING; INSPECTION AND PHOTOGRAPHS OF PLATFORM COMPONENT ATTACHMENT POINTS; PHOTOGRAPHS OF TOWER TOP GROUNDING; PHOTOS OF TOWER COAX LINE COLOR CODING AT THE TOP AND AT GROUND LEVEL; INSPECTION AND PHOTOGRAPHS OF OPERATIONAL OF TOWER LIGHTING, AND PLACEMENT OF FAA REGISTRATION SIGN; PHOTOGRAPHS SHOWING ADDITIONAL GROUNDING POINTS FOR TOWERS GREATER THAN 200 FEET; PHOTOS OF ANTENNA GROUND BAR, EQUIPMENT GROUND BAR, AND MASTER GROUND BAR; PHOTOS OF GPS ANTENNA(S); PHOTOS OF EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA; PHOTOS OF COAX WEATHERPROOFING - TOP AND BOTTOM; PHOTOS OF COAX GROUNDING--TOP AND BOTTOM; PHOTOS OF ANTENNA AND MAST GROUNDING; PHOTOS OF COAX CABLE ENTRY INTO SHELTER; PHOTOS OF PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.
 5. ROOF TOPS: PRE-CONSTRUCTION AND POST-CONSTRUCTION VISUAL INSPECTION AND PHOTOGRAPHS OF THE ROOF AND INTERIOR TO DETERMINE AND DOCUMENT CONDITIONS; ROOF TOP CONSTRUCTION INSPECTIONS AS REQUIRED BY THE JURISDICTION; PHOTOGRAPHS OF CABLE TRAY AND/OR ICE BRIDGE; PHOTOGRAPHS OF DOGHOUSE/CABLE EXIT FROM ROOF;
 6. SITE LAYOUT - PHOTOGRAPHS OF THE OVERALL COMPOUND, INCLUDING EQUIPMENT PLATFORM FROM ALL FOUR CORNERS.
 7. FINISHED UTILITIES: CLOSE-UP PHOTOGRAPHS OF THE PPC BREAKER PANEL; CLOSE-UP PHOTOGRAPH OF THE INSIDE OF THE TELCO PANEL AND NIU; CLOSE-UP PHOTOGRAPH OF THE POWER METER AND DISCONNECT; PHOTOS OF POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE; PHOTOGRAPHS AT METER BOX AND/OR FACILITY DISTRIBUTION PANEL.
 8. REQUIRED MATERIALS CERTIFICATIONS: CONCRETE MIX DESIGNS; MILL CERTIFICATION FOR ALL REINFORCING AND STRUCTURAL STEEL; AND ASPHALT PAVING MIX DESIGN.
 9. ANY AND ALL SUBMITTALS BY THE JURISDICTION OR COMPANY.

SECTION 01 400 - SUBMITTALS & TESTS

PART 1 - GENERAL

- 1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE OTHER CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.
- 1.2 RELATED DOCUMENTS:
 - A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
 - B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HEREWITH.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

- 3.1 WEEKLY REPORTS:
 - A. CONTRACTOR SHALL PROVIDE SPRINT WITH WEEKLY REPORTS SHOWING PROJECT STATUS. THIS STATUS REPORT FORMAT WILL BE PROVIDED TO THE CONTRACTOR BY SPRINT. THE REPORT WILL CONTAIN SITE ID NUMBER, THE MILESTONES FOR EACH SITE, INCLUDING THE BASELINE DATE, ESTIMATED COMPLETION DATE AND ACTUAL COMPLETION DATE.
 - B. REPORT INFORMATION WILL BE TRANSMITTED TO SPRINT VIA ELECTRONIC MEANS AS REQUIRED. THIS INFORMATION WILL PROVIDE A BASIS FOR PROGRESS MONITORING AND PAYMENT.
- 3.2 PROJECT CONFERENCE CALLS:
 - A. SPRINT MAY HOLD WEEKLY PROJECT CONFERENCE CALLS. CONTRACTOR WILL BE REQUIRED TO COMMUNICATE SITE STATUS, MILESTONE COMPLETIONS AND UPCOMING MILESTONE PROJECTIONS, AND ANSWER ANY OTHER SITE STATUS QUESTIONS AS NECESSARY.
- 3.3 PROJECT TRACKING IN SMS:
 - A. CONTRACTOR SHALL PROVIDE SCHEDULE UPDATES AND PROJECTIONS IN THE SMS SYSTEM ON A WEEKLY BASIS.
- 3.4 ADDITIONAL REPORTING:
 - A. ADDITIONAL OR ALTERNATE REPORTING REQUIREMENTS MAY BE ADDED TO THE REPORT AS DETERMINED TO BE REASONABLY NECESSARY BY COMPANY.
- 3.5 PROJECT PHOTOGRAPHS:
 - A. FILE DIGITAL PHOTOGRAPHS OF COMPLETED SITE IN JPEG FORMAT IN THE SMS PHOTO LIBRARY FOR THE RESPECTIVE SITE. PHOTOGRAPHS SHALL BE CLEARLY LABELED WITH SITE NUMBER, NAME AND DESCRIPTION, AND SHALL INCLUDE AT A MINIMUM THE FOLLOWING AS APPLICABLE:
 1. SHELTER AND TOWER OVERVIEW.
 2. TOWER FOUNDATION(S) - FORMS AND STEEL BEFORE POUR (EACH ANCHOR ON GUYED TOWERS).
 3. TOWER FOUNDATION(S) POUR WITH VIBRATOR IN USE (EACH ANCHOR ON GUYED TOWERS).
 4. TOWER STEEL AS BEING INSTALLED INTO HOLE (SHOW ANCHOR STEEL ON GUYED TOWERS).
 5. PHOTOS OF TOWER SECTION STACKING.
 6. CONCRETE TESTING / SAMPLES.
 7. PLACING OF ANCHOR BOLTS IN TOWER FOUNDATION.
 8. BUILDING/WATER TANK FROM ROAD FOR TENANT IMPROVEMENTS OR COMMENTS.
 9. SHELTER FOUNDATION--FORMS AND STEEL BEFORE POURING.
 10. SHELTER FOUNDATION POUR WITH VIBRATOR IN USE.
 11. COAX CABLE ENTRY INTO SHELTER.
 12. PLATFORM MECHANICAL CONNECTIONS TO TOWER/MONOPOLE.
 13. ROOFTOP PRE AND POST CONSTRUCTION PHOTOS TO INCLUDE PENETRATIONS AND INTERIOR CEILING.
 14. PHOTOS OF TOWER TOP COAX LINE COLOR CODING AND COLOR CODING AT GROUND LEVEL.
 15. PHOTOS OF ALL APPROPRIATE COMPANY OR REGULATORY SIGNAGE.
 16. PHOTOS OF EQUIPMENT BOLT DOWN INSIDE SHELTER.
 17. POWER AND TELCO ENTRANCE TO COMPANY ENCLOSURE AND POWER AND TELCO SUPPLY LOCATIONS INCLUDING METER/DISCONNECT.
 18. ELECTRICAL TRENCH(S) WITH ELECTRICAL / CONDUIT BEFORE BACKFILL.
 19. ELECTRICAL TRENCH(S) WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.
 20. TELCO TRENCH WITH TELEPHONE / CONDUIT BEFORE BACKFILL.
 21. TELCO TRENCH WITH FOIL-BACKED TAPE BEFORE FURTHER BACKFILL.
 22. SHELTER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).
 23. TOWER GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).

24. FENCE GROUND-RING TRENCH WITH GROUND-WIRE BEFORE BACKFILL (SHOW ALL CAD WELDS AND BEND RADII).
25. ALL BTS GROUND CONNECTIONS.
26. ALL GROUND TEST WELLS.
27. ANTENNA GROUND BAR AND EQUIPMENT GROUND BAR.
28. ADDITIONAL GROUNDING POINTS ON TOWERS ABOVE 200'.
29. HVAC UNITS INCLUDING CONDENSERS ON SPLIT SYSTEMS.
30. GPS ANTENNAS.
31. CABLE TRAY AND/OR WAVEGUIDE BRIDGE.
32. DOGHOUSE/CABLE EXIT FROM ROOF.
33. EACH SECTOR OF ANTENNAS; ONE PHOTOGRAPH LOOKING AT THE SECTOR AND ONE FROM BEHIND SHOWING THE PROJECTED COVERAGE AREA.
34. MASTER BUS BAR.
35. TELCO BOARD AND NIU.
36. ELECTRICAL DISTRIBUTION WALL.
37. CABLE ENTRY WITH SURGE SUPPRESSION.
38. ENTRANCE TO EQUIPMENT ROOM.
39. COAX WEATHERPROOFING--TOP AND BOTTOM OF TOWER.
40. COAX GROUNDING -TOP AND BOTTOM OF TOWER.
41. ANTENNA AND MAST GROUNDING.
42. LANDSCAPING - WHERE APPLICABLE.

