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March 13th, 2018

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

RE: Notice of Exempt Modification – Antenna Swap for wireless facility located at 20 ANTOLINI ROAD, NEW HARTFORD, CONNECTICUT – CT33XC022 (lat. 41° 49' 40.97" N, long. -73° 0' 56.4" W)

Dear Ms. Bachman:

Sprint Spectrum, LP ("Sprint") currently maintains wireless telecommunications antennas at the (145-foot level) on an existing (145-foot Monopole Tower) at the above-referenced address. The property is owned by the SOUTH END FIRE DISTRICT, and the tower is owned by American Tower Corporation.

Sprint's proposed work involves antenna replacement and tower work. Sprint intends to install Three (3) antennas and add Six (6) new RRHs onto the tower. All the proposed work is contained within the existing fenced area. Please refer to the attached drawings for site plans prepared by Infinigy Engineering.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to DANIEL V. JERRAM, FIRST DELECTMAN, and RUTH MULCAHY, ZONING ENFORCEMENT OFFICER for the Town of NEW HARTFORD. A Copy of this notification letter will also go to SOUTH END FIRE DISTRICT who is the Land Owner on record, and JUSTINE PAUL who is a Manager at American Tower Corporation who own the tower.

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

1. The proposed modifications will not result in an increase in the height of the existing tower.
2. The antennas work is a one-for-one replacement of facility components.

32 Clinton Street, Saratoga Springs, NY 12866
Office 518-306-1733 – Fax 518-306-1711
www.airosmithdevelopment.com

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3. The proposed modifications will include the addition of ground base equipment as depicted on the attached drawings; however, the proposed equipment will not require an extension of the site boundaries.

4. The proposed modifications will not increase noise levels at the facility by six decibels or more.

5. The additional ground based equipment will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard.

For the foregoing reasons, Sprint respectfully submits that the proposed modifications to the above referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b).

If you have any questions or require any additional information regarding this request, please do not hesitate to give me a call at (518) 350-4222 or email me to aperkowski@airosmithdevelopment.com

Kind Regards,

Arthur Perkowski
Airosmith Development Inc.
32 Clinton Street
Saratoga Springs, NY 12866
518-306-1711 desk & fax
518-871-3707 cell
aperkowski@airosmithdevelopment.com

Attachment

CC: DANIEL JERRAM (First Selectman, Town of NEW HARTFORD)
RUTH MULCAHY (ZONING ENFORCEMENT OFFICER, Town of NEW HARTFORD)
SOUTH END FIRE DISTRICT (Land Owner)
JUSTINE PAUL (Manager, American Tower Corporation)

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City, State, ZIP+4®: New Hartford CT 06057

PS Form 3800, April 2015 PSN 7530-02-000-9047 — See Reverse for Instructions

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City, State, ZIP+4®: Woburn MA 01801

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Sent To: Kath McCahy (CT33x022)
Street and Apt. No., or PO Box No.: 530 Main St P.O. Box 316
City, State, ZIP+4®: New Hartford, CT 06057

PS Form 3800, April 2015 PSN 7530-02-000-9047 — See Reverse for Instructions

Town of New Hartford, CT
Property Listing Report

Map Block Lot 021-007-42B

Account 00247300

Property Information

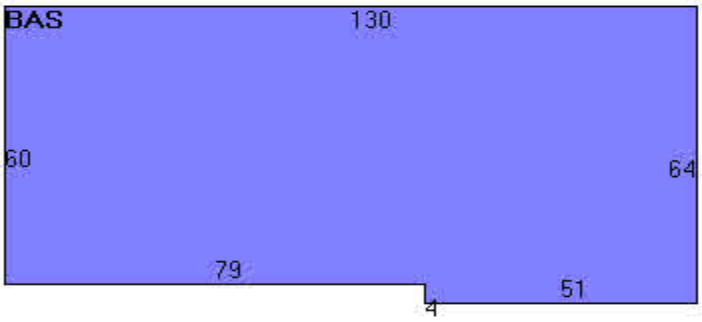
Property Location	20 ANTOLINI ROAD
Owner	SOUTH END FIRE DISTRICT
Co-Owner	
Mailing Address	20 ANTOLINI ROAD NEW HARTFORD CT 06057
Land Use	9032 MUN FIRE
Land Class	E

Fire District	4
Census Tract	X
Neighborhood	D
Zoning Code	R2
Acreage	1.92
Utilities	Well,Septic
Lot Setting/Desc	Rural Level

Photo

No Photo Available

Sketch



Primary Construction Details

Year Built	1986
Stories	1
Building Style	Fire Station
Building Use	Commercial
Building Condition	Average + 20
Floors	Concrete
Total Rooms	

Bedrooms	0
Full Bathrooms	
Half Bathrooms	
Bath Style	n/a
Kitchen Style	n/a
Roof Style	Flat
Roof Cover	Tar & Gravel

Exterior Walls	Aluminum Sidng
Interior Walls	Minim/Masonry
Heating Type	Forced Air
Heating Fuel	Oil
AC Type	Central
Gross Bldg Area	8004
Total Living Area	8004

Report Created On 3/13/2018

Valuation Summary (Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	398500	278950
Outbuildings	12500	8750
Improvements	411000	287700
Extras	0	0
Land	78500	54950
Total	489500	342650

Outbuilding and Extra Items

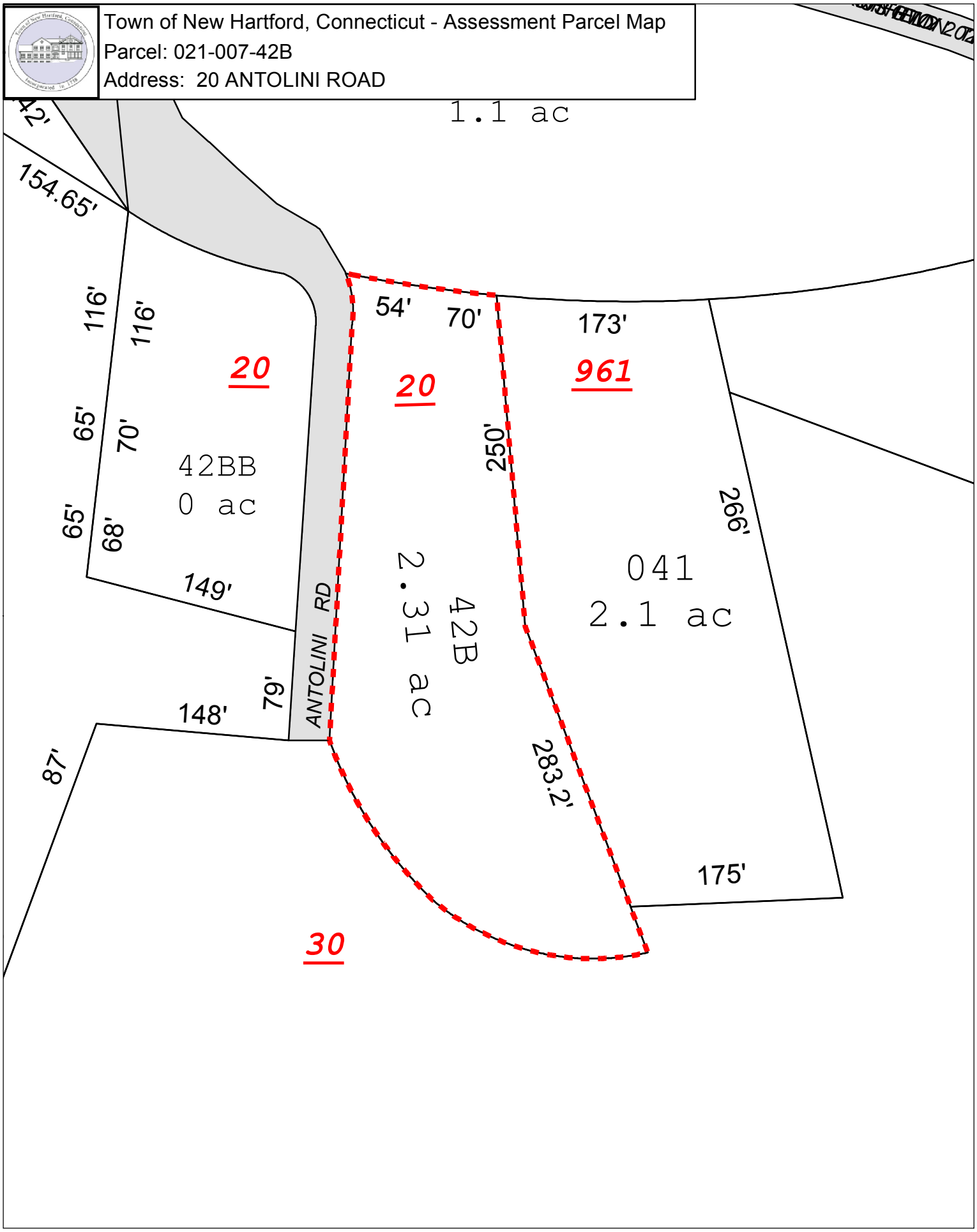
Type	Description
Paving Asphalt	10000.00 S.F.

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	8004	8004
Total Area	8004	8004

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
SOUTH END FIRE DISTRICT	103/ 417	10/4/1984	



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

Map Produced September 2014

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

SPRINT Existing Facility

Site ID: CT33XC022

New Hartford - (AT&T)
20 Antolini Road
New Hartford, CT 06057

February 6, 2018

EBI Project Number: 6218000596

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	13.13 %

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

EBI Consulting
environmental | engineering | due diligence

February 6, 2018

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

Emissions Analysis for Site: **CT33XC022 – New Hartford - (AT&T)**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **20 Antolini Road, New Hartford, 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 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ 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.

General population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 850 MHz Band is approximately 567 $\mu W/cm^2$. The general population exposure limit for the 1900 MHz (PCS) and 2500 MHz (BRS) bands is 1000 $\mu W/cm^2$. 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 **20 Antolini Road, New Hartford, 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 APXVSPP18-C-A20 and the Commscope DT465B-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 **151 feet** above ground level (AGL) for **Sector A**, **151 feet** above ground level (AGL) for **Sector B** and **151 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 APXVSPP18-C-A20	Make / Model:	RFS APXVSPP18-C-A20	Make / Model:	RFS APXVSPP18-C-A20
Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd
Height (AGL):	**151 feet**	Height (AGL):	**151 feet**	Height (AGL):	**151 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%	**1.46 %**	Antenna B1 MPE%	**1.46 %**	Antenna C1 MPE%	**1.46 %**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	Commscope DT465B-2XR	Make / Model:	Commscope DT465B-2XR	Make / Model:	Commscope DT465B-2XR
Gain:	15.05 dBd	Gain:	15.05 dBd	Gain:	15.05 dBd
Height (AGL):	**151 feet**	Height (AGL):	**151 feet**	Height (AGL):	**151 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):	5,118.23	ERP (W):	5,118.23	ERP (W):	5,118.23
Antenna A2 MPE%	**0.88 %**	Antenna B2 MPE%	**0.88 %**	Antenna C2 MPE%	**0.88 %**

Site Composite MPE%	
Carrier	**MPE%**
SPRINT – Max per sector	**2.34 %**
AT&T	5.93 %
MetroPCS	0.57 %
T-Mobile	1.22 %
Nextel	0.74 %
South End Fire Dist	0.07 %
Verizon Wireless	2.26 %
Site Total MPE %:	**13.13 %**

SPRINT Sector A Total:	2.34 %
SPRINT Sector B Total:	2.34 %
SPRINT Sector C Total:	2.34 %
Site Total:	13.13 %

SPRINT _ Frequency Band / Technology (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
Sprint 850 MHz CDMA	1	437.55	151	0.75	850 MHz	567	0.13%
Sprint 850 MHz LTE	2	437.55	151	1.50	850 MHz	567	0.27%
Sprint 1900 MHz (PCS) CDMA	5	622.47	151	5.32	1900 MHz (PCS)	1000	0.53%
Sprint 1900 MHz (PCS) LTE	2	1,556.18	151	5.32	1900 MHz (PCS)	1000	0.53%
Sprint 2500 MHz (BRS) LTE	8	639.78	151	8.75	2500 MHz (BRS)	1000	0.88%
						Total:	**2.34%**

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:	2.34 %
Sector B:	2.34 %
Sector C:	2.34 %
SPRINT Maximum Total (per sector):	2.34 %
Site Total:	13.13 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **13.13 %** 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.

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**145 ft Monopole**
ATC Site Name	:	**Nepaug CT, CT**
ATC Site Number	:	**411182**
Engineering Number	:	**OAA714420_C3_01**
Proposed Carrier	:	**Sprint Nextel**
Carrier Site Name	:	**Bakersville**
Carrier Site Number	:	**CT33XC022**
Site Location	:	**20 Antolini Road** **New Hartford, CT 06057-3326** **41.828100,-73.015700**
County	:	**Litchfield**
Date	:	**October 24, 2017**
Max Usage	:	**79%**
Result	:	**Pass**

Prepared By:
Vivian Chung, E.I.
Structural Engineer I

Reviewed By:

COA: PEC.0001553

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CORPORATION

Table of Contents

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Calculations ..... Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 145 ft monopole to reflect the change in loading by Sprint Nextel.