3.6 FINAL PROJECT ACCEPTANCE: COMPLETE ALL REQUIRED REPORTING TASKS PER CONTRACT, CONTRACT DOCUMENTS OR THE SPRINT INTEGRATED CONSTRUCTION STANDARDS FOR WIRELESS SITES AND UPLOAD INTO SITERRA.

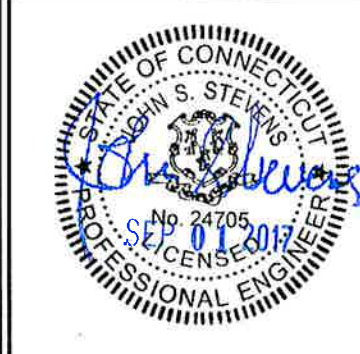
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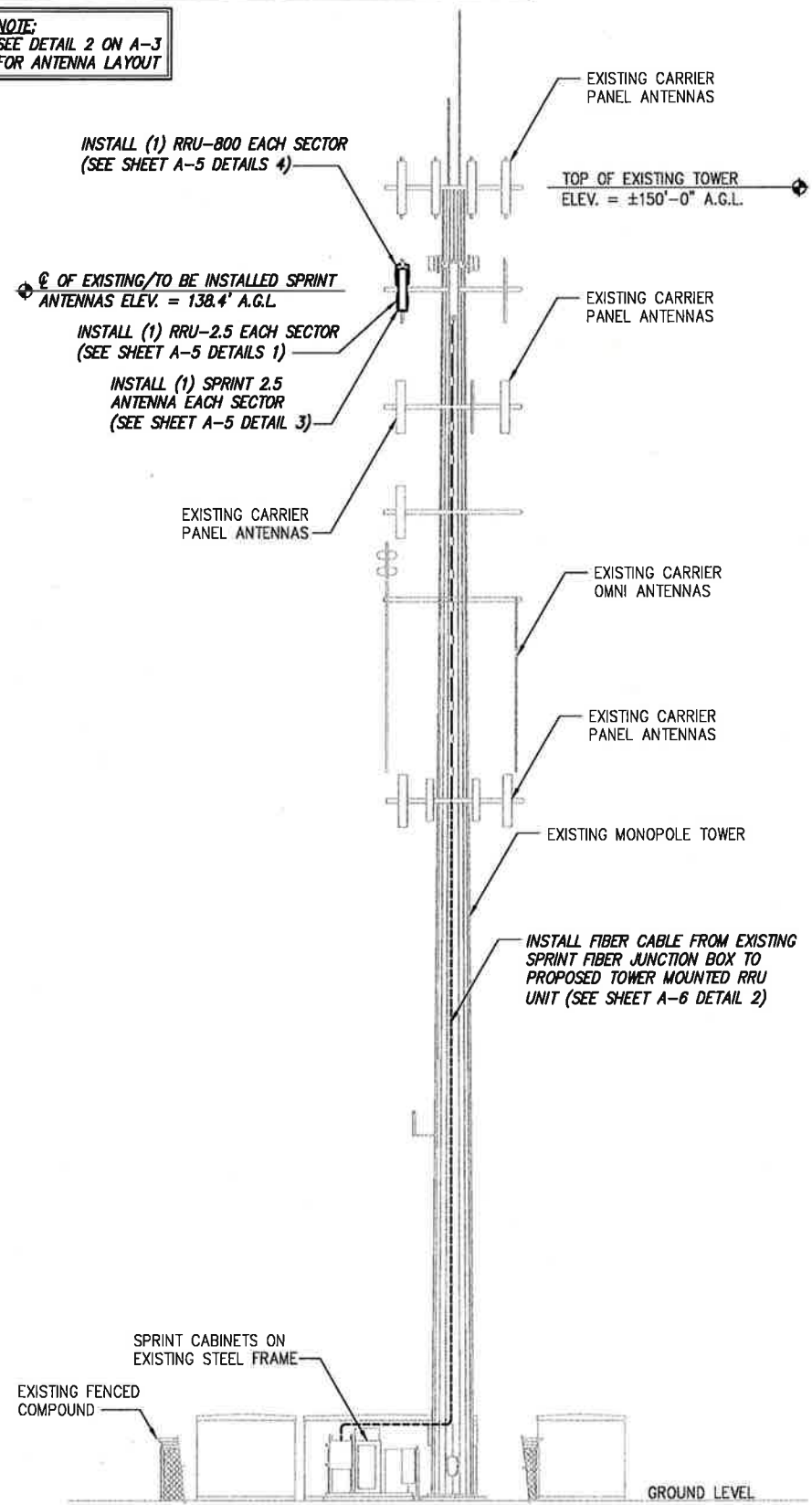
SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-3

NOTE:
 STRUCTURAL ANALYSIS COMPLETED BY INFINIGY, FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "STRUCTURAL ANALYSIS REPORT, CARRIER SITE NAME: CT03XC385 - FAIRFIELD FIRE DEPARTMENT, DATED AUGUST 31, 2017", INFINIGY PROJECT NUMBER: "333-000". ACCORDING TO RESULTS OF THE STRUCTURAL ANALYSIS, THE STRUCTURE HAS SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED LOADING.

NOTE:
 SEE DETAIL 2 ON A-3 FOR ANTENNA LAYOUT



DETAIL NOT USED NO SCALE 2

TOWER ELEVATION NO SCALE 1

DETAIL NOT USED NO SCALE 3


DETAIL NOT USED NO SCALE 4

PLANS PREPARED FOR:



6580 Sprint Parkway
 Overland Park, Kansas 66251

PLANS PREPARED BY:



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 Office # (518) 890-0790
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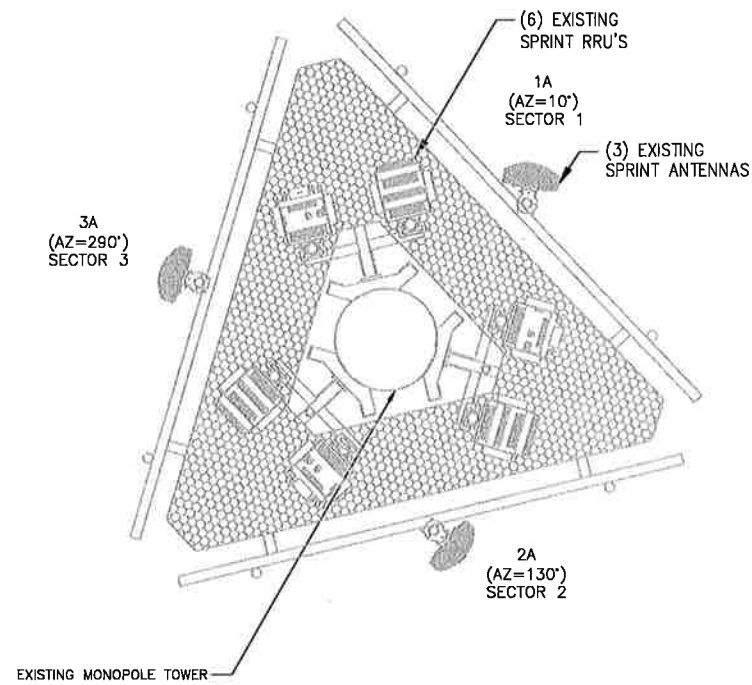
SITE NAME:
FAIRFIELD FIRE DEPARTMENT

SITE CASCADE:
CT03XC385

SITE ADDRESS:
**3965 CONGRESS STREET
 FAIRFIELD, CT 06824**

SHEET DESCRIPTION:
**BUILDING ELEVATION
 & CABLE PLAN**

SHEET NUMBER:
A-2



EXISTING ANTENNA & RRU LAYOUT

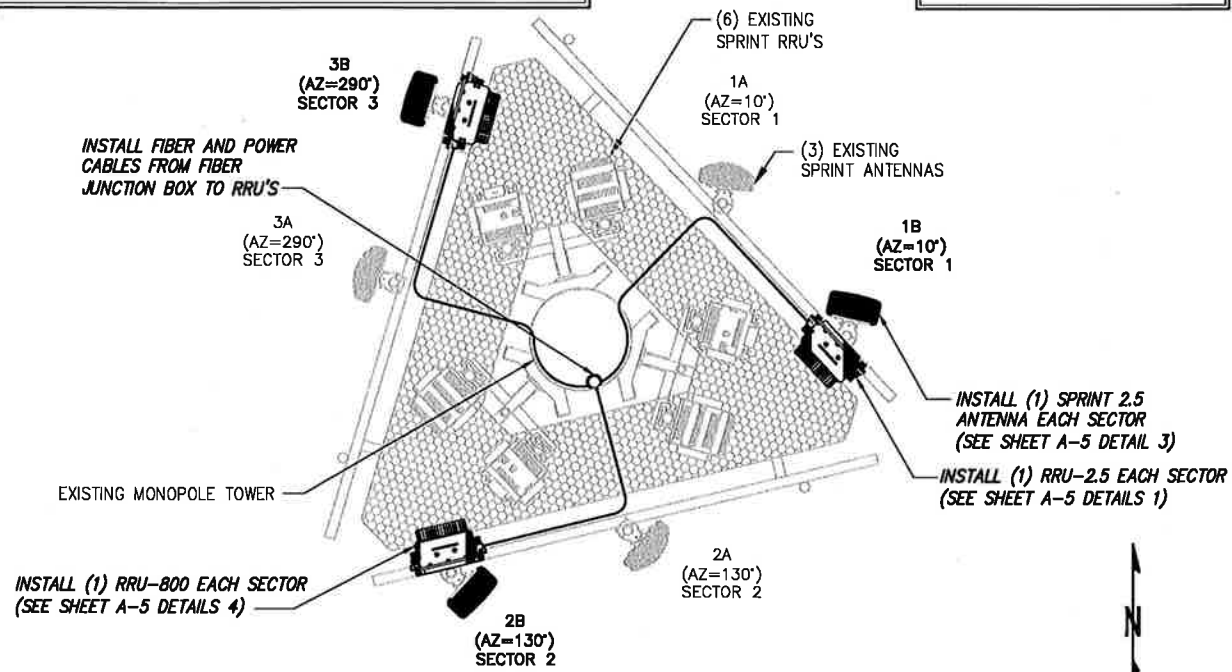
NO SCALE

1

NOTE:
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THE CONFIGURATION PLANS ARE BASED ON PROVIDED INFORMATION AND ARE FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO CONSTRUCTION.

NOTE:
JUMPERS FROM 2.5 RRH TO THE 2.5 ANTENNA CANNOT EXCEED 15 FEET



FINAL ANTENNA LAYOUT

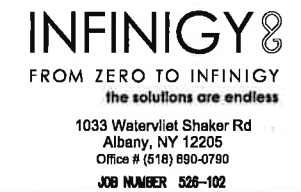
NO SCALE

2

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SITE CASCADE:

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SITE ADDRESS:

3965 CONGRESS STREET
FAIRFIELD, CT 06824

SHEET DESCRIPTION:

ANTENNA LAYOUT & MOUNTING DETAILS

SHEET NUMBER:

A-3

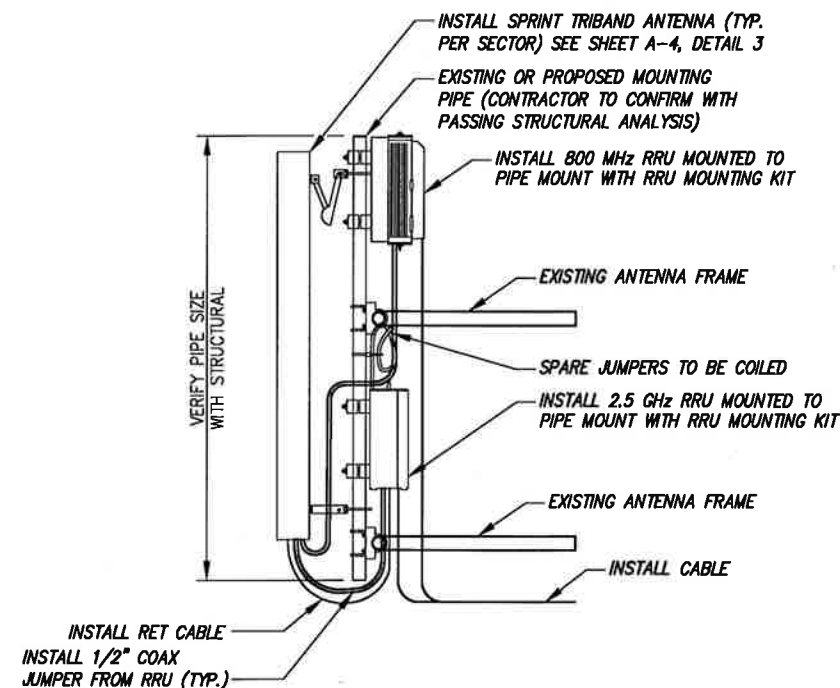
NOTE:
SPARE DC CABLES ARE COILED UP ON NV RRHS AT SPRINT ARRAY. THESE ARE TO BE USED TO POWER UP THE 2.5 RRHS AND TIED INTO EXISTING DC BREAKERS INSIDE THE FIBER JUNCTION BOX LOCATED AT EQUIPMENT.

NOTE:
CONTRACTOR TO POSITION RRU ON MOUNT BEHIND ANTENNA SUCH THAT THE RRU DOES NOT INTERFERE WITH THE EXISTING PLATFORM/T-ARM MOUNTING HARDWARE.

NOTE:
THE DIAGRAM IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR IS TO REFER TO PASSING STRUCTURAL ANALYSIS FOR ANTENNA AND RRU MOUNTING DETAILS

NOTES:

- CUT DC CONDUCTORS TO LENGTH.
- COIL FIBER CABLE AND SECURE AT SIDE OF RRU.
- DO NOT EXCEED BEND RADIUS.



TYPICAL ANTENNA & RRU MOUNTING DETAILS

NO SCALE

4

DETAIL NOT USED

NO SCALE

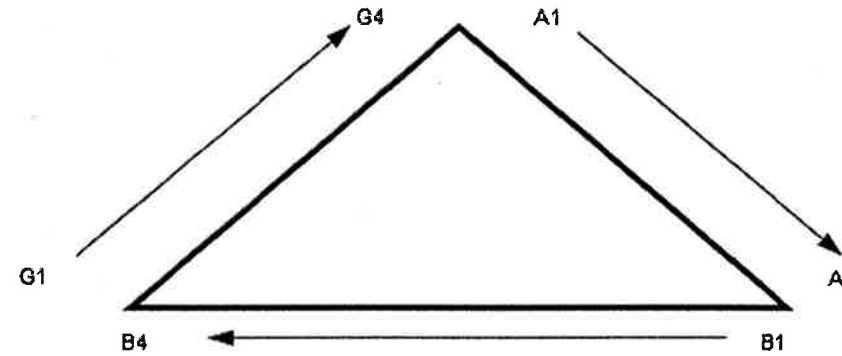
3

NV CABLES				
BAND	INDICATOR	PORT	COLOR	
800-1	YEL GRN	NV-1	GRN	
1900-1	YEL RED	NV-2	BLU	
1900-2	YEL BRN	NV-3	BRN	
1900-3	YEL BLU	NV-4	WHT	
1900-4	YEL SLT	NV-5	RED	
800-2	YEL ORG	NV-6	SLT	
SPARE	YEL WHT	NV-7	PPL	
2500	YEL PPL	NV-8	ORG	

HYBRID	
HYBRID	COLOR
1	GRN
2	BLU
3	BRN
4	WHT
5	RED
6	SLT
7	PPL
8	ORG

2.5 Band		
2500 Radio 1	COLOR	
YEL WHT	GRN	
YEL WHT	BLU	
YEL WHT	BRN	
YEL WHT	WHT	
YEL WHT	RED	
YEL WHT	SLT	
YEL WHT	PPL	
YEL WHT	ORG	