Supporting Documents

Tower Drawings	EEI Project #8859 Rev. 2, dated March 30, 2001
Foundation Drawing	URS Grenier Woodward Clyde Project #F301682.04, dated October 13, 2000
Geotechnical Report	Dr. Clarence Welti Site Location: 20 Antolini Road, New Hartford, CT., dated March 27, 2000

Analysis

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

Basic Wind Speed:	93 mph (3-Second Gust, V_{asd})/ 120 mph (3-second Gust, V_{ult})
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 1" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft
Spectral Response:	Ss = 0.18, S_1 = 0.06
Site Class:	D - Stiff Soil

Conclusion

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

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

Existing and Reserved Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	160.0	1	RFS PD620-2	Flush	(1) 7/8" Coax	Other
148.0	155.0	1	12' Omni	Flush	(1) 7/8" Coax	Other
145.0	151.0	3	Alcatel-Lucent ALU 800MHz External Notch Filter	Low Profile Platform	(3) 1 1/4" Hybriflex (1) 1/2" Coax	Sprint Nextel
		1	PCTEL GPS-TMG-HR-26N			
		3	Alcatel-Lucent 800MHz RRH			
		3	Alcatel-Lucent 1900MHz RRH			
		3	RFS APXVSPP18-C-A20			
138.0	141.0	1	GPS	T-Arms	(12) 1 5/8" Coax (1) 7/8" Coax	Verizon
		6	TTA			
		6	Antel LPA-80040-4CF-EDIN-X			
		3	Antel BXA-171040-8CF			
		3	Antel BXA-70040/6CF			
125.0	125.0	1	E-911 GPS	T-Arms	(18) 1 5/8" Coax (1) 1/2" Coax	T-Mobile
		3	RFS ATM1900D-1CWA			
		3	RFS ATMAA1412D-1A20			
		6	RFS APX16DWV-16DWV-S-E-ACU			
		3	Commscope LNX-6515DS-A1M			
115.0	115.0	1	GPS	Flush	(6) 1 5/8" Coax	Metro PCS
		3	RFS APXV18-206517			
87.0	87.0	-	-	Empty Low Profile Platform	-	--
80.0	80.0	3	Spinner Bias-T	Low Profile Platform	(12) 7/8" Coax (2) 0.78" 8 AWG 6 (1) 3" conduit (1) 0.39" Fiber Trunk	AT&T Mobility
		6	Powerwave LGP21901			
		6	Powerwave LGP21401			
		1	Raycap DC6-48-60-18-8F(32.8 lbs)			
		6	Ericsson RRUS 11 (Band 12)			
		6	Powerwave 7770.00			
		2	KMW AM-X-CD-16-65-00T-RET			
		1	Powerwave P65-17-XLH-RR (50 lbs)			

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
145.0	145.0	2	Andrew DB980F65E-M	-	(6) 1 5/8” Coax	Sprint Nextel

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
145.0	151.0	3	Alcatel-Lucent RRH2x50-08	Low Profile Platform	(1) 1 1/4" Hybriflex	Sprint Nextel
		3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
		3	Commscope DT465B-2XR			
52.0	52.0	1	PCTEL GPS-TMG-HR-26N	Flush	(1) 1/2" Coax	

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

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	31%	Pass
Shaft	53%	Pass
Base Plate	79%	Pass
Flanges	33%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	3,128.4	4,223.3	2,229.3	53%
Shear (Kips)	29.2	39.4	21.2	54%

*** The design reactions are factored by 1.35 per ANSI/TIA-222-G, Sec. 15.5.1**

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
145.0	Alcatel-Lucent RRH2x50-08	Sprint Nextel	1.698	1.393
	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	Commscope DT465B-2XR			

***Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-G**

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CORPORATION

Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

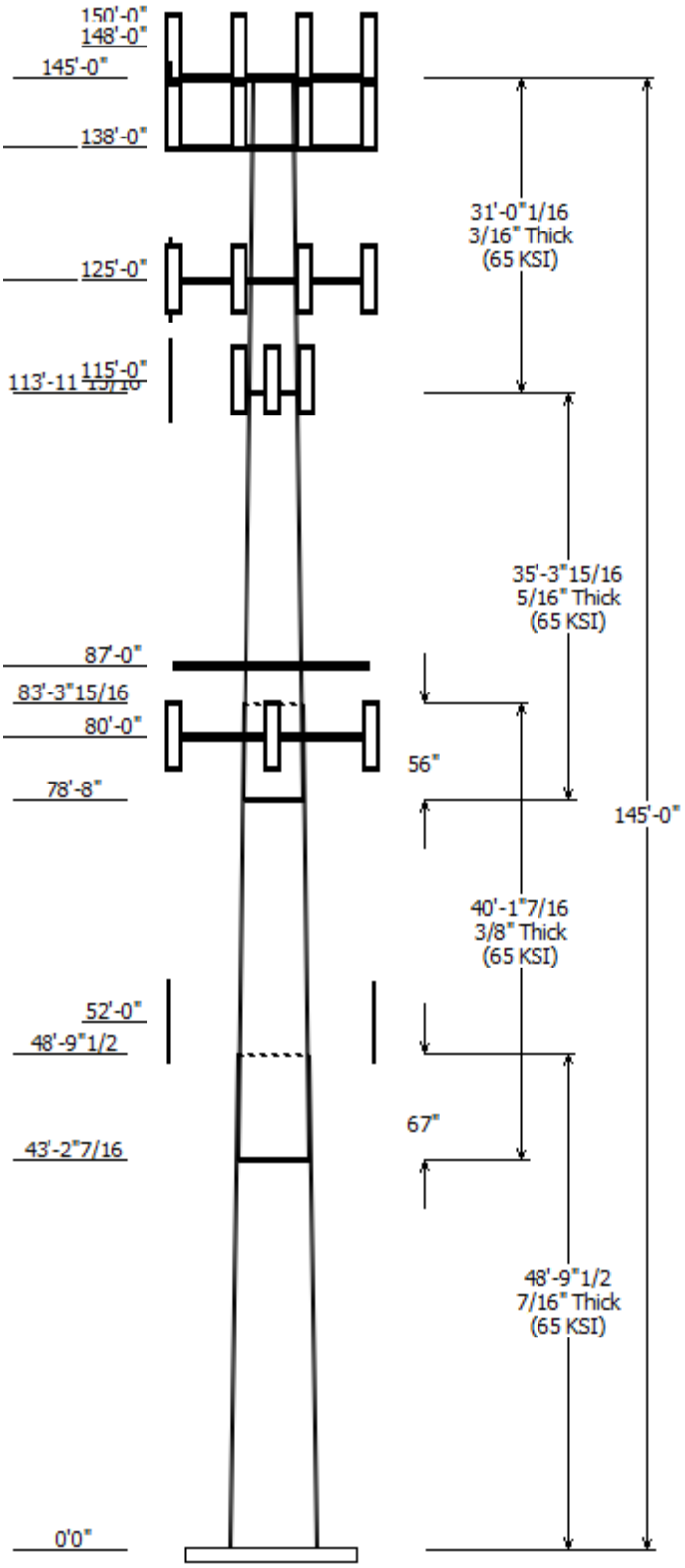
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

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



Job Information

Pole :	411182	Code:	ANSI/TIA-222-G
Description :	145' EEI Monopole		
Client :	SPRINT NEXTEL	Struct Class :	II
Location :	Nepaug CT, CT		
Shape :	18 Sides	Exposure :	B
Height :	145.00 (ft)	Topo :	1
Base Elev (ft):	0.00		
Taper:	0.228448 (in/ft)		

Sections Properties

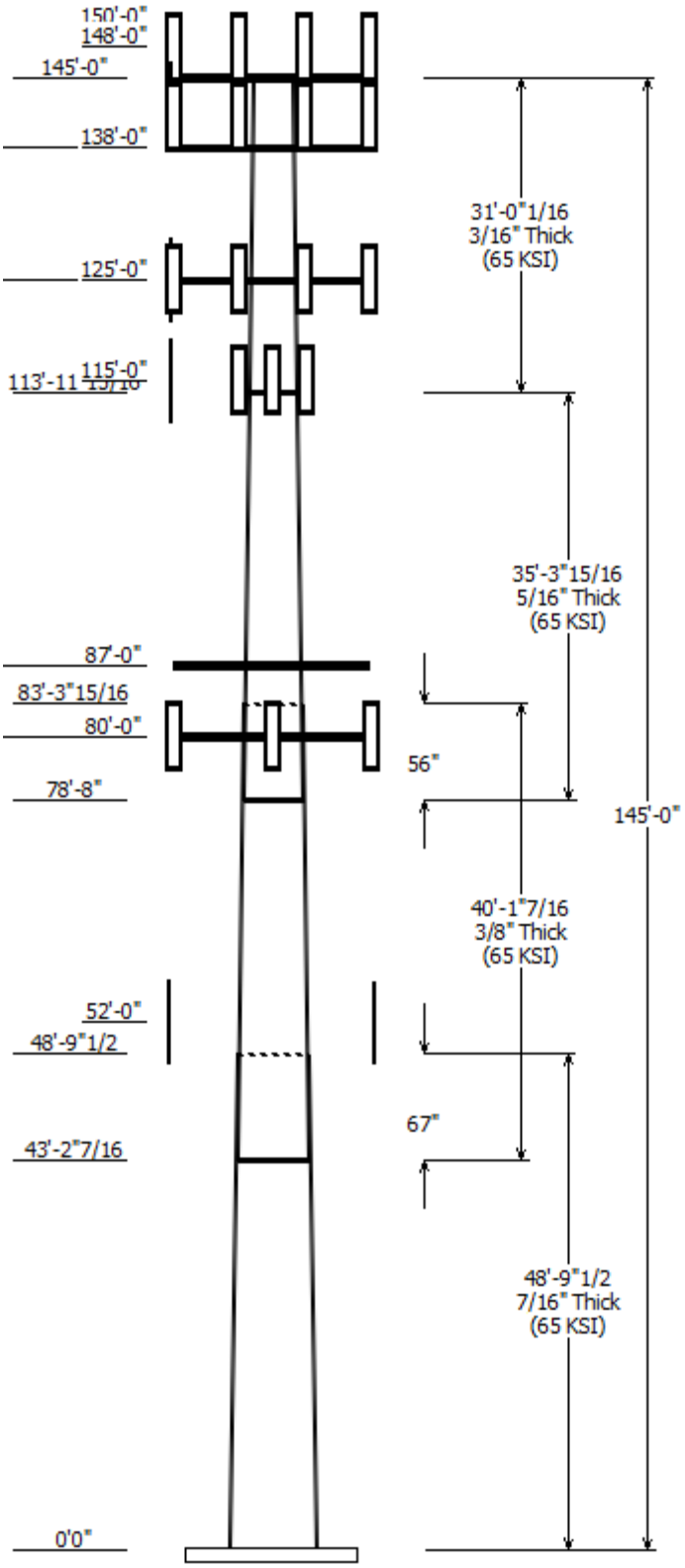
Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	48.794	38.60	49.75	0.438		0.000	0.228400	65
2	40.122	31.46	40.63	0.375	Slip Joint	67.063	0.228400	65
3	35.328	25.08	33.15	0.313	Slip Joint	55.906	0.228400	65
4	31.003	18.00	25.08	0.188	Butt Joint	0.000	0.228400	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
150.000	160.000	1	RFS PD620-2
148.000	155.000	1	12' Omni
145.000	151.000	3	Commscope DT465B-2XR
145.000	151.000	3	Alcatel-Lucent TD-RRH8x20-25
145.000	151.000	3	Alcatel-Lucent RRH2x50-08
145.000	151.000	3	Alcatel-Lucent ALU 800MHz
145.000	145.000	1	Flat Low Profile Platform
145.000	151.000	3	RFS APXVSPP18-C-A20
145.000	151.000	3	Alcatel-Lucent 1900MHz RRH
145.000	151.000	3	Alcatel-Lucent 800 MHz RRH
138.000	138.000	3	Round T-Arm
138.000	141.000	1	GPS
138.000	141.000	3	Amphenol Antel BXA-
138.000	141.000	6	Amphenol Antel LPA-80040-
138.000	141.000	6	TTA
138.000	141.000	3	Amphenol Antel BXA-171040-
125.000	125.000	3	Commscope LNX-6515DS-A1M
125.000	125.000	3	RFS ATMAA1412D-1A20
125.000	125.000	3	RFS ATM1900D-1CWA
125.000	125.000	3	Round T-Arm
125.000	125.000	6	RFS APX16DWV-16DWV-S-E-
125.000	125.000	1	E-911 GPS
115.000	115.000	3	RFS APXV18-206517
115.000	115.000	1	GPS
87.000	87.000	1	Empty Flat Low Profile Platfor
80.000	80.000	1	Flat Low Profile Platform
80.000	80.000	1	Powerwave Allgon P65-17-
80.000	80.000	2	KMW AM-X-CD-16-65-00T-RET
80.000	80.000	6	Powerwave Allgon 7770.00
80.000	80.000	6	Ericsson RRUS 11 (Band 12)
80.000	80.000	1	Raycap DC6-48-60-18-8F(32.8 lb
80.000	80.000	6	Powerwave Allgon LGP21401
80.000	80.000	6	Powerwave Allgon LGP21901
80.000	80.000	3	Spinner Bias-T
52.000	52.000	2	PCTEL GPS-TMG-HR-26N

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	52.000	1/2" Coax	Yes
0.000	52.000	1/2" Coax	Yes
0.000	80.000	0.39" Fiber Trunk	No



0.000	80.000	0.78" 8 AWG 6	No
0.000	80.000	3" conduit	No
0.000	80.000	7/8" Coax	No
0.000	115.0	1 5/8" Coax	No
0.000	125.0	1 5/8" Coax	Yes
0.000	125.0	1 5/8" Coax	No
0.000	125.0	1/2" Coax	No
0.000	138.0	1 5/8" Coax	No
0.000	138.0	1 5/8" Coax	No
0.000	138.0	1 5/8" Coax	No
0.000	138.0	7/8" Coax	No
0.000	145.0	1 1/4" Hybriflex	No
0.000	145.0	1 1/4" Hybriflex	No
0.000	148.0	7/8" Coax	No
0.000	150.0	7/8" Coax	No