Figure 1: Antenna Orientation



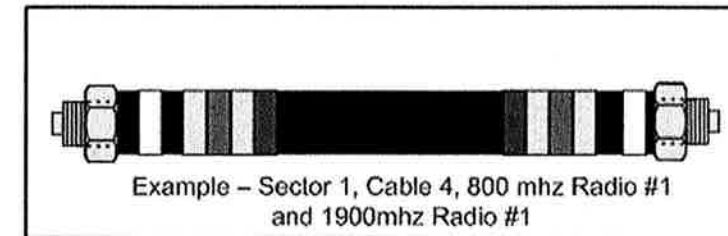
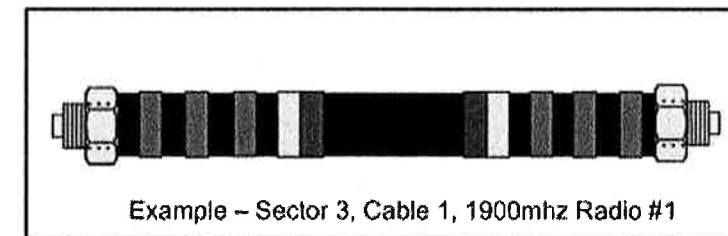
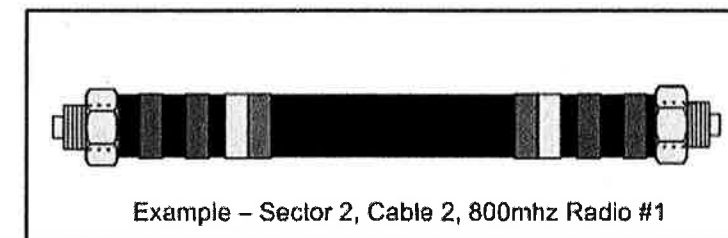
NOTES:

- ALL CABLES SHALL BE MARKED WITH 2" WIDE, UV STABILIZED, UL APPROVED TAPE.
- THE FIRST RING SHALL BE CLOSEST TO THE END OF THE CABLE AND SPACED APPROXIMATELY 2" FROM THE END CONNECTOR, WEATHERPROOFING, OR BREAK-OUT CYLINDER. THERE SHALL BE A 1" SPACE BETWEEN EACH RING FOR THE CABLE IDENTIFIER, AND NO SPACES BETWEEN THE FREQUENCY BANDS.
- A 2" GAP SHALL SEPARATE THE CABLE COLOR CODE FROM THE FREQUENCY COLOR CODE. THE 2" COLOR RINGS FOR THE FREQUENCY CODE SHALL BE PLACED NEXT TO EACH OTHER WITH NO SPACES.
- THE 2" COLORED TAPE(S) SHALL EACH BE WRAPPED A MINIMUM OF 3 TIMES AROUND THE INDIVIDUAL CABLES, AND THE TAPE SHALL BE KEPT IN THE SAME LOCATION AS MUCH AS POSSIBLE.
- SITES WITH MORE THAN FOUR (4) SECTORS WILL REQUIRE ADDITIONAL RINGS FOR EACH SECTOR, FOLLOWING THE PATTERN. HIGH CAPACITY SITES WILL USE THE NEXT COLOR IN THE SEQUENCE FOR ADDITIONAL CABLES IN EACH SECTOR.
- HYBRID FIBER CABLE SHALL BE SECTOR IDENTIFIED INSIDE THE CABINET ON FREQUENCY BUNDLES, ON THE SEALTITE, ON THE MAIN LINE UPON EXIT OF SEALTITE, AND BEFORE AND AFTER THE BREAKOUT UNIT (MEDUSA), AS WELL AS BEFORE AND AFTER ANY ENTRANCE OR EXIT.
- HFC "MAIN TRUNK" WILL NOT BE MARKED WITH THE FREQUENCY CODES, AS IT CONTAINS ALL FREQUENCIES.
- INDIVIDUAL POWER PAIRS AND FIBER BUNDLES SHALL BE LABELED WITH BOTH THE CABLE AND FREQUENCY.

Sector	Cable	First Ring	Second Ring	Third Ring
1 Alpha	1	Green	No Tape	No Tape
	2		No Tape	No Tape
	3	Brown	No Tape	No Tape
	4	White	No Tape	No Tape
	5	Red	No Tape	No Tape
	6	Grey	No Tape	No Tape
	7	Purple	No Tape	No Tape
	8	Orange	No Tape	No Tape
2 Beta	1	Green	Green	No Tape
	2			No Tape
	3	Brown	Brown	No Tape
	4	White	White	No Tape
	5	Red	Red	No Tape
	6	Grey	Grey	No Tape
	7	Purple	Purple	No Tape
	8	Orange	Orange	No Tape
3 Gamma	1	Green	Green	Green
	2			
	3	Brown	Brown	Brown
	4	White	White	White
	5	Red	Red	Red
	6	Grey	Grey	Grey
	7	Purple	Purple	Purple
	8	Orange	Orange	Orange

NV FREQUENCY	INDICATOR	ID
800-1	YEL GRN	GRN
1900-1	YEL RED	RED
1900-2	YEL BRN	BRN
1900-3	YEL BLU	BLU
1900-4	YEL SLT	SLT
800-1	YEL ORG	ORG
RESERVED	YEL WHT	WHT
RESERVED	YEL PPL	PPL

2.5 FREQUENCY	INDICATOR		ID
2500 -1	YEL	WHT	GRN
2500 -2	YEL	WHT	RED
2500 -3	YEL	WHT	BRN
2500 -4	YEL	WHT	BLU
2500 -5	YEL	WHT	SLT
2500 -6	YEL	WHT	ORG
2500 -7	YEL	WHT	WHT
2500 -8	YEL	WHT	PPL



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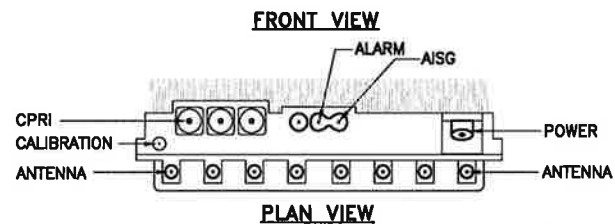
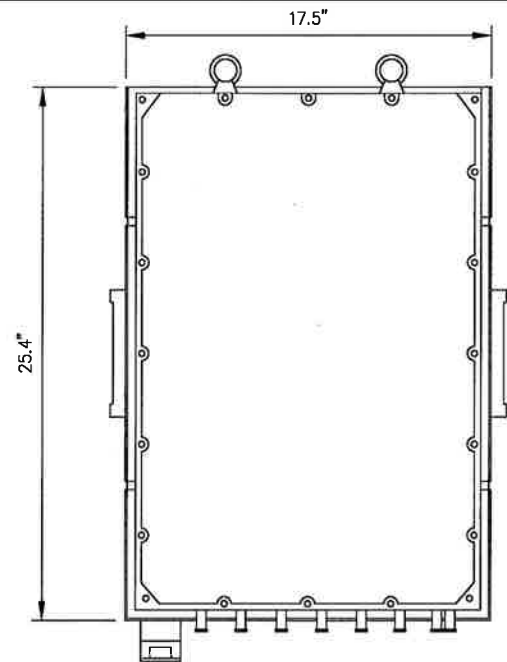
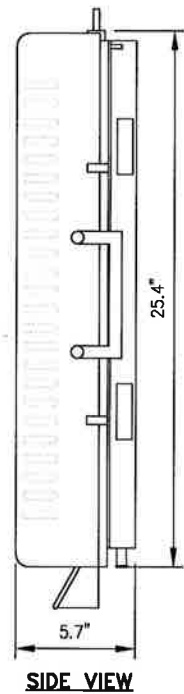
SHEET DESCRIPTION:

COLOR CODING AND NOTES

SHEET NUMBER:

A-4

RRU: ALCATEL LUCENT TD-RRH8X20
 COLOR: LIGHT GREY
 WEIGHT: 70 LBS.