Load Cases

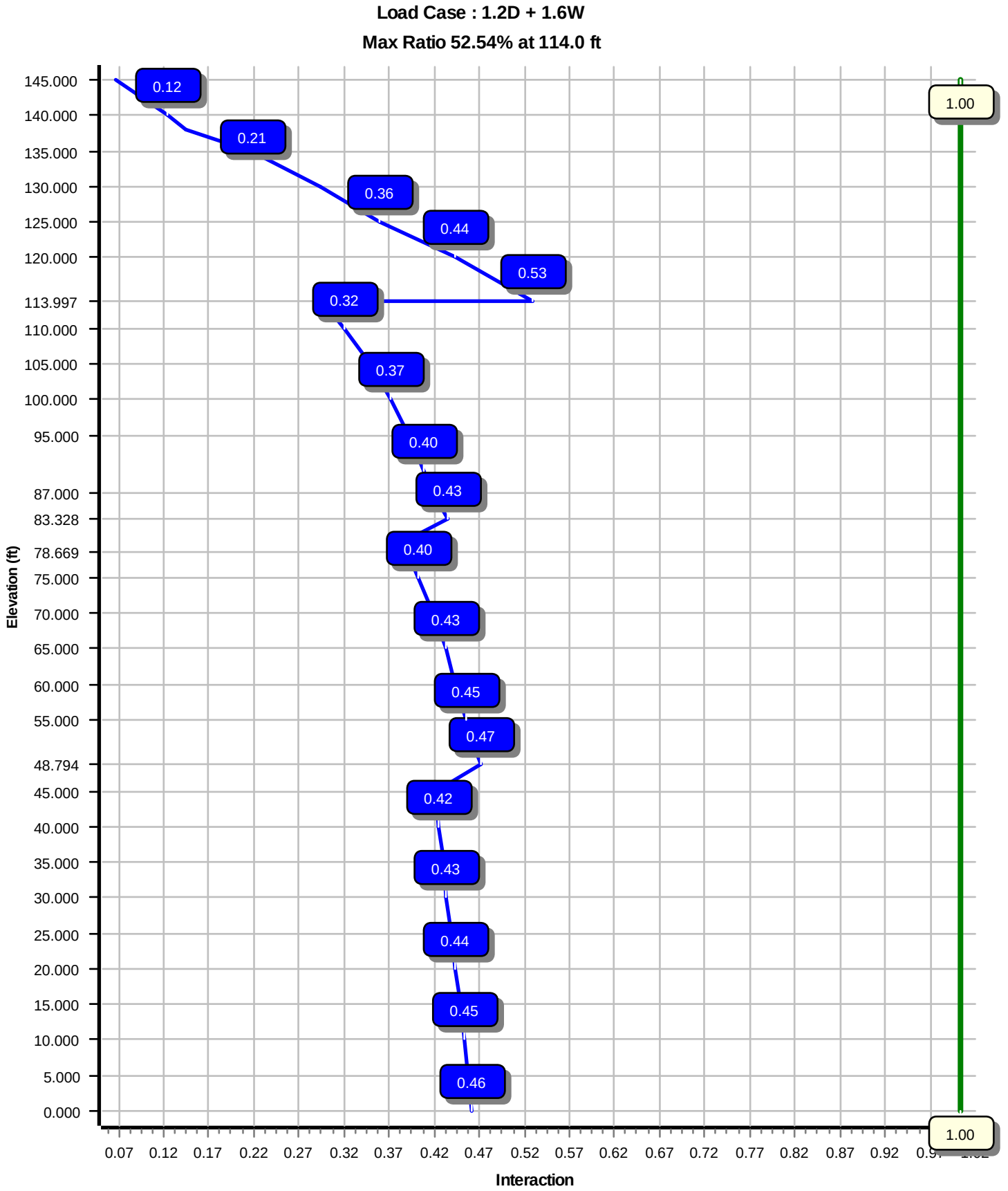
1.2D + 1.6W	93 mph with No Ice
0.9D + 1.6W	93 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	40 mph with 1.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	2229.33	21.15	41.97
0.9D + 1.6W	2206.86	21.14	31.47
1.2D + 1.0Di + 1.0Wi	479.56	4.46	72.52
(1.2 + 0.2Sds) * DL + E ELFM	166.53	1.50	41.51
(1.2 + 0.2Sds) * DL + E EMAM	216.55	1.90	41.51
(0.9 - 0.2Sds) * DL + E ELFM	164.58	1.50	28.87
(0.9 - 0.2Sds) * DL + E EMAM	213.73	1.90	28.87
1.0D + 1.0W	576.45	5.50	34.99

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000


Load Case : 1.2D + 1.6W
Max Ratio 52.54% at 114.0 ft
Elevation (ft)
145.000
140.000
135.000
130.000
125.000
120.000
113.997
110.000
105.000
100.000
95.000
87.000
83.328
78.669
75.000
70.000
65.000
60.000
55.000
48.794
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
0.12
0.21
0.36
0.44
0.53
0.32
0.37
0.40
0.43
0.40
0.43
0.45
0.47
0.42
0.43
0.44
0.45
0.46
1.00
1.00
0.07 0.12 0.17 0.22 0.27 0.32 0.37 0.42 0.47 0.52 0.57 0.62 0.67 0.72 0.77 0.82 0.87 0.92
Interaction

Site Number:	411182	Code: ANSI/TIA-222-G	
Site Name:	Nepaug CT, CT	Engineering Number:OAA714420_C3_01	10/24/2017 4:43:00 PM
Customer:	SPRINT NEXTEL		

Analysis Parameters

Location:	LITCHFIELD County, CT	Height (ft):	145
Code:	ANSI/TIA-222-G	Base Diameter (in):	49.75
Shape:	18 Sides	Top Diameter (in):	18.00
Pole Type:	Taper	Taper (in/ft) :	0.228
Pole Manfacturer:	EEI	Rotation (deg) :	0.00

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	93 mph
Exposure Category:	B	Design Wind Speed With Ice:	40 mph
Topographic Category:	1	Operational Wind Speed:	60 mph
Crest Height:	0.0 ft	Design Ice Thickness:	1.00 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods				
Site Class:	D - Stiff Soil				
Period Based on Rayleigh Method (sec):	2.08				
T_L (sec):	6	p:	1.3	C_s:	0.033
S_s:	0.181	S_1:	0.065	C_s Max:	0.033
F_a:	1.600	F_v:	2.400	C_s Min:	0.030
S_{ds}:	0.193	S_{d1}:	0.104		

Load Cases

1.2D + 1.6W	93 mph with No Ice
0.9D + 1.6W	93 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	40 mph with 1.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2Sds) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 411182 Code: ANSI/TIA-222-G

Site Name: Nepaug CT, CT Engineering Number:OAA714420_C3_01 10/24/2017 4:43:00 PM

Customer: SPRINT NEXTEL

Shaft Section Properties

							Bottom						Top						
Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Slip Joint Type	Slip Joint Len (in)	Weight (lb)	Dia (in)	Elev (ft)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)
1-18	48.794	0.4375	65		0.00	10,084	49.75	0.00	68.47	21037.5	18.64	113.71	38.60	48.79	53.00	9753.0	14.15	88.24	0.228448
2-18	40.122	0.3750	65	Slip	67.06	5,797	40.63	43.21	47.91	9809.0	17.69	108.35	31.46	83.33	37.00	4518.4	13.38	83.90	0.228448
3-18	35.328	0.3125	65	Slip	55.91	3,435	33.15	78.67	32.57	4438.4	17.30	106.09	25.08	114.00	24.57	1904.5	12.74	80.26	0.228448
4-18	31.003	0.1875	65	Butt	0.00	1,341	25.08	114.00	14.82	1160.1	22.18	133.77	18.00	145.00	10.60	424.9	15.52	96.00	0.228448
				Shaft Weight		20,656													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor	Distance From Face (ft)	Vert Ecc (ft)
150.00	RFS PD620-2	1	53.00	7.170	1.00	287.11	16.831	1.00	0.000	10.000
148.00	12' Omni	1	40.00	3.600	1.00	160.68	9.311	1.00	0.000	7.000
145.00	Alcatel-Lucent 1900MHz RRH	3	44.00	3.260	0.67	188.81	4.842	0.67	0.000	6.000
145.00	Alcatel-Lucent 800 MHz RRH	3	53.00	2.130	0.67	151.11	3.428	0.67	0.000	6.000
145.00	Alcatel-Lucent ALU 800MHz	3	8.80	0.780	0.50	32.20	1.638	0.50	0.000	6.000
145.00	Alcatel-Lucent RRH2x50-08	3	52.90	1.700	0.50	131.77	2.846	0.50	0.000	6.000
145.00	Alcatel-Lucent TD-RRH8x20-	3	70.00	4.050	0.67	195.75	5.816	0.67	0.000	6.000
145.00	Commscope DT465B-2XR	3	58.00	9.100	0.69	326.55	12.783	0.69	0.000	6.000
145.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	2,361.20	51.478	1.00	0.000	0.000
145.00	RFS APXVSPP18-C-A20	3	57.00	8.020	0.83	286.29	11.726	0.83	0.000	6.000
138.00	Amphenol Antel BXA-171040-	3	13.00	5.090	0.74	151.49	7.601	0.74	0.000	3.000
138.00	Amphenol Antel BXA-	3	37.50	14.250	0.70	415.46	17.995	0.70	0.000	3.000
138.00	Amphenol Antel LPA-80040-	6	18.00	4.990	0.92	200.45	7.433	0.92	0.000	3.000
138.00	GPS	1	10.00	1.000	1.00	48.73	1.941	1.00	0.000	3.000
138.00	Round T-Arm	3	250.00	9.700	0.67	526.61	20.611	0.67	0.000	0.000
138.00	TTA	6	10.00	1.200	0.50	57.66	2.160	0.50	0.000	3.000
125.00	Commscope LNX-6515DS-	3	43.70	11.440	0.70	407.61	13.630	0.70	0.000	0.000
125.00	E-911 GPS	1	5.00	0.580	1.00	33.21	1.159	1.00	0.000	0.000
125.00	RFS APX16DWV-16DWV-S-E-	6	39.60	6.080	0.66	146.98	8.775	0.66	0.000	0.000
125.00	RFS ATM1900D-1CWA	3	8.40	0.840	0.50	45.62	1.230	0.50	0.000	0.000
125.00	RFS ATMAA1412D-1A20	3	13.00	1.000	0.50	64.34	1.589	0.50	0.000	0.000
125.00	Round T-Arm	3	250.00	9.700	0.67	523.64	20.494	0.67	0.000	0.000
115.00	GPS	1	10.00	1.000	1.00	48.05	1.924	1.00	0.000	0.000
115.00	RFS APXV18-206517	3	26.40	5.050	0.80	145.25	8.125	0.80	0.000	0.000
87.00	Empty Flat Low Profile Platfor	1	1500.00	26.100	1.00	2,318.79	50.228	1.00	0.000	0.000
80.00	Ericsson RRUS 11 (Band 12)	6	50.00	2.570	0.67	135.46	3.885	0.67	0.000	0.000
80.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	2,312.21	50.034	1.00	0.000	0.000
80.00	KMW AM-X-CD-16-65-00T-	2	48.50	8.020	0.79	251.52	11.515	0.79	0.000	0.000
80.00	Powerwave Allgon 7770.00	6	35.00	5.510	0.77	213.89	6.854	0.77	0.000	0.000
80.00	Powerwave Allgon LGP21401	6	14.10	1.100	0.50	45.38	1.992	0.50	0.000	0.000
80.00	Powerwave Allgon LGP21901	6	5.50	0.230	0.50	15.12	0.690	0.50	0.000	0.000
80.00	Powerwave Allgon P65-17-	1	50.00	11.470	0.80	321.00	15.527	0.80	0.000	0.000
80.00	Raycap DC6-48-60-18-	1	32.80	1.280	1.00	110.14	2.042	1.00	0.000	0.000
80.00	Spinner Bias-T	3	1.50	0.170	0.50	8.29	0.605	0.50	0.000	0.000
52.00	PCTEL GPS-TMG-HR-26N	2	0.60	0.090	1.00	6.41	0.306	1.00	0.000	0.000
	Totals	104	8793.80			24,208.96			Number of Loadings :	35

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	150.00	1	7/8" Coax	1.09	0.33	N	0.00	N	Unknown
0.00	148.00	1	7/8" Coax	1.09	0.33	N	0.00	N	Unknown

0.00	145.00	3	1 1/4" Hybriflex Cable	1.54	1.00	N	0.00	N	Sprint Nextel
0.00	145.00	1	1 1/4" Hybriflex Cable	1.54	1.00	N	0.00	N	Sprint Nextel
0.00	138.00	3	1 5/8" Coax	1.98	0.82	N	0.00	N	Verizon
0.00	138.00	3	1 5/8" Coax	1.98	0.82	N	0.00	N	Verizon
0.00	138.00	6	1 5/8" Coax	1.98	0.82	N	0.00	N	Verizon
0.00	138.00	1	7/8" Coax	1.09	0.33	N	0.00	N	Verizon
0.00	125.00	6	1 5/8" Coax	1.98	0.82	N	1.98	Y	T-Mobile
0.00	125.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	T-Mobile
0.00	125.00	1	1/2" Coax	0.63	0.15	N	0.00	N	T-Mobile
0.00	115.00	6	1 5/8" Coax	1.98	0.82	N	0.00	N	Metro PCS
0.00	80.00	1	0.39" Fiber Trunk	0.39	0.06	N	0.00	N	AT&T Mobility
0.00	80.00	2	0.78" 8 AWG 6	0.78	0.59	N	0.00	N	AT&T Mobility
0.00	80.00	1	3" conduit	3.50	7.58	N	0.00	N	AT&T Mobility
0.00	80.00	12	7/8" Coax	1.09	0.33	N	0.00	N	AT&T Mobility
0.00	52.00	1	1/2" Coax	0.63	0.15	N	0.00	Y	Sprint Nextel
0.00	52.00	1	1/2" Coax	0.63	0.15	N	0.00	Y	Sprint Nextel

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
0.00		0.4375	49.750	68.474	21,037.5	18.64	113.71	79.5	832.9	0.0	0.0
5.00		0.4375	48.608	66.888	19,609.2	18.18	111.10	80.0	794.6	0.0	1,151.5
10.00		0.4375	47.466	65.302	18,247.0	17.72	108.49	80.6	757.2	0.0	1,124.5
15.00		0.4375	46.323	63.716	16,949.5	17.26	105.88	81.1	720.7	0.0	1,097.5
20.00		0.4375	45.181	62.130	15,715.0	16.80	103.27	81.6	685.1	0.0	1,070.6
25.00		0.4375	44.039	60.544	14,541.9	16.34	100.66	82.2	650.4	0.0	1,043.6
30.00		0.4375	42.897	58.958	13,428.7	15.88	98.05	82.6	616.6	0.0	1,016.6
35.00		0.4375	41.754	57.371	12,373.8	15.42	95.44	82.6	583.7	0.0	989.6
40.00		0.4375	40.612	55.785	11,375.6	14.96	92.83	82.6	551.7	0.0	962.6
43.21	Bot - Section 2	0.4375	39.880	54.768	10,764.8	14.66	91.15	82.6	531.7	0.0	603.0
45.00		0.4375	39.470	54.199	10,432.7	14.50	90.22	82.6	520.6	0.0	623.7
48.79	Top - Section 1	0.3750	39.353	46.392	8,905.0	17.09	104.94	81.3	445.7	0.0	1,297.6
50.00		0.3750	39.078	46.064	8,717.6	16.96	104.21	81.4	439.4	0.0	189.7
52.00		0.3750	38.621	45.520	8,412.5	16.75	102.99	81.7	429.0	0.0	311.6
55.00		0.3750	37.935	44.705	7,968.3	16.43	101.16	82.1	413.7	0.0	460.5
60.00		0.3750	36.793	43.345	7,263.2	15.89	98.11	82.6	388.8	0.0	749.0
65.00		0.3750	35.651	41.986	6,601.0	15.35	95.07	82.6	364.7	0.0	725.9
70.00		0.3750	34.509	40.626	5,980.3	14.82	92.02	82.6	341.3	0.0	702.8
75.00		0.3750	33.366	39.267	5,399.8	14.28	88.98	82.6	318.7	0.0	679.6
78.67	Bot - Section 3	0.3750	32.528	38.269	4,998.6	13.88	86.74	82.6	302.7	0.0	484.0
80.00		0.3750	32.224	37.907	4,858.1	13.74	85.93	82.6	296.9	0.0	319.3
83.33	Top - Section 2	0.3125	32.089	31.517	4,020.7	16.70	102.68	81.8	246.8	0.0	785.4
85.00		0.3125	31.707	31.138	3,877.5	16.48	101.46	82.0	240.9	0.0	178.2
87.00		0.3125	31.250	30.685	3,710.7	16.22	100.00	82.3	233.9	0.0	210.4
90.00		0.3125	30.565	30.005	3,469.5	15.84	97.81	82.6	223.6	0.0	309.8
95.00		0.3125	29.422	28.872	3,091.1	15.19	94.15	82.6	206.9	0.0	500.9
100.0		0.3125	28.280	27.739	2,741.3	14.55	90.50	82.6	190.9	0.0	481.6
105.0		0.3125	27.138	26.607	2,419.0	13.90	86.84	82.6	175.6	0.0	462.3
110.0		0.3125	25.996	25.474	2,123.0	13.26	83.19	82.6	160.9	0.0	443.0
114.0	Top - Section 3	0.3125	25.082	24.568	1,904.5	12.74	80.26	82.6	149.5	0.0	340.3
114.0	Bot - Section 4	0.1875	25.082	14.815	1,160.1	22.18	133.77	75.3	91.1	0.0	
115.0		0.1875	24.853	14.679	1,128.3	21.96	132.55	75.6	89.4	0.0	50.3
120.0		0.1875	23.711	13.999	978.7	20.89	126.46	76.8	81.3	0.0	244.0
125.0		0.1875	22.569	13.319	843.0	19.81	120.37	78.1	73.6	0.0	232.4
130.0		0.1875	21.427	12.640	720.4	18.74	114.28	79.4	66.2	0.0	220.8
135.0		0.1875	20.284	11.960	610.3	17.67	108.18	80.6	59.3	0.0	209.3
138.0		0.1875	19.599	11.552	550.0	17.02	104.53	81.4	55.3	0.0	120.0
140.0		0.1875	19.142	11.280	512.0	16.59	102.09	81.9	52.7	0.0	77.7
145.0		0.1875	18.000	10.600	424.9	15.52	96.00	82.6	46.5	0.0	186.1
											20,655.8

Site Number: 411182 Code: ANSI/TIA-222-G

Site Name: Nepaug CT, CT Engineering Number:OAA714420_C3_01 10/24/2017 4:43:00 PM

Customer: SPRINT NEXTEL

Load Case: 1.2D + 1.6W 93 mph with No Ice 24 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		175.2	0.0					0.0	0.0	175.2	0.0	0.0	0.0
5.00		346.4	1,381.8					0.0	286.4	346.4	1,668.3	0.0	0.0
10.00		338.3	1,349.4					0.0	286.4	338.3	1,635.9	0.0	0.0
15.00		330.1	1,317.1					0.0	286.4	330.1	1,603.5	0.0	0.0
20.00		322.0	1,284.7					0.0	286.4	322.0	1,571.1	0.0	0.0
25.00		313.9	1,252.3					0.0	286.4	313.9	1,538.7	0.0	0.0
30.00		309.3	1,219.9					0.0	286.4	309.3	1,506.3	0.0	0.0
35.00		311.0	1,187.5					0.0	286.4	311.0	1,474.0	0.0	0.0
40.00		257.6	1,155.1					0.0	286.4	257.6	1,441.6	0.0	0.0
43.21	Bot - Section 2	158.8	723.6					0.0	183.6	158.8	907.2	0.0	0.0
45.00		180.1	748.4					0.0	102.8	180.1	851.2	0.0	0.0
48.79	Top - Section 1	161.2	1,557.2					0.0	217.4	161.2	1,774.5	0.0	0.0
50.00		103.4	227.6					0.0	69.1	103.4	296.7	0.0	0.0
52.00	Appertunance(s)	161.1	374.0	5.5	0.0	0.0	1.4	0.0	114.6	166.6	490.0	0.0	0.0
55.00		257.1	552.6					0.0	170.8	257.1	723.4	0.0	0.0
60.00		319.8	898.8					0.0	284.6	319.8	1,183.5	0.0	0.0
65.00		317.0	871.1					0.0	284.6	317.0	1,155.7	0.0	0.0
70.00		313.5	843.3					0.0	284.6	313.5	1,128.0	0.0	0.0
75.00		268.6	815.6					0.0	284.6	268.6	1,100.2	0.0	0.0
78.67	Bot - Section 3	154.2	580.9					0.0	208.9	154.2	789.7	0.0	0.0
80.00	Appertunance(s)	144.0	383.1	2,630.3	0.0	0.0	2,774.3	0.0	75.8	2,774.2	3,233.2	0.0	0.0
83.33	Top - Section 2	153.7	942.4					0.0	138.4	153.7	1,080.9	0.0	0.0
85.00		111.7	213.9					0.0	69.5	111.7	283.4	0.0	0.0
87.00	Appertunance(s)	150.8	252.4	917.6	0.0	0.0	1,800.0	0.0	83.2	1,068.4	2,135.6	0.0	0.0
90.00		237.7	371.7					0.0	124.8	237.7	496.5	0.0	0.0
95.00		291.7	601.0					0.0	208.0	291.7	809.0	0.0	0.0
100.00		284.5	577.9					0.0	208.0	284.5	785.9	0.0	0.0
105.00		276.8	554.8					0.0	208.0	276.8	762.7	0.0	0.0
110.00		242.5	531.7					0.0	208.0	242.5	739.6	0.0	0.0
114.00	Top - Section 3	132.3	408.4					0.0	166.3	132.3	574.7	0.0	0.0
115.00	Appertunance(s)	154.1	60.4	499.5	0.0	0.0	107.0	0.0	41.7	653.6	209.1	0.0	0.0
120.00		251.3	292.8					0.0	178.4	251.3	471.2	0.0	0.0
125.00	Appertunance(s)	242.0	278.9	2,179.4	0.0	0.0	1,425.5	0.0	178.4	2,421.4	1,882.8	0.0	0.0
130.00		232.3	265.0					0.0	89.0	232.3	354.0	0.0	0.0
135.00		179.5	251.1					0.0	89.0	179.5	340.1	0.0	0.0
138.00	Appertunance(s)	108.6	144.0	2,963.5	0.0	7,130.8	1,295.4	0.0	53.4	3,072.1	1,492.8	0.0	0.0
140.00		146.2	93.2					0.0	11.2	146.2	104.4	0.0	0.0
145.00	Appertunance(s)	103.4	223.4	3,086.7	0.0	12,149.6	3,037.3	0.0	28.0	3,190.1	3,288.6	0.0	0.0
								Totals:		20,823.9	41,884.0	0.00	0.00

Load Case: 1.2D + 1.6W 93 mph with No Ice 24 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.20
Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-41.97	-21.15	0.00	-2,229.33	0.00	2,229.33	4,897.86	2,448.93	9,914.38	4,964.56	0.00	0.00	0.458
5.00	-40.25	-20.91	0.00	-2,123.57	0.00	2,123.57	4,817.00	2,408.50	9,522.86	4,768.51	0.08	-0.15	0.454
10.00	-38.56	-20.67	0.00	-2,019.03	0.00	2,019.03	4,734.60	2,367.30	9,136.02	4,574.80	0.31	-0.30	0.450
15.00	-36.90	-20.43	0.00	-1,915.70	0.00	1,915.70	4,650.66	2,325.33	8,754.06	4,383.53	0.71	-0.45	0.445
20.00	-35.28	-20.19	0.00	-1,813.57	0.00	1,813.57	4,565.16	2,282.58	8,377.20	4,194.83	1.26	-0.61	0.440
25.00	-33.69	-19.95	0.00	-1,712.64	0.00	1,712.64	4,478.12	2,239.06	8,005.67	4,008.78	1.99	-0.77	0.435
30.00	-32.13	-19.71	0.00	-1,612.90	0.00	1,612.90	4,380.25	2,190.13	7,623.52	3,817.43	2.88	-0.93	0.430
35.00	-30.60	-19.46	0.00	-1,514.35	0.00	1,514.35	4,262.42	2,131.21	7,216.83	3,613.78	3.94	-1.10	0.426
40.00	-29.12	-19.25	0.00	-1,417.04	0.00	1,417.04	4,144.58	2,072.29	6,821.28	3,415.71	5.18	-1.26	0.422
43.21	-28.19	-19.11	0.00	-1,355.35	0.00	1,355.35	4,069.03	2,034.51	6,573.54	3,291.66	6.06	-1.37	0.419
45.00	-27.31	-18.95	0.00	-1,321.06	0.00	1,321.06	4,026.74	2,013.37	6,436.88	3,223.22	6.59	-1.44	0.417
48.79	-25.51	-18.79	0.00	-1,249.14	0.00	1,249.14	3,394.32	1,697.16	5,426.90	2,717.49	7.79	-1.57	0.467
50.00	-25.20	-18.70	0.00	-1,226.49	0.00	1,226.49	3,376.65	1,688.32	5,360.14	2,684.05	8.19	-1.61	0.465
52.00	-24.68	-18.56	0.00	-1,189.09	0.00	1,189.09	3,347.13	1,673.57	5,249.96	2,628.88	8.88	-1.69	0.460
55.00	-23.91	-18.35	0.00	-1,133.40	0.00	1,133.40	3,302.40	1,651.20	5,086.09	2,546.82	9.99	-1.81	0.452
60.00	-22.68	-18.07	0.00	-1,041.65	0.00	1,041.65	3,220.32	1,610.16	4,807.35	2,407.25	11.99	-2.01	0.440
65.00	-21.48	-17.78	0.00	-951.32	0.00	951.32	3,119.32	1,559.66	4,509.03	2,257.87	14.19	-2.20	0.428
70.00	-20.30	-17.49	0.00	-862.41	0.00	862.41	3,018.31	1,509.16	4,220.27	2,113.27	16.60	-2.40	0.415
75.00	-19.17	-17.23	0.00	-774.95	0.00	774.95	2,917.31	1,458.66	3,941.06	1,973.46	19.22	-2.59	0.399
78.67	-18.35	-17.07	0.00	-711.71	0.00	711.71	2,843.19	1,421.59	3,742.24	1,873.90	21.26	-2.73	0.386
80.00	-15.24	-14.17	0.00	-688.99	0.00	688.99	2,816.31	1,408.15	3,671.40	1,838.43	22.03	-2.79	0.380
83.33	-14.14	-13.99	0.00	-641.83	0.00	641.83	2,319.25	1,159.63	3,022.32	1,513.41	24.02	-2.92	0.430
85.00	-13.84	-13.88	0.00	-618.45	0.00	618.45	2,298.48	1,149.24	2,958.90	1,481.65	25.06	-2.98	0.424
87.00	-11.74	-12.72	0.00	-590.69	0.00	590.69	2,273.40	1,136.70	2,883.60	1,443.94	26.33	-3.07	0.414
90.00	-11.22	-12.49	0.00	-552.52	0.00	552.52	2,229.24	1,114.62	2,764.32	1,384.22	28.30	-3.20	0.404
95.00	-10.39	-12.19	0.00	-490.05	0.00	490.05	2,145.07	1,072.54	2,558.49	1,281.15	31.77	-3.42	0.387
100.00	-9.58	-11.90	0.00	-429.08	0.00	429.08	2,060.90	1,030.45	2,360.62	1,182.06	35.46	-3.63	0.368
105.00	-8.79	-11.60	0.00	-369.60	0.00	369.60	1,976.73	988.37	2,170.71	1,086.97	39.37	-3.84	0.345
110.00	-8.04	-11.33	0.00	-311.59	0.00	311.59	1,892.56	946.28	1,988.77	995.86	43.49	-4.04	0.317
114.00	-7.45	-11.17	0.00	-266.29	0.00	266.29	1,825.27	912.63	1,849.04	925.89	46.94	-4.19	0.292
114.00	-7.45	-11.17	0.00	-266.29	0.00	266.29	1,004.24	502.12	1,027.61	514.57	46.94	-4.19	0.525
115.00	-7.26	-10.53	0.00	-255.08	0.00	255.08	998.34	499.17	1,012.11	506.81	47.82	-4.23	0.511
120.00	-6.76	-10.27	0.00	-202.45	0.00	202.45	968.03	484.02	935.59	468.49	52.41	-4.52	0.440
125.00	-5.05	-7.73	0.00	-151.08	0.00	151.08	936.17	468.09	860.51	430.90	57.28	-4.78	0.356
130.00	-4.69	-7.48	0.00	-112.44	0.00	112.44	902.76	451.38	787.11	394.14	62.40	-5.00	0.291
135.00	-4.35	-7.28	0.00	-75.02	0.00	75.02	867.81	433.91	715.59	358.32	67.73	-5.18	0.215
138.00	-3.14	-4.09	0.00	-46.03	0.00	46.03	846.10	423.05	673.67	337.34	71.01	-5.27	0.140
140.00	-3.05	-3.94	0.00	-37.85	0.00	37.85	831.32	415.66	646.17	323.57	73.23	-5.32	0.121
145.00	0.00	-3.64	0.00	-18.14	0.00	18.14	787.55	393.77	574.90	287.88	78.83	-5.39	0.063