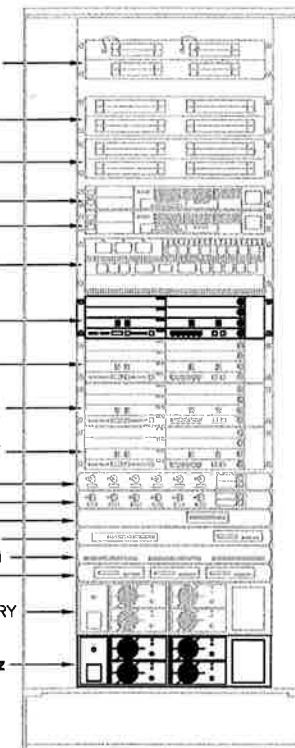
NOTES
 COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRU'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRU PACKAGES IN THE RAIN.

2.5 RRU'S

NO SCALE

1

- DS3 SURGE PROTECTOR
- POWER INJECTOR 5-8
- POWER INJECTOR 1-4
- 7210 SAS-M 2
- 7210 SAS-M 1
- 7205 SAR-B
- LTE-BBU 2.5GHz
- LTE-BBU FDD
- CDMA MT-BBU GROWTH
- CDMA MT-BBU PRIMARY
- PDP1
- PDP2
- 15MHZ SPLITTER
- ETHERNET HUB SEC-B
- PRIMARY PROTECTION T1
- SEC-B #1, #1 & #3
- RECTIFIER SHELF PRIMARY
- RECTIFIER SHELF 2.5GHz



FRONT VIEW

2.5 EQUIPMENT IN EXISTING N.V. MMBS

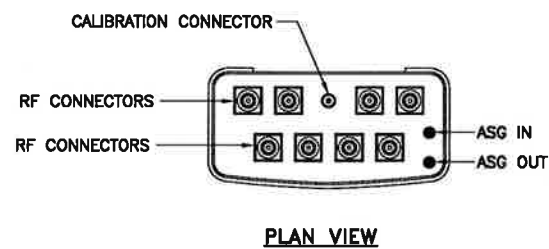
NOTES

NO SCALE

2

ANTENNA COMMSCOPE DT465B-2XR

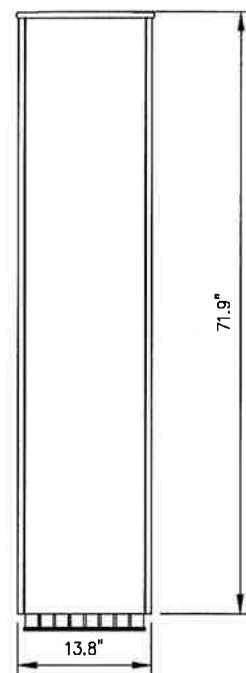
RADOME MATERIAL: FIBER GLASS
 RADOME COLOR: LIGHT GREY
 DIMENSIONS, HxWxD.in(m/m): 71.9"x13.8"x8.2" (1825x350x209mm)
 WEIGHT: 58 lbs
 CONNECTORS: (2) 7/16 DIN FEMALE
 (8) 4.1/9.5 DIN FEMAL



PLAN VIEW



SIDE VIEW



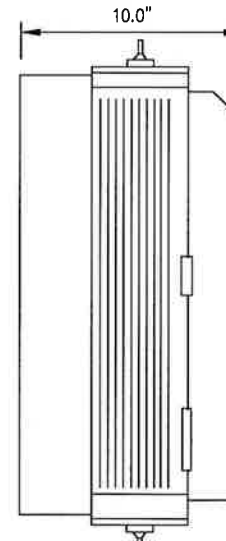
FRONT VIEW

2.5 ANTENNA

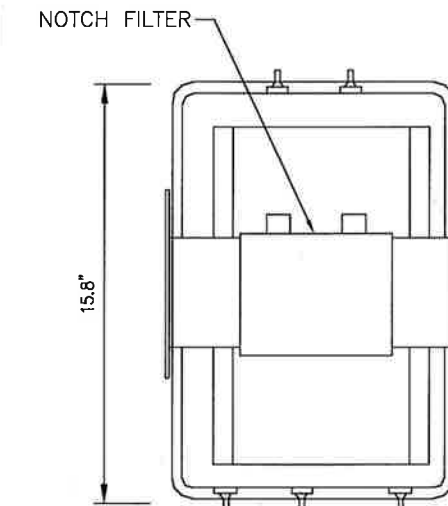
NO SCALE

3

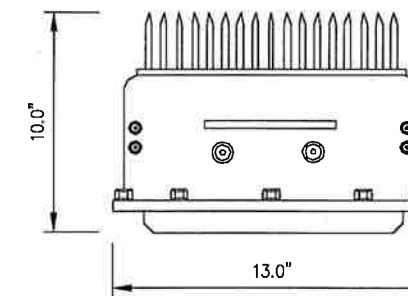
RRU: ALCATEL LUCENT RRH 800 MHz 2x50W
 COLOR: LIGHT GREY
 WEIGHT: 53 LBS.



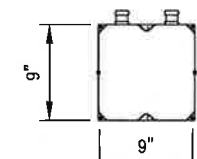
SIDE VIEW



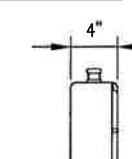
FRONT VIEW



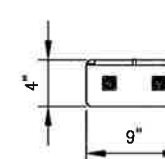
PLAN VIEW



FRONT VIEW



SIDE VIEW



PLAN VIEW

850 MHZ NOTCH FILTERS
 WEIGHT = 11 LBS.

COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRU'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRU PACKAGES IN THE RAIN.

800 RRU'S

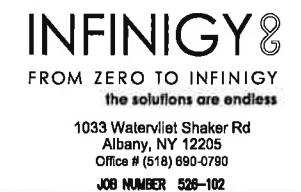
NO SCALE

4

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CT03XC385

SITE ADDRESS:

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 FAIRFIELD, CT 06824

SHEET DESCRIPTION:

EQUIPMENT &
 MOUNTING DETAILS

SHEET NUMBER:

A-5

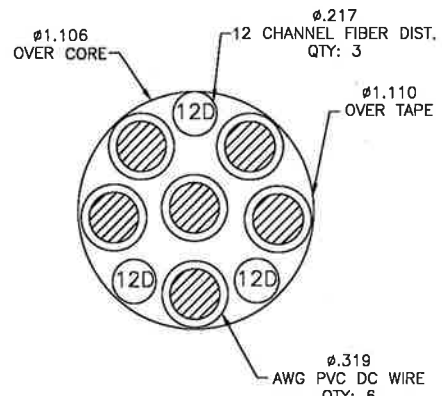
RFS HYBRIFLEX RISER CABLE SCHEDULE

Fiber Only (Existing DC Power)	Hybrid cable MN: HB058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft
	MN: HB058-M12-075F	75 ft
	MN: HB058-M12-100F	100 ft
	MN: HB058-M12-125F	125 ft
	MN: HB058-M12-150F	150 ft
	MN: HB058-M12-175F	175 ft
	MN: HB058-M12-200F	200 ft
8 AWG Power	Hybrid cable MN: HB114-08U3M12-050F 3x 8 AWG power pairs, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 50 ft	50 ft
	MN: HB114-08U3M12-075F	75 ft
	MN: HB114-08U3M12-100F	100 ft
	MN: HB114-08U3M12-125F	125 ft
	MN: HB114-08U3M12-150F	150 ft
	MN: HB114-08U3M12-175F	175 ft
	MN: HB114-08U3M12-200F	200 ft
6 AWG Power	Hybrid cable MN: HB114-13U3M12-225F 3x 6 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 3/4 cable, 225 ft	225 ft
	MN: HB114-13U3M12-250F	250 ft
	MN: HB114-13U3M12-275F	275 ft
	MN: HB114-13U3M12-300F	300 ft
4 AWG Power	Hybrid cable MN: HB114-21U3M12-325F 3x 4 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 3/4 cable, 325 ft	325 ft
	MN: HB114-21U3M12-350F	350 ft
	MN: HB114-21U3M12-375F	375 ft