Site Number: 411182 Code: ANSI/TIA-222-G

Site Name: Nepaug CT, CT Engineering Number:OAA714420_C3_01 10/24/2017 4:43:03 PM

Customer: SPRINT NEXTEL

Load Case: 0.9D + 1.6W — 93 mph with No Ice (Reduced DL) — 23 Iterations

Gust Response Factor :1.10
Dead Load Factor :0.90
Wind Load Factor :1.60

Wind Importance Factor 1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		175.2	0.0					0.0	0.0	175.2	0.0	0.0	0.0
5.00		346.4	1,036.4					0.0	214.8	346.4	1,251.2	0.0	0.0
10.00		338.3	1,012.1					0.0	214.8	338.3	1,226.9	0.0	0.0
15.00		330.1	987.8					0.0	214.8	330.1	1,202.6	0.0	0.0
20.00		322.0	963.5					0.0	214.8	322.0	1,178.3	0.0	0.0
25.00		313.9	939.2					0.0	214.8	313.9	1,154.0	0.0	0.0
30.00		309.3	914.9					0.0	214.8	309.3	1,129.8	0.0	0.0
35.00		311.0	890.6					0.0	214.8	311.0	1,105.5	0.0	0.0
40.00		257.6	866.4					0.0	214.8	257.6	1,081.2	0.0	0.0
43.21	Bot - Section 2	158.8	542.7					0.0	137.7	158.8	680.4	0.0	0.0
45.00		180.1	561.3					0.0	77.1	180.1	638.4	0.0	0.0
48.79	Top - Section 1	161.2	1,167.9					0.0	163.0	161.2	1,330.9	0.0	0.0
50.00		103.4	170.7					0.0	51.8	103.4	222.5	0.0	0.0
52.00	Appertunance(s)	161.1	280.5	5.5	0.0	0.0	1.1	0.0	85.9	166.6	367.5	0.0	0.0
55.00		257.1	414.5					0.0	128.1	257.1	542.6	0.0	0.0
60.00		319.8	674.1					0.0	213.5	319.8	887.6	0.0	0.0
65.00		317.0	653.3					0.0	213.5	317.0	866.8	0.0	0.0
70.00		313.5	632.5					0.0	213.5	313.5	846.0	0.0	0.0
75.00		268.6	611.7					0.0	213.5	268.6	825.2	0.0	0.0
78.67	Bot - Section 3	154.2	435.6					0.0	156.7	154.2	592.3	0.0	0.0
80.00	Appertunance(s)	144.0	287.4	2,630.3	0.0	0.0	2,080.7	0.0	56.8	2,774.2	2,424.9	0.0	0.0
83.33	Top - Section 2	153.7	706.8					0.0	103.8	153.7	810.6	0.0	0.0
85.00		111.7	160.4					0.0	52.2	111.7	212.6	0.0	0.0
87.00	Appertunance(s)	150.8	189.3	917.6	0.0	0.0	1,350.0	0.0	62.4	1,068.4	1,601.7	0.0	0.0
90.00		237.7	278.8					0.0	93.6	237.7	372.4	0.0	0.0
95.00		291.7	450.8					0.0	156.0	291.7	606.8	0.0	0.0
100.00		284.5	433.4					0.0	156.0	284.5	589.4	0.0	0.0
105.00		276.8	416.1					0.0	156.0	276.8	572.1	0.0	0.0
110.00		242.5	398.7					0.0	156.0	242.5	554.7	0.0	0.0
114.00	Top - Section 3	132.3	306.3					0.0	124.7	132.3	431.0	0.0	0.0
115.00	Appertunance(s)	154.1	45.3	499.5	0.0	0.0	80.3	0.0	31.3	653.6	156.8	0.0	0.0
120.00		251.3	219.6					0.0	133.8	251.3	353.4	0.0	0.0
125.00	Appertunance(s)	242.0	209.2	2,179.4	0.0	0.0	1,069.1	0.0	133.8	2,421.4	1,412.1	0.0	0.0
130.00		232.3	198.7					0.0	66.7	232.3	265.5	0.0	0.0
135.00		179.5	188.3					0.0	66.7	179.5	255.1	0.0	0.0
138.00	Appertunance(s)	108.6	108.0	2,963.5	0.0	7,130.8	971.5	0.0	40.0	3,072.1	1,119.6	0.0	0.0
140.00		146.2	69.9					0.0	8.4	146.2	78.3	0.0	0.0
145.00	Appertunance(s)	103.4	167.5	3,086.7	0.0	12,149.6	2,278.0	0.0	21.0	3,190.1	2,466.5	0.0	0.0
								Totals:		20,823.9	31,413.0	0.00	0.00

Load Case: 0.9D + 1.6W 93 mph with No Ice (Reduced DL) 23 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :0.90
Wind Load Factor :1.60

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-31.47	-21.14	0.00	-2,206.86	0.00	2,206.86	4,897.86	2,448.93	9,914.38	4,964.56	0.00	0.00	0.451
5.00	-30.16	-20.87	0.00	-2,101.17	0.00	2,101.17	4,817.00	2,408.50	9,522.86	4,768.51	0.08	-0.15	0.447
10.00	-28.89	-20.60	0.00	-1,996.84	0.00	1,996.84	4,734.60	2,367.30	9,136.02	4,574.80	0.31	-0.29	0.443
15.00	-27.63	-20.34	0.00	-1,893.84	0.00	1,893.84	4,650.66	2,325.33	8,754.06	4,383.53	0.70	-0.45	0.438
20.00	-26.40	-20.08	0.00	-1,792.16	0.00	1,792.16	4,565.16	2,282.58	8,377.20	4,194.83	1.25	-0.60	0.433
25.00	-25.20	-19.82	0.00	-1,691.79	0.00	1,691.79	4,478.12	2,239.06	8,005.67	4,008.78	1.96	-0.76	0.428
30.00	-24.02	-19.56	0.00	-1,592.70	0.00	1,592.70	4,380.25	2,190.13	7,623.52	3,817.43	2.84	-0.92	0.423
35.00	-22.86	-19.30	0.00	-1,494.90	0.00	1,494.90	4,262.42	2,131.21	7,216.83	3,613.78	3.89	-1.08	0.419
40.00	-21.74	-19.07	0.00	-1,398.42	0.00	1,398.42	4,144.58	2,072.29	6,821.28	3,415.71	5.12	-1.25	0.415
43.21	-21.03	-18.93	0.00	-1,337.30	0.00	1,337.30	4,069.03	2,034.51	6,573.54	3,291.66	5.99	-1.36	0.412
45.00	-20.37	-18.76	0.00	-1,303.34	0.00	1,303.34	4,026.74	2,013.37	6,436.88	3,223.22	6.52	-1.42	0.410
48.79	-19.01	-18.60	0.00	-1,232.14	0.00	1,232.14	3,394.32	1,697.16	5,426.90	2,717.49	7.70	-1.55	0.459
50.00	-18.77	-18.51	0.00	-1,209.72	0.00	1,209.72	3,376.65	1,688.32	5,360.14	2,684.05	8.10	-1.60	0.456
52.00	-18.38	-18.36	0.00	-1,172.70	0.00	1,172.70	3,347.13	1,673.57	5,249.96	2,628.88	8.78	-1.67	0.452
55.00	-17.80	-18.14	0.00	-1,117.61	0.00	1,117.61	3,302.40	1,651.20	5,086.09	2,546.82	9.87	-1.79	0.444
60.00	-16.86	-17.84	0.00	-1,026.93	0.00	1,026.93	3,220.32	1,610.16	4,807.35	2,407.25	11.85	-1.98	0.432
65.00	-15.95	-17.55	0.00	-937.71	0.00	937.71	3,119.32	1,559.66	4,509.03	2,257.87	14.02	-2.17	0.421
70.00	-15.06	-17.25	0.00	-849.96	0.00	849.96	3,018.31	1,509.16	4,220.27	2,113.27	16.40	-2.37	0.407
75.00	-14.19	-16.99	0.00	-763.69	0.00	763.69	2,917.31	1,458.66	3,941.06	1,973.46	18.98	-2.56	0.392
78.67	-13.58	-16.83	0.00	-701.34	0.00	701.34	2,843.19	1,421.59	3,742.24	1,873.90	21.01	-2.70	0.379
80.00	-11.27	-13.96	0.00	-678.94	0.00	678.94	2,816.31	1,408.15	3,671.40	1,838.43	21.77	-2.75	0.373
83.33	-10.44	-13.79	0.00	-632.46	0.00	632.46	2,319.25	1,159.63	3,022.32	1,513.41	23.73	-2.88	0.423
85.00	-10.22	-13.68	0.00	-609.41	0.00	609.41	2,298.48	1,149.24	2,958.90	1,481.65	24.75	-2.94	0.416
87.00	-8.65	-12.55	0.00	-582.05	0.00	582.05	2,273.40	1,136.70	2,883.60	1,443.94	26.00	-3.03	0.407
90.00	-8.26	-12.31	0.00	-544.41	0.00	544.41	2,229.24	1,114.62	2,764.32	1,384.22	27.95	-3.16	0.397
95.00	-7.62	-12.02	0.00	-482.84	0.00	482.84	2,145.07	1,072.54	2,558.49	1,281.15	31.37	-3.37	0.381
100.00	-7.01	-11.72	0.00	-422.76	0.00	422.76	2,060.90	1,030.45	2,360.62	1,182.06	35.01	-3.58	0.361
105.00	-6.42	-11.43	0.00	-364.16	0.00	364.16	1,976.73	988.37	2,170.71	1,086.97	38.87	-3.78	0.338
110.00	-5.85	-11.17	0.00	-307.00	0.00	307.00	1,892.56	946.28	1,988.77	995.86	42.94	-3.98	0.312
114.00	-5.41	-11.02	0.00	-262.35	0.00	262.35	1,825.27	912.63	1,849.04	925.89	46.34	-4.13	0.286
114.00	-5.41	-11.02	0.00	-262.35	0.00	262.35	1,004.24	502.12	1,027.61	514.57	46.34	-4.13	0.516
115.00	-5.27	-10.37	0.00	-251.31	0.00	251.31	998.34	499.17	1,012.11	506.81	47.21	-4.17	0.502
120.00	-4.89	-10.11	0.00	-199.47	0.00	199.47	968.03	484.02	935.59	468.49	51.73	-4.46	0.431
125.00	-3.64	-7.60	0.00	-148.90	0.00	148.90	936.17	468.09	860.51	430.90	56.53	-4.71	0.350
130.00	-3.37	-7.36	0.00	-110.89	0.00	110.89	902.76	451.38	787.11	394.14	61.58	-4.93	0.285
135.00	-3.12	-7.17	0.00	-74.09	0.00	74.09	867.81	433.91	715.59	358.32	66.84	-5.11	0.211
138.00	-2.27	-4.01	0.00	-45.45	0.00	45.45	846.10	423.05	673.67	337.34	70.08	-5.20	0.138
140.00	-2.20	-3.86	0.00	-37.44	0.00	37.44	831.32	415.66	646.17	323.57	72.27	-5.24	0.118
145.00	0.00	-3.64	0.00	-18.14	0.00	18.14	787.55	393.77	574.90	287.88	77.80	-5.32	0.063

Site Number: 411182 Code: ANSI/TIA-222-G

Site Name: Nepaug CT, CT Engineering Number:OAA714420_C3_01 10/24/2017 4:43:06 PM

Customer: SPRINT NEXTEL

Load Case: 1.2D + 1.0Di + 1.0Wi 40 mph with 1.00 in Radial Ice 23 Iterations

Gust Response Factor :1.10 Ice Dead Load Factor :1.00 Wind Importance Factor :1.00

Dead Load Factor :1.20 Ice Importance Factor :1.00

Wind Load Factor :1.00

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces				Linear Forces		Sum of Forces			
Seg Elev (ft)	Description	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		39.7	0.0					0.0	0.0	39.7	0.0	0.0	0.0
5.00		78.8	1,867.2					0.0	419.3	78.8	2,286.5	0.0	0.0
10.00		77.5	1,880.8					0.0	439.2	77.5	2,320.0	0.0	0.0
15.00		76.0	1,864.3					0.0	449.7	76.0	2,314.0	0.0	0.0
20.00		74.4	1,837.9					0.0	457.1	74.4	2,295.0	0.0	0.0
25.00		72.8	1,806.4					0.0	462.8	72.8	2,269.2	0.0	0.0
30.00		72.0	1,771.6					0.0	467.6	72.0	2,239.3	0.0	0.0
35.00		72.7	1,734.7					0.0	471.7	72.7	2,206.4	0.0	0.0
40.00		60.4	1,696.0					0.0	475.3	60.4	2,171.3	0.0	0.0
43.21	Bot - Section 2	37.3	1,068.1					0.0	306.4	37.3	1,374.6	0.0	0.0
45.00		42.4	944.0					0.0	172.1	42.4	1,116.1	0.0	0.0
48.79	Top - Section 1	38.0	1,964.9					0.0	365.1	38.0	2,330.0	0.0	0.0
50.00		24.4	357.0					0.0	116.3	24.4	473.4	0.0	0.0
52.00	Appertunance(s)	38.1	587.0	2.1	0.0	0.0	10.5	0.0	193.3	40.2	790.8	0.0	0.0
55.00		60.9	868.3					0.0	251.0	60.9	1,119.3	0.0	0.0
60.00		76.0	1,413.9					0.0	419.4	76.0	1,833.3	0.0	0.0
65.00		75.7	1,375.4					0.0	420.7	75.7	1,796.1	0.0	0.0
70.00		75.1	1,336.4					0.0	421.9	75.1	1,758.3	0.0	0.0
75.00		64.6	1,296.9					0.0	423.0	64.6	1,719.9	0.0	0.0
78.67	Bot - Section 3	37.2	927.9					0.0	311.1	37.2	1,239.0	0.0	0.0
80.00	Appertunance(s)	34.8	510.6	480.8	0.0	0.0	5,642.0	0.0	113.0	515.6	6,265.6	0.0	0.0
83.33	Top - Section 2	37.2	1,255.2					0.0	231.8	37.2	1,487.0	0.0	0.0
85.00		27.1	369.7					0.0	116.6	27.1	486.3	0.0	0.0
87.00	Appertunance(s)	36.7	436.8	204.2	0.0	0.0	2,418.8	0.0	139.6	240.8	2,995.2	0.0	0.0
90.00		58.0	643.4					0.0	209.7	58.0	853.2	0.0	0.0
95.00		71.5	1,040.2					0.0	350.2	71.5	1,390.4	0.0	0.0
100.00		70.2	1,003.6					0.0	351.1	70.2	1,354.7	0.0	0.0
105.00		68.7	966.7					0.0	351.9	68.7	1,318.6	0.0	0.0
110.00		60.6	929.6					0.0	352.7	60.6	1,282.3	0.0	0.0
114.00	Top - Section 3	33.2	717.6					0.0	282.5	33.2	1,000.1	0.0	0.0
115.00	Appertunance(s)	38.9	137.5	94.3	0.0	0.0	415.0	0.0	70.9	133.2	623.4	0.0	0.0
120.00		63.8	662.0					0.0	324.7	63.8	986.7	0.0	0.0
125.00	Appertunance(s)	62.0	633.5	388.3	0.0	0.0	3,811.8	0.0	325.4	450.3	4,770.7	0.0	0.0
130.00		60.0	604.8					0.0	89.0	60.0	693.7	0.0	0.0
135.00		46.8	575.9					0.0	89.0	46.8	664.8	0.0	0.0
138.00	Appertunance(s)	28.5	333.6	534.6	0.0	1,171.4	4,259.5	0.0	53.4	563.1	4,646.4	0.0	0.0
140.00		38.8	217.2					0.0	11.2	38.8	228.4	0.0	0.0
145.00	Appertunance(s)	27.5	517.6	587.4	0.0	2,071.6	6,827.1	0.0	28.0	614.9	7,372.7	0.0	0.0
								Totals:		4,350.03	72,072.5	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi — 40 mph with 1.00 in Radial Ice — 23 Iterations

Gust Response Factor :1.10 | Ice Dead Load Factor :1.00 | Wind Importance Factor :1.00
Dead Load Factor :1.20 | Ice Importance Factor :1.00
Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-72.52	-4.46	0.00	-479.56	0.00	479.56	4,897.86	2,448.93	9,914.38	4,964.56	0.00	0.00	0.111
5.00	-70.23	-4.42	0.00	-457.28	0.00	457.28	4,817.00	2,408.50	9,522.86	4,768.51	0.02	-0.03	0.110
10.00	-67.91	-4.38	0.00	-435.20	0.00	435.20	4,734.60	2,367.30	9,136.02	4,574.80	0.07	-0.06	0.109
15.00	-65.59	-4.33	0.00	-413.32	0.00	413.32	4,650.66	2,325.33	8,754.06	4,383.53	0.15	-0.10	0.108
20.00	-63.29	-4.29	0.00	-391.65	0.00	391.65	4,565.16	2,282.58	8,377.20	4,194.83	0.27	-0.13	0.107
25.00	-61.02	-4.25	0.00	-370.18	0.00	370.18	4,478.12	2,239.06	8,005.67	4,008.78	0.43	-0.17	0.106
30.00	-58.78	-4.21	0.00	-348.93	0.00	348.93	4,380.25	2,190.13	7,623.52	3,817.43	0.62	-0.20	0.105
35.00	-56.57	-4.16	0.00	-327.88	0.00	327.88	4,262.42	2,131.21	7,216.83	3,613.78	0.85	-0.24	0.104
40.00	-54.40	-4.12	0.00	-307.06	0.00	307.06	4,144.58	2,072.29	6,821.28	3,415.71	1.12	-0.27	0.103
43.21	-53.02	-4.10	0.00	-293.85	0.00	293.85	4,069.03	2,034.51	6,573.54	3,291.66	1.31	-0.30	0.102
45.00	-51.90	-4.07	0.00	-286.50	0.00	286.50	4,026.74	2,013.37	6,436.88	3,223.22	1.42	-0.31	0.102
48.79	-49.57	-4.03	0.00	-271.07	0.00	271.07	3,394.32	1,697.16	5,426.90	2,717.49	1.68	-0.34	0.114
50.00	-49.10	-4.02	0.00	-266.21	0.00	266.21	3,376.65	1,688.32	5,360.14	2,684.05	1.77	-0.35	0.114
52.00	-48.31	-3.99	0.00	-258.18	0.00	258.18	3,347.13	1,673.57	5,249.96	2,628.88	1.92	-0.37	0.113
55.00	-47.19	-3.95	0.00	-246.21	0.00	246.21	3,302.40	1,651.20	5,086.09	2,546.82	2.16	-0.39	0.111
60.00	-45.35	-3.89	0.00	-226.47	0.00	226.47	3,220.32	1,610.16	4,807.35	2,407.25	2.59	-0.43	0.108
65.00	-43.55	-3.84	0.00	-207.00	0.00	207.00	3,119.32	1,559.66	4,509.03	2,257.87	3.07	-0.48	0.106
70.00	-41.79	-3.78	0.00	-187.83	0.00	187.83	3,018.31	1,509.16	4,220.27	2,113.27	3.59	-0.52	0.103
75.00	-40.07	-3.72	0.00	-168.95	0.00	168.95	2,917.31	1,458.66	3,941.06	1,973.46	4.15	-0.56	0.099
78.67	-38.83	-3.69	0.00	-155.30	0.00	155.30	2,843.19	1,421.59	3,742.24	1,873.90	4.60	-0.59	0.097
80.00	-32.57	-3.12	0.00	-150.39	0.00	150.39	2,816.31	1,408.15	3,671.40	1,838.43	4.77	-0.60	0.093
83.33	-31.08	-3.07	0.00	-140.02	0.00	140.02	2,319.25	1,159.63	3,022.32	1,513.41	5.20	-0.63	0.106
85.00	-30.59	-3.05	0.00	-134.88	0.00	134.88	2,298.48	1,149.24	2,958.90	1,481.65	5.42	-0.65	0.104
87.00	-27.60	-2.79	0.00	-128.78	0.00	128.78	2,273.40	1,136.70	2,883.60	1,443.94	5.70	-0.67	0.101
90.00	-26.75	-2.74	0.00	-120.42	0.00	120.42	2,229.24	1,114.62	2,764.32	1,384.22	6.12	-0.70	0.099
95.00	-25.36	-2.67	0.00	-106.74	0.00	106.74	2,145.07	1,072.54	2,558.49	1,281.15	6.88	-0.74	0.095
100.00	-24.00	-2.60	0.00	-93.40	0.00	93.40	2,060.90	1,030.45	2,360.62	1,182.06	7.68	-0.79	0.091
105.00	-22.68	-2.53	0.00	-80.40	0.00	80.40	1,976.73	988.37	2,170.71	1,086.97	8.53	-0.83	0.085
110.00	-21.40	-2.46	0.00	-67.75	0.00	67.75	1,892.56	946.28	1,988.77	995.86	9.42	-0.88	0.079
114.00	-20.40	-2.42	0.00	-57.90	0.00	57.90	1,825.27	912.63	1,849.04	925.89	10.17	-0.91	0.074
114.00	-20.40	-2.42	0.00	-57.90	0.00	57.90	1,004.24	502.12	1,027.61	514.57	10.17	-0.91	0.133
115.00	-19.77	-2.29	0.00	-55.48	0.00	55.48	998.34	499.17	1,012.11	506.81	10.36	-0.92	0.129
120.00	-18.79	-2.23	0.00	-44.02	0.00	44.02	968.03	484.02	935.59	468.49	11.36	-0.98	0.113
125.00	-14.02	-1.71	0.00	-32.86	0.00	32.86	936.17	468.09	860.51	430.90	12.42	-1.04	0.091
130.00	-13.33	-1.65	0.00	-24.31	0.00	24.31	902.76	451.38	787.11	394.14	13.53	-1.09	0.076
135.00	-12.67	-1.59	0.00	-16.07	0.00	16.07	867.81	433.91	715.59	358.32	14.69	-1.13	0.059
138.00	-8.03	-0.94	0.00	-10.12	0.00	10.12	846.10	423.05	673.67	337.34	15.41	-1.14	0.039
140.00	-7.80	-0.90	0.00	-8.24	0.00	8.24	831.32	415.66	646.17	323.57	15.89	-1.15	0.035
145.00	0.00	-0.74	0.00	-3.74	0.00	3.74	787.55	393.77	574.90	287.88	17.11	-1.17	0.013

Load Case: 1.0D + 1.0W Serviceability 60 mph 22 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces Wind FX (lb)	Shaft Forces Dead Load (lb)	Discrete Forces Wind FX (lb)	Discrete Forces Torsion MY (lb-ft)	Discrete Forces Moment MZ (lb-ft)	Discrete Forces Dead Load (lb)	Linear Forces Wind FX (lb)	Linear Forces Dead Load (lb)	Sum of Forces Wind FX (lb)	Sum of Forces Dead Load (lb)	Sum of Forces Torsion MY (lb-ft)	Sum of Forces Moment MZ (lb)
0.00		45.6	0.0					0.0	0.0	45.6	0.0	0.0	0.0
5.00		90.1	1,151.5					0.0	238.7	90.1	1,390.2	0.0	0.0
10.00		88.0	1,124.5					0.0	238.7	88.0	1,363.2	0.0	0.0
15.00		85.9	1,097.5					0.0	238.7	85.9	1,336.2	0.0	0.0
20.00		83.8	1,070.6					0.0	238.7	83.8	1,309.3	0.0	0.0
25.00		81.6	1,043.6					0.0	238.7	81.6	1,282.3	0.0	0.0
30.00		80.5	1,016.6					0.0	238.7	80.5	1,255.3	0.0	0.0
35.00		80.9	989.6					0.0	238.7	80.9	1,228.3	0.0	0.0
40.00		67.0	962.6					0.0	238.7	67.0	1,201.3	0.0	0.0
43.21	Bot - Section 2	41.3	603.0					0.0	153.0	41.3	756.0	0.0	0.0
45.00		46.9	623.7					0.0	85.7	46.9	709.3	0.0	0.0
48.79	Top - Section 1	41.9	1,297.6					0.0	181.1	41.9	1,478.8	0.0	0.0
50.00		26.9	189.7					0.0	57.6	26.9	247.2	0.0	0.0
52.00	Appertunance(s)	41.9	311.6	1.4	0.0	0.0	1.2	0.0	95.5	43.3	408.3	0.0	0.0
55.00		66.9	460.5					0.0	142.3	66.9	602.8	0.0	0.0
60.00		83.2	749.0					0.0	237.2	83.2	986.2	0.0	0.0
65.00		82.5	725.9					0.0	237.2	82.5	963.1	0.0	0.0
70.00		81.5	702.8					0.0	237.2	81.5	940.0	0.0	0.0
75.00		69.9	679.6					0.0	237.2	69.9	916.8	0.0	0.0
78.67	Bot - Section 3	40.1	484.0					0.0	174.1	40.1	658.1	0.0	0.0
80.00	Appertunance(s)	37.5	319.3	684.3	0.0	0.0	2,311.9	0.0	63.1	721.7	2,694.3	0.0	0.0
83.33	Top - Section 2	40.0	785.4					0.0	115.4	40.0	900.7	0.0	0.0
85.00		29.1	178.2					0.0	57.9	29.1	236.2	0.0	0.0
87.00	Appertunance(s)	39.2	210.4	238.7	0.0	0.0	1,500.0	0.0	69.3	277.9	1,779.7	0.0	0.0
90.00		61.8	309.8					0.0	104.0	61.8	413.8	0.0	0.0
95.00		75.9	500.9					0.0	173.3	75.9	674.2	0.0	0.0
100.00		74.0	481.6					0.0	173.3	74.0	654.9	0.0	0.0
105.00		72.0	462.3					0.0	173.3	72.0	635.6	0.0	0.0
110.00		63.1	443.0					0.0	173.3	63.1	616.3	0.0	0.0
114.00	Top - Section 3	34.4	340.3					0.0	138.5	34.4	478.9	0.0	0.0
115.00	Appertunance(s)	40.1	50.3	130.0	0.0	0.0	89.2	0.0	34.8	170.0	174.3	0.0	0.0
120.00		65.4	244.0					0.0	148.7	65.4	392.7	0.0	0.0
125.00	Appertunance(s)	62.9	232.4	567.0	0.0	0.0	1,187.9	0.0	148.7	629.9	1,569.0	0.0	0.0
130.00		60.4	220.8					0.0	74.2	60.4	295.0	0.0	0.0
135.00		46.7	209.3					0.0	74.2	46.7	283.4	0.0	0.0
138.00	Appertunance(s)	28.3	120.0	770.9	0.0	1,855.1	1,079.5	0.0	44.5	799.2	1,244.0	0.0	0.0
140.00		38.0	77.7					0.0	9.3	38.0	87.0	0.0	0.0
145.00	Appertunance(s)	26.9	186.1	803.0	0.0	3,160.7	2,531.1	0.0	23.3	829.9	2,740.5	0.0	0.0
								Totals:		5,417.26	34,903.3	0.00	0.00