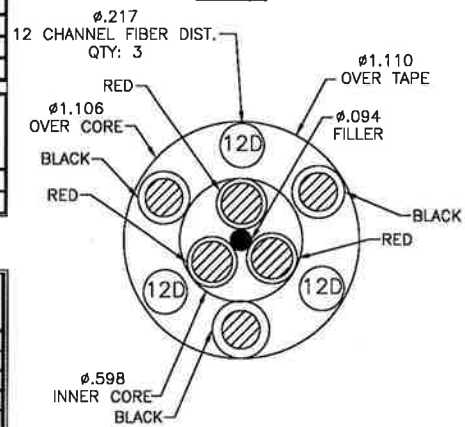
RFS HYBRIFLEX JUMPER CABLE SCHEDULE

Fiber Only	Hybrid Jumper cable MN: HBF012-M3-5F1 5 ft, 3x multi-mode fiber pairs, Outdoor & LC connectors, 1/2 cable	5 ft
	MN: HBF012-M3-10F1	10 ft
	MN: HBF012-M3-15F1	15 ft
	MN: HBF012-M3-20F1	20 ft
	MN: HBF012-M3-25F1	25 ft
	MN: HBF012-M3-30F1	30 ft
8 AWG Power	Hybrid Jumper cable MN: HBF058-08U1M3-5F1 5 ft, 1x 8 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: HBF058-08U1M3-10F1	10 ft
	MN: HBF058-08U1M3-15F1	15 ft
	MN: HBF058-08U1M3-20F1	20 ft
	MN: HBF058-08U1M3-25F1	25 ft
	MN: HBF058-08U1M3-30F1	30 ft
6 AWG Power	Hybrid Jumper cable MN: HBF058-13U1M3-5F1 5 ft, 1x 6 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: HBF058-13U1M3-10F1	10 ft
	MN: HBF058-13U1M3-15F1	15 ft
	MN: HBF058-13U1M3-20F1	20 ft
	MN: HBF058-13U1M3-25F1	25 ft
	MN: HBF058-13U1M3-30F1	30 ft
4 AWG Power	Hybrid Jumper cable MN: HBF078-21U1M3-5F1 5 ft, 1x 4 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 7/8 cable	5 ft
	MN: HBF078-21U1M3-10F1	10 ft
	MN: HBF078-21U1M3-15F1	15 ft
	MN: HBF078-21U1M3-20F1	20 ft
	MN: HBF078-21U1M3-25F1	25 ft
	MN: HBF078-21U1M3-30F1	30 ft

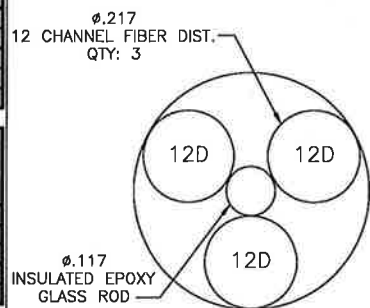
NOTE:
SPRINT CM TO CONFIRM HYBRID OR FIBER RISER CABLE AND HYBRID OR FIBER JUMPER CABLE MODEL NUMBERS IF HYBRID CABLES ARE REQUIRED BEFORE PREPARING BOM.



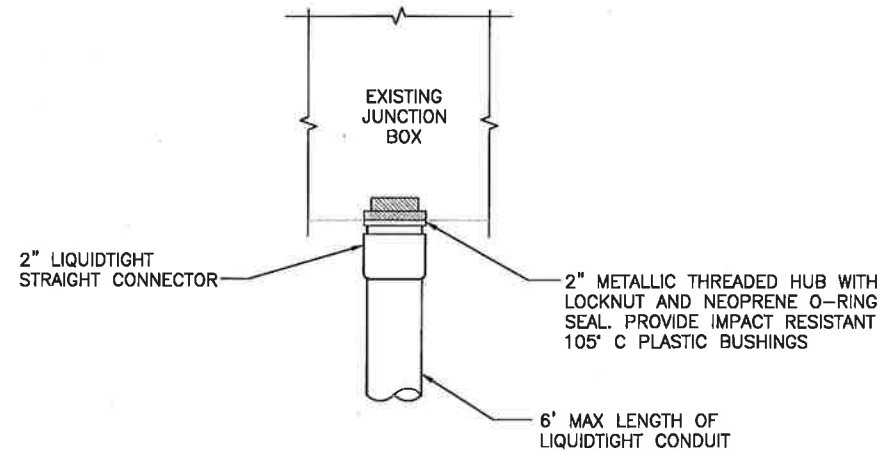
4 AWG



8 & 6 AWG



FIBER ONLY



FIBER JUNCTION BOX PENETRATION

NO SCALE

2

2.5 CABLE CROSS SECTION DATA

NO SCALE

1

DETAIL NOT USED

NO SCALE

3

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SITE ADDRESS:

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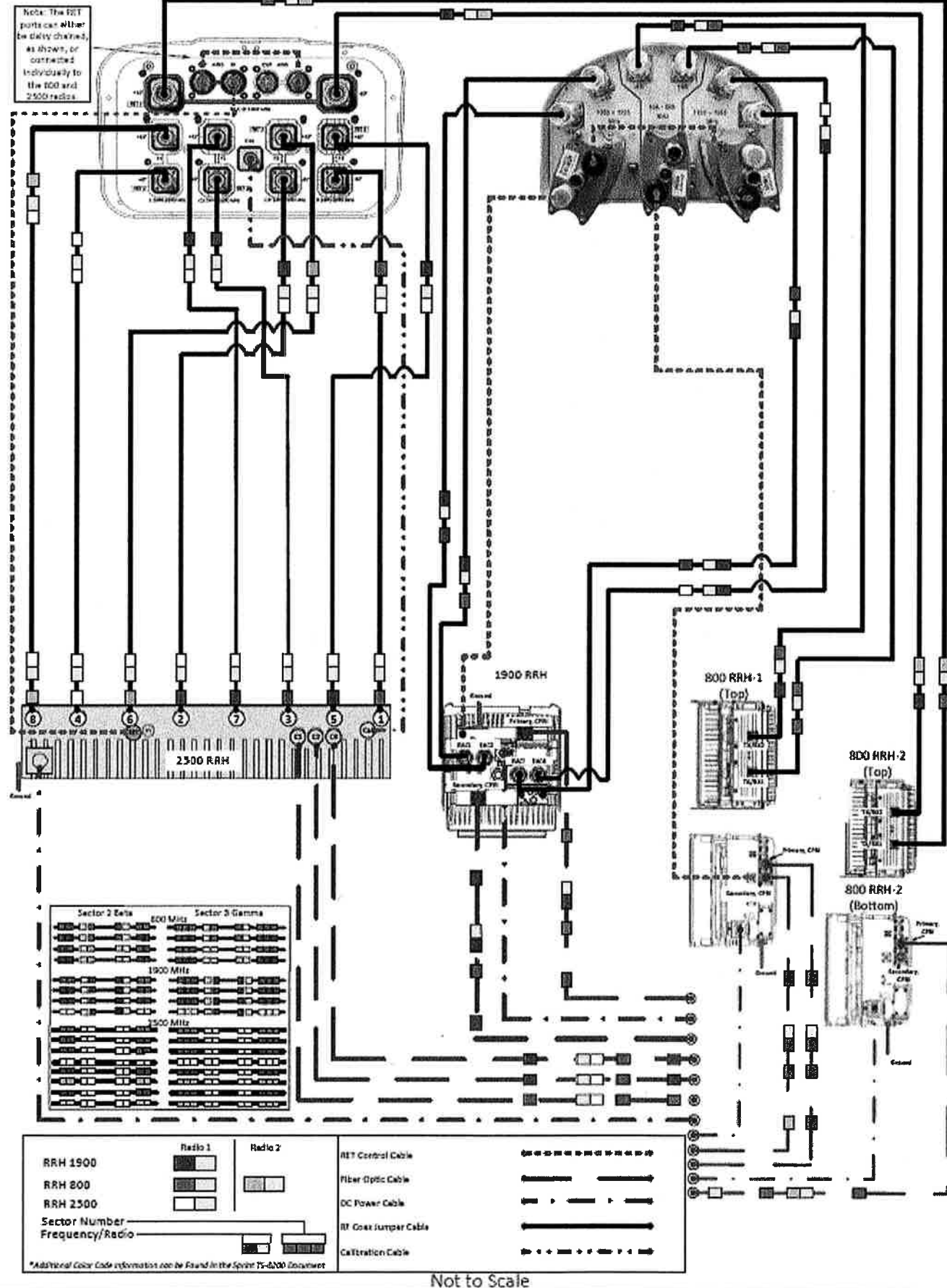
SHEET DESCRIPTION:

CIVIL DETAILS

SHEET NUMBER:

A-6

ALU 211 DT465B-2XR & APXVSP18-C-A20 wo Filters



Not to Scale

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SHEET DESCRIPTION:
PLUMBING DIAGRAM

SHEET NUMBER:
A-7

PLANS PREPARED FOR:



PLANS PREPARED BY:



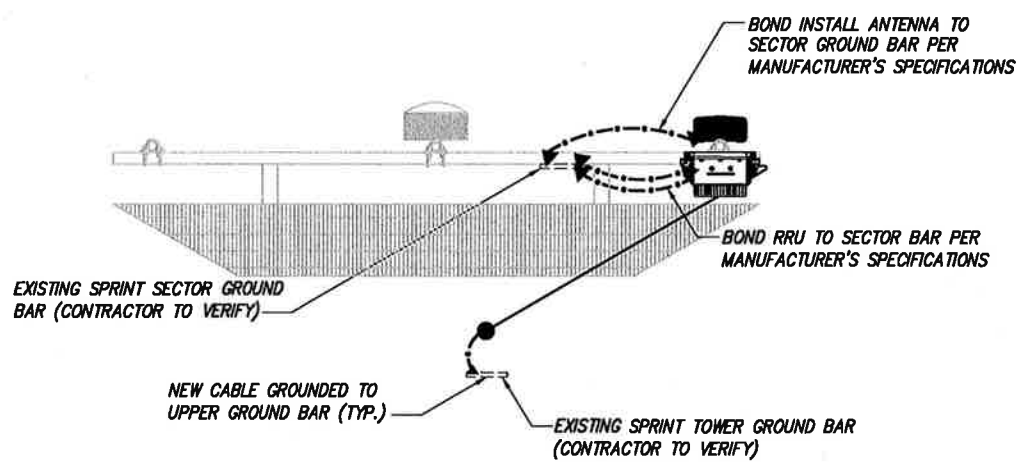
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PLAN NOT USED

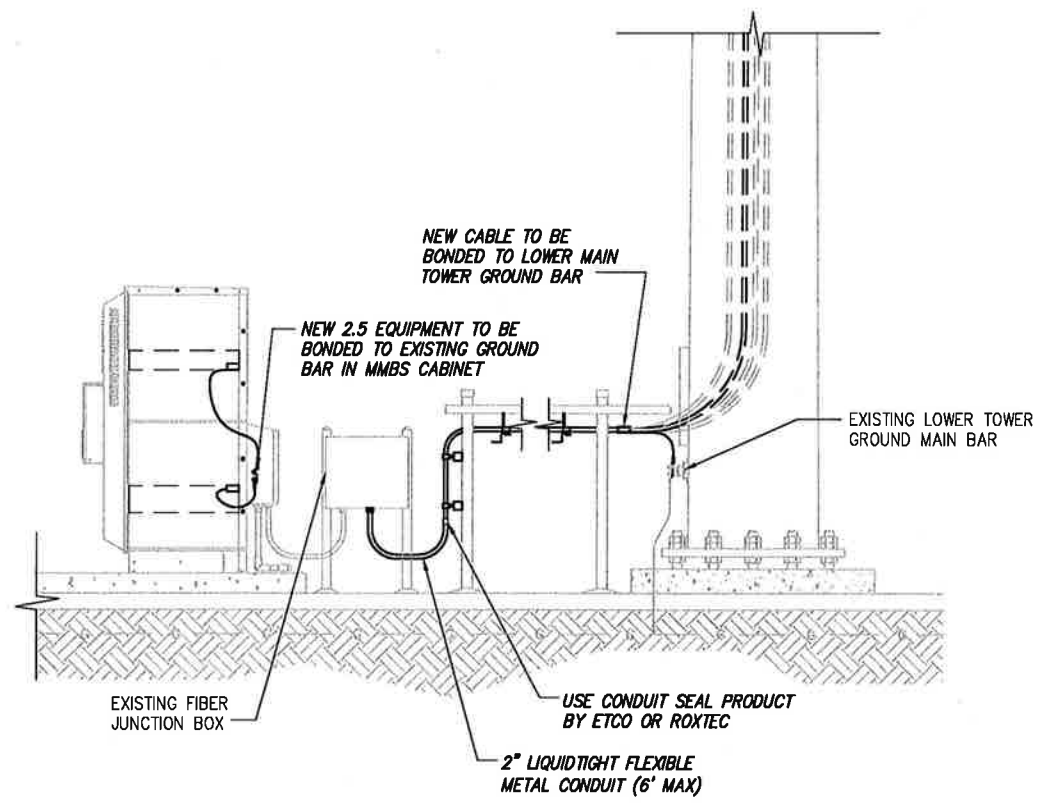
NO SCALE 1

- LEGEND:**
- G — EXISTING GROUND RING
 - CADWELD CONNECTION (EXOTHERMIC WELD)
 - ▲ MECHANICAL CONNECTION
 - ⊗ GROUND ROD
 - CABLE GROUND KIT



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE 2



TYPICAL EQUIPMENT GROUNDING PLAN (ELEVATION)

NO SCALE 3

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ISSUED FOR PERMIT	09/01/17	ASW	0

SITE NAME: FAIRFIELD FIRE DEPARTMENT

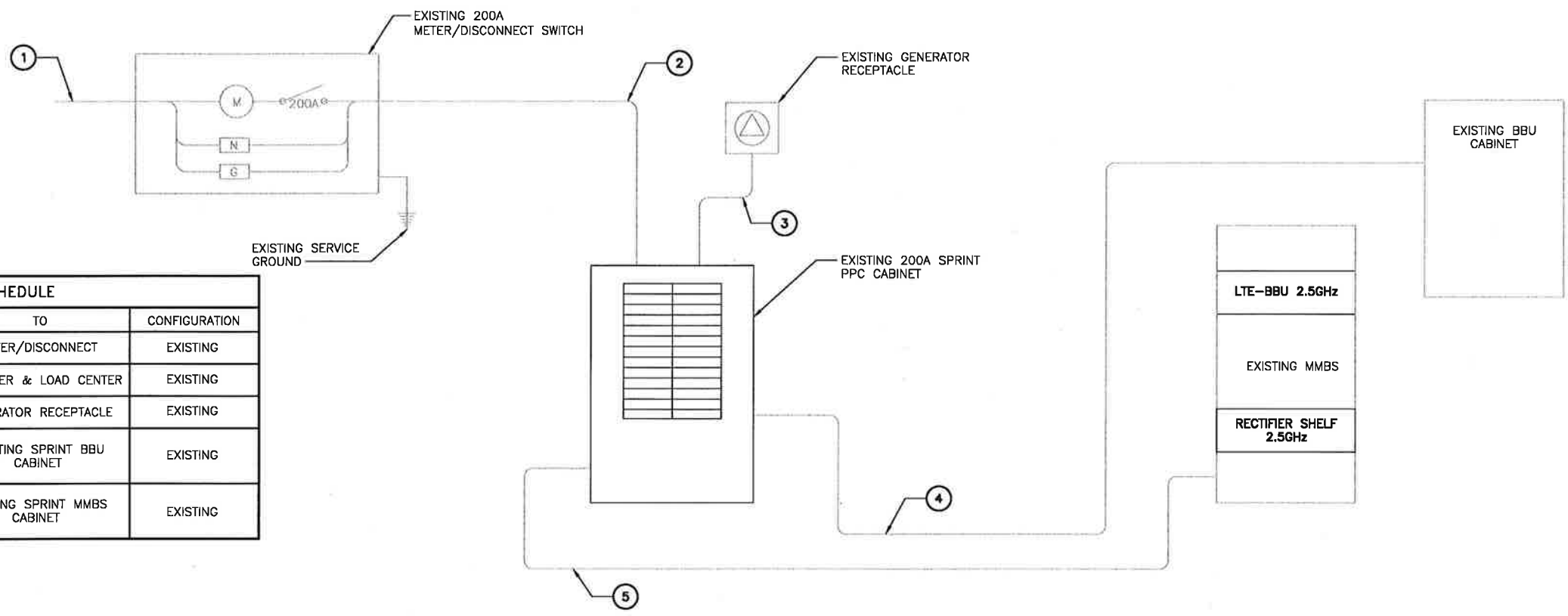
SITE CASCADE: CT03XC385

SITE ADDRESS: 3965 CONGRESS STREET FAIRFIELD, CT 06824

SHEET DESCRIPTION: ELECTRICAL & GROUNDING PLAN

SHEET NUMBER: E-1

NOTES
 CG SHALL REFERENCE ALL SPECS FOR "CONNECTING THE POWER SUPPLY" OF THE NEW INSTALLATION DOCUMENTS, FOR ALL CONNECTION SPECIFICATIONS.



CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
①	UTILITY SOURCE	METER/DISCONNECT	EXISTING
②	METER/DISCONNECT	TRANSFER & LOAD CENTER	EXISTING
③	TRANSFER & LOAD CENTER	GENERATOR RECEPTACLE	EXISTING
④	TRANSFER & LOAD CENTER	EXISTING SPRINT BBU CABINET	EXISTING
⑤	TRANSFER & LOAD CENTER	EXISTING SPRINT MMBS CABINET	EXISTING

ELECTRICAL ONE-LINE DIAGRAM

NO SCALE 1

PLANS PREPARED FOR:

6580 Sprint Parkway
 Overland Park, Kansas 66251

PLANS PREPARED BY:

FROM ZERO TO INFINIGY
 the solutions are endless

1033 Watervliet Shaker Rd
 Albany, NY 12205
 Office # (518) 890-0790
 JOB NUMBER 528-102

ENGINEERING LICENSE:

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REVISIONS:

DESCRIPTION	DATE	BY	REV

ISSUED FOR PERMIT: 09/01/17 ASW 0

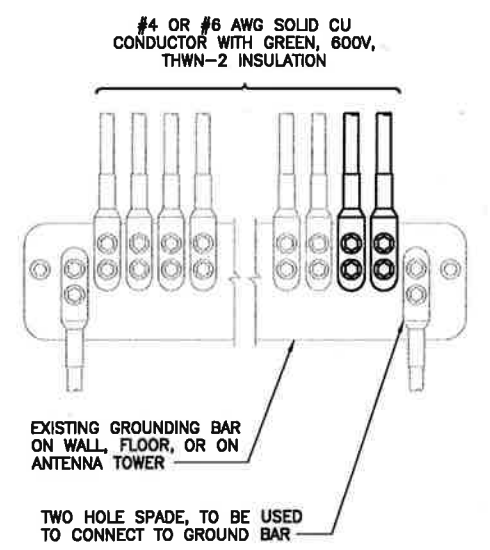
SITE NAME:
FAIRFIELD FIRE DEPARTMENT

SITE CASCADE:
CT03XC385

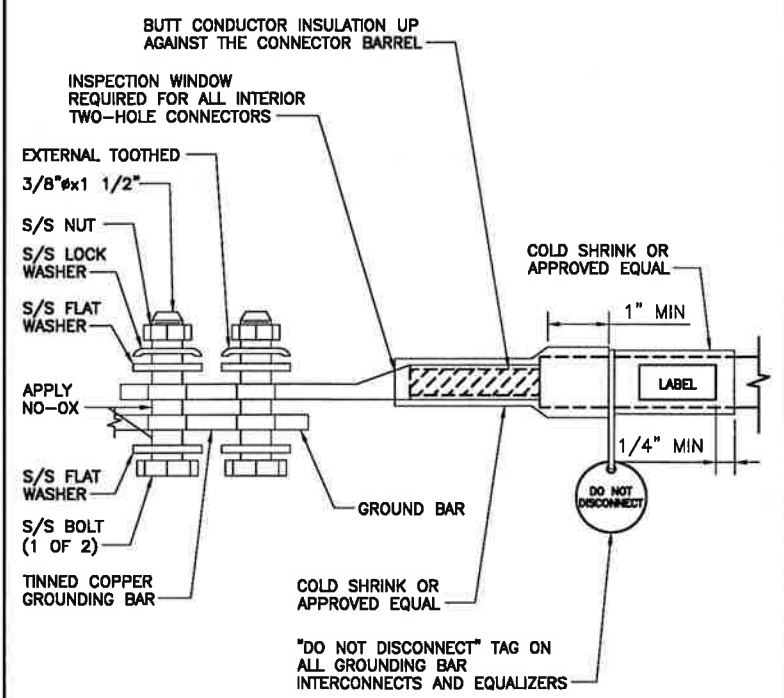
SITE ADDRESS:
**3965 CONGRESS STREET
 FAIRFIELD, CT 06824**

SHEET DESCRIPTION:
ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:
E-2

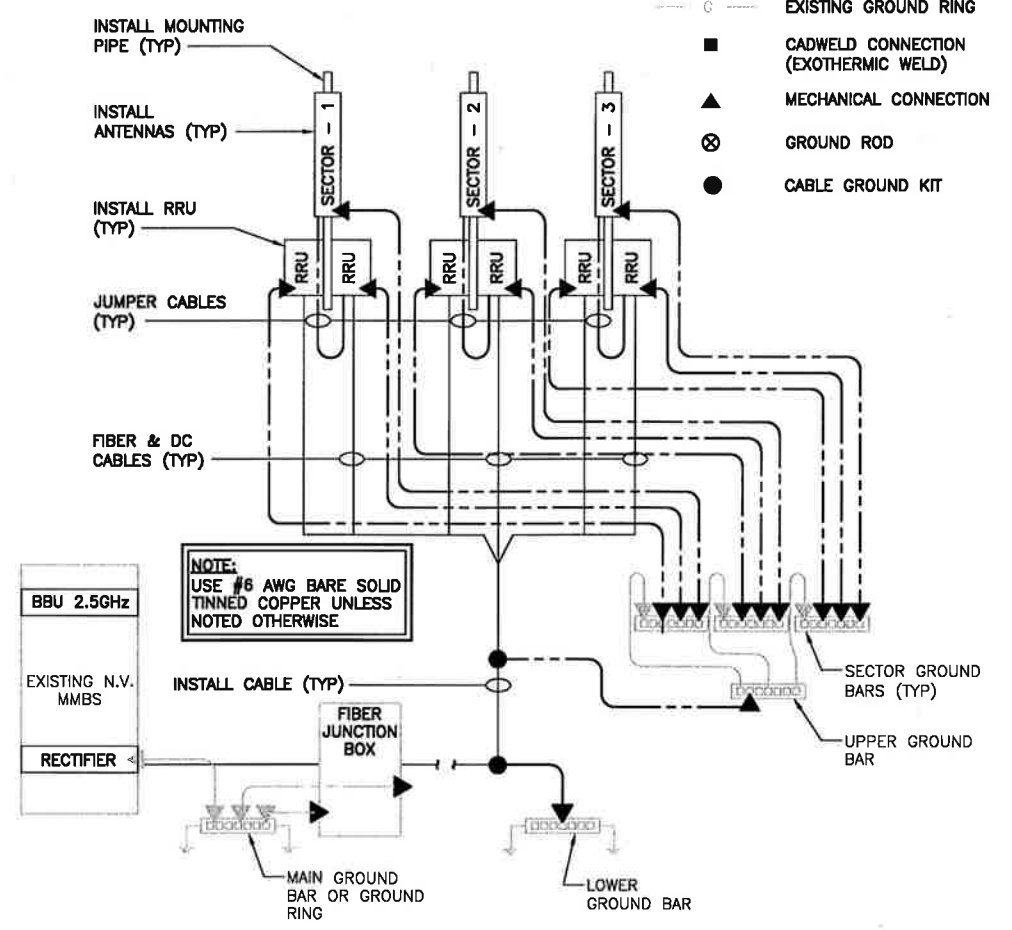


NOTES
 1. APPLY NO-OX TO LUG AND BAR CONTACT SURFACE. DO NOT COAT INLINE LUG.
 2. IF STOLEN GROUND BARS ARE ENCOUNTERED, CONTACT SPRINT CM FOR REPLACEMENT THREADED ROD KIT.



TWO HOLE LUG

NO SCALE 2



GROUNDING RISER DIAGRAM

NO SCALE 4

INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR

NO SCALE 2

NO SCALE 3

NO SCALE 4