Load Case: 1.0D + 1.0W Serviceability 60 mph 22 Iterations

Gust Response Factor :1.10 Wind Importance Factor 1.00
Dead Load Factor :1.00
Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-34.99	-5.50	0.00	-576.45	0.00	576.45	4,897.86	2,448.93	9,914.38	4,964.56	0.00	0.00	0.123
5.00	-33.60	-5.43	0.00	-548.96	0.00	548.96	4,817.00	2,408.50	9,522.86	4,768.51	0.02	-0.04	0.122
10.00	-32.23	-5.36	0.00	-521.80	0.00	521.80	4,734.60	2,367.30	9,136.02	4,574.80	0.08	-0.08	0.121
15.00	-30.89	-5.30	0.00	-494.98	0.00	494.98	4,650.66	2,325.33	8,754.06	4,383.53	0.18	-0.12	0.120
20.00	-29.58	-5.23	0.00	-468.50	0.00	468.50	4,565.16	2,282.58	8,377.20	4,194.83	0.33	-0.16	0.118
25.00	-28.30	-5.17	0.00	-442.34	0.00	442.34	4,478.12	2,239.06	8,005.67	4,008.78	0.51	-0.20	0.117
30.00	-27.04	-5.10	0.00	-416.51	0.00	416.51	4,380.25	2,190.13	7,623.52	3,817.43	0.74	-0.24	0.115
35.00	-25.81	-5.03	0.00	-391.00	0.00	391.00	4,262.42	2,131.21	7,216.83	3,613.78	1.02	-0.28	0.114
40.00	-24.60	-4.98	0.00	-365.83	0.00	365.83	4,144.58	2,072.29	6,821.28	3,415.71	1.34	-0.33	0.113
43.21	-23.84	-4.94	0.00	-349.88	0.00	349.88	4,069.03	2,034.51	6,573.54	3,291.66	1.57	-0.36	0.112
45.00	-23.13	-4.90	0.00	-341.02	0.00	341.02	4,026.74	2,013.37	6,436.88	3,223.22	1.70	-0.37	0.112
48.79	-21.65	-4.86	0.00	-322.43	0.00	322.43	3,394.32	1,697.16	5,426.90	2,717.49	2.01	-0.41	0.125
50.00	-21.40	-4.83	0.00	-316.58	0.00	316.58	3,376.65	1,688.32	5,360.14	2,684.05	2.12	-0.42	0.124
52.00	-20.99	-4.80	0.00	-306.91	0.00	306.91	3,347.13	1,673.57	5,249.96	2,628.88	2.30	-0.44	0.123
55.00	-20.39	-4.74	0.00	-292.52	0.00	292.52	3,302.40	1,651.20	5,086.09	2,546.82	2.58	-0.47	0.121
60.00	-19.40	-4.66	0.00	-268.83	0.00	268.83	3,220.32	1,610.16	4,807.35	2,407.25	3.10	-0.52	0.118
65.00	-18.43	-4.59	0.00	-245.52	0.00	245.52	3,119.32	1,559.66	4,509.03	2,257.87	3.67	-0.57	0.115
70.00	-17.49	-4.51	0.00	-222.57	0.00	222.57	3,018.31	1,509.16	4,220.27	2,113.27	4.29	-0.62	0.111
75.00	-16.57	-4.44	0.00	-200.01	0.00	200.01	2,917.31	1,458.66	3,941.06	1,973.46	4.96	-0.67	0.107
78.67	-15.91	-4.40	0.00	-183.70	0.00	183.70	2,843.19	1,421.59	3,742.24	1,873.90	5.49	-0.71	0.104
80.00	-13.22	-3.65	0.00	-177.84	0.00	177.84	2,816.31	1,408.15	3,671.40	1,838.43	5.69	-0.72	0.101
83.33	-12.32	-3.61	0.00	-165.68	0.00	165.68	2,319.25	1,159.63	3,022.32	1,513.41	6.21	-0.75	0.115
85.00	-12.08	-3.58	0.00	-159.65	0.00	159.65	2,298.48	1,149.24	2,958.90	1,481.65	6.47	-0.77	0.113
87.00	-10.31	-3.28	0.00	-152.49	0.00	152.49	2,273.40	1,136.70	2,883.60	1,443.94	6.80	-0.79	0.110
90.00	-9.89	-3.22	0.00	-142.64	0.00	142.64	2,229.24	1,114.62	2,764.32	1,384.22	7.31	-0.83	0.107
95.00	-9.22	-3.15	0.00	-126.53	0.00	126.53	2,145.07	1,072.54	2,558.49	1,281.15	8.21	-0.88	0.103
100.00	-8.56	-3.07	0.00	-110.80	0.00	110.80	2,060.90	1,030.45	2,360.62	1,182.06	9.16	-0.94	0.098
105.00	-7.92	-2.99	0.00	-95.45	0.00	95.45	1,976.73	988.37	2,170.71	1,086.97	10.17	-0.99	0.092
110.00	-7.30	-2.93	0.00	-80.48	0.00	80.48	1,892.56	946.28	1,988.77	995.86	11.24	-1.04	0.085
114.00	-6.83	-2.89	0.00	-68.78	0.00	68.78	1,825.27	912.63	1,849.04	925.89	12.13	-1.08	0.078
114.00	-6.83	-2.89	0.00	-68.78	0.00	68.78	1,004.24	502.12	1,027.61	514.57	12.13	-1.08	0.140
115.00	-6.65	-2.72	0.00	-65.89	0.00	65.89	998.34	499.17	1,012.11	506.81	12.35	-1.09	0.137
120.00	-6.26	-2.65	0.00	-52.30	0.00	52.30	968.03	484.02	935.59	468.49	13.54	-1.17	0.118
125.00	-4.70	-1.99	0.00	-39.04	0.00	39.04	936.17	468.09	860.51	430.90	14.80	-1.23	0.096
130.00	-4.40	-1.93	0.00	-29.06	0.00	29.06	902.76	451.38	787.11	394.14	16.12	-1.29	0.079
135.00	-4.12	-1.88	0.00	-19.40	0.00	19.40	867.81	433.91	715.59	358.32	17.50	-1.34	0.059
138.00	-2.90	-1.05	0.00	-11.90	0.00	11.90	846.10	423.05	673.67	337.34	18.35	-1.36	0.039
140.00	-2.81	-1.01	0.00	-9.79	0.00	9.79	831.32	415.66	646.17	323.57	18.92	-1.37	0.034
145.00	0.00	-0.95	0.00	-4.72	0.00	4.72	787.55	393.77	574.90	287.88	20.37	-1.39	0.016

Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period (S_s):	0.18	
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06	
Long-Period Transition Period (T_L):	6	
Importance Factor (I_E):	1.00	
Site Coefficient F_a:	1.60	
Site Coeffiecient F_v:	2.40	
Response Modification Coefficient (R):	1.50	
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19	
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10	
Seismic Response Coefficient (C_s):	0.03	
Upper Limit C_s	0.03	
Lower Limit C_s	0.03	
Period based on Rayleigh Method (sec):	2.08	
Redundancy Factor (p):	1.30	
Seismic Force Distribution Exponent (k):	1.79	
Total Unfactored Dead Load:	35.00	k
Seismic Base Shear (E):	1.51	k

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
37	142.50	209	1,519	0.017	26	259
36	139.00	87	604	0.007	10	108
35	136.50	164	1,105	0.012	19	204
34	132.50	283	1,805	0.020	30	351
33	127.50	295	1,753	0.020	30	365
32	122.50	381	2,108	0.024	36	472
31	117.50	393	2,016	0.022	34	486
30	114.50	85	417	0.005	7	105
29	112.00	479	2,256	0.025	38	593
28	107.50	616	2,698	0.030	46	763
27	102.50	636	2,555	0.029	43	787
26	97.50	655	2,406	0.027	41	811
25	92.50	674	2,254	0.025	38	835
24	88.50	414	1,278	0.014	22	512
23	86.00	280	821	0.009	14	346
22	84.16	236	667	0.007	11	293
21	81.66	901	2,409	0.027	41	1,116
20	79.33	382	971	0.011	16	474
19	76.83	658	1,578	0.018	27	815
18	72.50	917	1,981	0.022	33	1,136
17	67.50	940	1,787	0.020	30	1,164
16	62.50	963	1,595	0.018	27	1,193
15	57.50	986	1,406	0.016	24	1,222

14	53.50	603	755	0.008	13	747
13	51.00	407	468	0.005	8	504
12	49.40	247	269	0.003	5	306
11	46.90	1,479	1,463	0.016	25	1,832
10	44.10	709	629	0.007	11	879
9	41.60	756	604	0.007	10	936
8	37.50	1,201	796	0.009	13	1,488
7	32.50	1,228	630	0.007	11	1,521
6	27.50	1,255	477	0.005	8	1,555
5	22.50	1,282	340	0.004	6	1,588
4	17.50	1,309	221	0.002	4	1,622
3	12.50	1,336	124	0.001	2	1,655
2	7.50	1,363	50	0.001	1	1,689
1	2.50	1,390	7	0.000	0	1,722
RFS PD620-2	150.00	53	422	0.005	7	66
12' Omni	148.00	40	311	0.003	5	50
Alcatel-Lucent ALU 8	145.00	26	198	0.002	3	33
Alcatel-Lucent RRH2x	145.00	159	1,188	0.013	20	197
Alcatel-Lucent 800 M	145.00	159	1,190	0.013	20	197
Alcatel-Lucent 1900M	145.00	132	988	0.011	17	163
Alcatel-Lucent TD-RR	145.00	210	1,572	0.018	27	260
RFS APXVSPP18-C-A20	145.00	171	1,280	0.014	22	212
Commscope DT465B-2XR	145.00	174	1,302	0.015	22	216
Flat Low Profile Pla	145.00	1,500	11,226	0.125	190	1,858
GPS	138.00	10	68	0.001	1	12
TTA	138.00	60	411	0.005	7	74
Amphenol Antel LPA-8	138.00	108	740	0.008	12	134
Amphenol Antel BXA-1	138.00	39	267	0.003	5	48
Round T-Arm	138.00	750	5,137	0.057	87	929
Amphenol Antel BXA-7	138.00	112	771	0.009	13	139
E-911 GPS	125.00	5	29	0.000	0	6
RFS ATM1900D-1CWA	125.00	25	145	0.002	2	31
RFS ATMAA1412D-1A20	125.00	39	224	0.002	4	48
RFS APX16DWV-16DWV-S	125.00	238	1,363	0.015	23	294
Round T-Arm	125.00	750	4,302	0.048	73	929
Commscope LNX-6515DS	125.00	131	752	0.008	13	162
GPS	115.00	10	49	0.001	1	12
RFS APXV18-206517	115.00	79	391	0.004	7	98
Empty Flat Low Profi	87.00	1,500	4,494	0.050	76	1,858
Spinner Bias-T	80.00	4	12	0.000	0	6
Powerwave Allgon LGP	80.00	33	85	0.001	1	41
Powerwave Allgon LGP	80.00	85	218	0.002	4	105
Raycap DC6-48-60-18-	80.00	33	85	0.001	1	41
Ericsson RRUS 11 (Ba	80.00	300	773	0.009	13	372
Powerwave Allgon 777	80.00	210	541	0.006	9	260
KMW AM-X-CD-16-65-00	80.00	97	250	0.003	4	120
Powerwave Allgon P65	80.00	50	129	0.001	2	62
Flat Low Profile Pla	80.00	1,500	3,866	0.043	65	1,858
PCTEL GPS-TMG-HR-26N	52.00	1	1	0.000	0	1
		34,996	89,600	1.000	1,513	43,347

Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
37	142.50	209	1,519	0.017	26	180
36	139.00	87	604	0.007	10	75
35	136.50	164	1,105	0.012	19	142
34	132.50	283	1,805	0.020	30	244
33	127.50	295	1,753	0.020	30	254

32	122.50	381	2,108	0.024	36	328
31	117.50	393	2,016	0.022	34	338
30	114.50	85	417	0.005	7	73
29	112.00	479	2,256	0.025	38	413
28	107.50	616	2,698	0.030	46	531
27	102.50	636	2,555	0.029	43	548
26	97.50	655	2,406	0.027	41	564
25	92.50	674	2,254	0.025	38	581
24	88.50	414	1,278	0.014	22	356
23	86.00	280	821	0.009	14	241
22	84.16	236	667	0.007	11	203
21	81.66	901	2,409	0.027	41	776
20	79.33	382	971	0.011	16	329
19	76.83	658	1,578	0.018	27	567
18	72.50	917	1,981	0.022	33	790
17	67.50	940	1,787	0.020	30	810
16	62.50	963	1,595	0.018	27	830
15	57.50	986	1,406	0.016	24	850
14	53.50	603	755	0.008	13	519
13	51.00	407	468	0.005	8	351
12	49.40	247	269	0.003	5	213
11	46.90	1,479	1,463	0.016	25	1,274
10	44.10	709	629	0.007	11	611
9	41.60	756	604	0.007	10	651
8	37.50	1,201	796	0.009	13	1,035
7	32.50	1,228	630	0.007	11	1,058
6	27.50	1,255	477	0.005	8	1,081
5	22.50	1,282	340	0.004	6	1,105
4	17.50	1,309	221	0.002	4	1,128
3	12.50	1,336	124	0.001	2	1,151
2	7.50	1,363	50	0.001	1	1,174
1	2.50	1,390	7	0.000	0	1,198
RFS PD620-2	150.00	53	422	0.005	7	46
12' Omni	148.00	40	311	0.003	5	34
Alcatel-Lucent ALU 8	145.00	26	198	0.002	3	23
Alcatel-Lucent RRH2x	145.00	159	1,188	0.013	20	137
Alcatel-Lucent 800 M	145.00	159	1,190	0.013	20	137
Alcatel-Lucent 1900M	145.00	132	988	0.011	17	114
Alcatel-Lucent TD-RR	145.00	210	1,572	0.018	27	181
RFS APXVSPP18-C-A20	145.00	171	1,280	0.014	22	147
Commscope DT465B-2XR	145.00	174	1,302	0.015	22	150
Flat Low Profile Pla	145.00	1,500	11,226	0.125	190	1,292
GPS	138.00	10	68	0.001	1	9
TTA	138.00	60	411	0.005	7	52
Amphenol Antel LPA-8	138.00	108	740	0.008	12	93
Amphenol Antel BXA-1	138.00	39	267	0.003	5	34
Round T-Arm	138.00	750	5,137	0.057	87	646
Amphenol Antel BXA-7	138.00	112	771	0.009	13	97
E-911 GPS	125.00	5	29	0.000	0	4
RFS ATM1900D-1CWA	125.00	25	145	0.002	2	22
RFS ATMAA1412D-1A20	125.00	39	224	0.002	4	34
RFS APX16DWV-16DWV-S	125.00	238	1,363	0.015	23	205
Round T-Arm	125.00	750	4,302	0.048	73	646
Commscope LNX-6515DS	125.00	131	752	0.008	13	113
GPS	115.00	10	49	0.001	1	9
RFS APXV18-206517	115.00	79	391	0.004	7	68
Empty Flat Low Profi	87.00	1,500	4,494	0.050	76	1,292
Spinner Bias-T	80.00	4	12	0.000	0	4
Powerwave Allgon LGP	80.00	33	85	0.001	1	28
Powerwave Allgon LGP	80.00	85	218	0.002	4	73
Raycap DC6-48-60-18-	80.00	33	85	0.001	1	28
Ericsson RRUS 11 (Ba	80.00	300	773	0.009	13	258
Powerwave Allgon 777	80.00	210	541	0.006	9	181
KMW AM-X-CD-16-65-00	80.00	97	250	0.003	4	84

Powerwave Allgon P65	80.00	50	129	0.001	2	43
Flat Low Profile Pla	80.00	1,500	3,866	0.043	65	1,292
PCTEL GPS-TMG-HR-26N	52.00	1	1	0.000	0	1
		34,996	89,600	1.000	1,513	30,145

Load Case (1.2 + 0.2Sds) * DL + E ELFM Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-41.51	-1.50	0.00	-166.53	0.00	166.53	4,897.86	2,448.93	9,914.38	4,964.56	0.00	0.00	0.042
5.00	-39.82	-1.51	0.00	-159.01	0.00	159.01	4,817.00	2,408.50	9,522.86	4,768.51	0.01	-0.01	0.042
10.00	-38.17	-1.52	0.00	-151.46	0.00	151.46	4,734.60	2,367.30	9,136.02	4,574.80	0.02	-0.02	0.041
15.00	-36.54	-1.52	0.00	-143.88	0.00	143.88	4,650.66	2,325.33	8,754.06	4,383.53	0.05	-0.03	0.041
20.00	-34.95	-1.52	0.00	-136.29	0.00	136.29	4,565.16	2,282.58	8,377.20	4,194.83	0.09	-0.05	0.040
25.00	-33.40	-1.52	0.00	-128.70	0.00	128.70	4,478.12	2,239.06	8,005.67	4,008.78	0.15	-0.06	0.040
30.00	-31.88	-1.51	0.00	-121.12	0.00	121.12	4,380.25	2,190.13	7,623.52	3,817.43	0.22	-0.07	0.039
35.00	-30.39	-1.50	0.00	-113.57	0.00	113.57	4,262.42	2,131.21	7,216.83	3,613.78	0.30	-0.08	0.039
40.00	-29.45	-1.50	0.00	-106.06	0.00	106.06	4,144.58	2,072.29	6,821.28	3,415.71	0.39	-0.09	0.038
43.21	-28.57	-1.49	0.00	-101.26	0.00	101.26	4,069.03	2,034.51	6,573.54	3,291.66	0.45	-0.10	0.038
45.00	-26.74	-1.46	0.00	-98.60	0.00	98.60	4,026.74	2,013.37	6,436.88	3,223.22	0.49	-0.11	0.037
48.79	-26.44	-1.46	0.00	-93.05	0.00	93.05	3,394.32	1,697.16	5,426.90	2,717.49	0.58	-0.12	0.042
50.00	-25.93	-1.45	0.00	-91.29	0.00	91.29	3,376.65	1,688.32	5,360.14	2,684.05	0.61	-0.12	0.042
52.00	-25.18	-1.44	0.00	-88.38	0.00	88.38	3,347.13	1,673.57	5,249.96	2,628.88	0.67	-0.13	0.041
55.00	-23.96	-1.42	0.00	-84.06	0.00	84.06	3,302.40	1,651.20	5,086.09	2,546.82	0.75	-0.14	0.040
60.00	-22.77	-1.40	0.00	-76.96	0.00	76.96	3,220.32	1,610.16	4,807.35	2,407.25	0.90	-0.15	0.039
65.00	-21.60	-1.37	0.00	-69.98	0.00	69.98	3,119.32	1,559.66	4,509.03	2,257.87	1.06	-0.16	0.038
70.00	-20.47	-1.34	0.00	-63.14	0.00	63.14	3,018.31	1,509.16	4,220.27	2,113.27	1.24	-0.18	0.037
75.00	-19.65	-1.31	0.00	-56.45	0.00	56.45	2,917.31	1,458.66	3,941.06	1,973.46	1.44	-0.19	0.035
78.67	-19.18	-1.30	0.00	-51.64	0.00	51.64	2,843.19	1,421.59	3,742.24	1,873.90	1.59	-0.20	0.034
80.00	-15.20	-1.14	0.00	-49.92	0.00	49.92	2,816.31	1,408.15	3,671.40	1,838.43	1.65	-0.21	0.033
83.33	-14.91	-1.13	0.00	-46.12	0.00	46.12	2,319.25	1,159.63	3,022.32	1,513.41	1.80	-0.22	0.037
85.00	-14.56	-1.12	0.00	-44.23	0.00	44.23	2,298.48	1,149.24	2,958.90	1,481.65	1.87	-0.22	0.036
87.00	-12.19	-1.01	0.00	-41.99	0.00	41.99	2,273.40	1,136.70	2,883.60	1,443.94	1.97	-0.23	0.034
90.00	-11.36	-0.97	0.00	-38.95	0.00	38.95	2,229.24	1,114.62	2,764.32	1,384.22	2.11	-0.24	0.033
95.00	-10.54	-0.93	0.00	-34.08	0.00	34.08	2,145.07	1,072.54	2,558.49	1,281.15	2.37	-0.25	0.032
100.00	-9.76	-0.89	0.00	-29.42	0.00	29.42	2,060.90	1,030.45	2,360.62	1,182.06	2.64	-0.27	0.030
105.00	-8.99	-0.84	0.00	-24.98	0.00	24.98	1,976.73	988.37	2,170.71	1,086.97	2.93	-0.28	0.028
110.00	-8.40	-0.80	0.00	-20.78	0.00	20.78	1,892.56	946.28	1,988.77	995.86	3.23	-0.29	0.025
114.00	-8.30	-0.80	0.00	-17.57	0.00	17.57	1,825.27	912.63	1,849.04	925.89	3.48	-0.30	0.024
114.00	-8.30	-0.80	0.00	-17.57	0.00	17.57	1,004.24	502.12	1,027.61	514.57	3.48	-0.30	0.042
115.00	-7.70	-0.75	0.00	-16.78	0.00	16.78	998.34	499.17	1,012.11	506.81	3.54	-0.31	0.041
120.00	-7.23	-0.72	0.00	-13.02	0.00	13.02	968.03	484.02	935.59	468.49	3.88	-0.33	0.035
125.00	-5.39	-0.56	0.00	-9.43	0.00	9.43	936.17	468.09	860.51	430.90	4.23	-0.34	0.028
130.00	-5.04	-0.53	0.00	-6.62	0.00	6.62	902.76	451.38	787.11	394.14	4.59	-0.36	0.022
135.00	-4.84	-0.51	0.00	-3.97	0.00	3.97	867.81	433.91	715.59	358.32	4.97	-0.37	0.017
138.00	-3.39	-0.37	0.00	-2.44	0.00	2.44	846.10	423.05	673.67	337.34	5.20	-0.37	0.011
140.00	-3.13	-0.34	0.00	-1.70	0.00	1.70	831.32	415.66	646.17	323.57	5.36	-0.37	0.009
145.00	0.00	-0.32	0.00	0.00	0.00	0.00	787.55	393.77	574.90	287.88	5.75	-0.38	0.000

Load Case (0.9 - 0.2Sds) * DL + E ELFM Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-28.87	-1.50	0.00	-164.58	0.00	164.58	4,897.86	2,448.93	9,914.38	4,964.56	0.00	0.00	0.039
5.00	-27.69	-1.51	0.00	-157.07	0.00	157.07	4,817.00	2,408.50	9,522.86	4,768.51	0.01	-0.01	0.039
10.00	-26.54	-1.51	0.00	-149.54	0.00	149.54	4,734.60	2,367.30	9,136.02	4,574.80	0.02	-0.02	0.038
15.00	-25.41	-1.51	0.00	-141.99	0.00	141.99	4,650.66	2,325.33	8,754.06	4,383.53	0.05	-0.03	0.038
20.00	-24.31	-1.51	0.00	-134.44	0.00	134.44	4,565.16	2,282.58	8,377.20	4,194.83	0.09	-0.04	0.037
25.00	-23.23	-1.50	0.00	-126.90	0.00	126.90	4,478.12	2,239.06	8,005.67	4,008.78	0.15	-0.06	0.037
30.00	-22.17	-1.50	0.00	-119.38	0.00	119.38	4,380.25	2,190.13	7,623.52	3,817.43	0.21	-0.07	0.036
35.00	-21.13	-1.49	0.00	-111.89	0.00	111.89	4,262.42	2,131.21	7,216.83	3,613.78	0.29	-0.08	0.036
40.00	-20.48	-1.48	0.00	-104.45	0.00	104.45	4,144.58	2,072.29	6,821.28	3,415.71	0.38	-0.09	0.036
43.21	-19.87	-1.47	0.00	-99.71	0.00	99.71	4,069.03	2,034.51	6,573.54	3,291.66	0.45	-0.10	0.035
45.00	-18.60	-1.45	0.00	-97.07	0.00	97.07	4,026.74	2,013.37	6,436.88	3,223.22	0.49	-0.11	0.035
48.79	-18.38	-1.44	0.00	-91.59	0.00	91.59	3,394.32	1,697.16	5,426.90	2,717.49	0.58	-0.12	0.039
50.00	-18.03	-1.44	0.00	-89.85	0.00	89.85	3,376.65	1,688.32	5,360.14	2,684.05	0.61	-0.12	0.039
52.00	-17.51	-1.42	0.00	-86.98	0.00	86.98	3,347.13	1,673.57	5,249.96	2,628.88	0.66	-0.13	0.038
55.00	-16.66	-1.40	0.00	-82.71	0.00	82.71	3,302.40	1,651.20	5,086.09	2,546.82	0.74	-0.13	0.038
60.00	-15.83	-1.38	0.00	-75.70	0.00	75.70	3,220.32	1,610.16	4,807.35	2,407.25	0.89	-0.15	0.036
65.00	-15.02	-1.35	0.00	-68.82	0.00	68.82	3,119.32	1,559.66	4,509.03	2,257.87	1.05	-0.16	0.035
70.00	-14.23	-1.32	0.00	-62.08	0.00	62.08	3,018.31	1,509.16	4,220.27	2,113.27	1.23	-0.18	0.034
75.00	-13.67	-1.29	0.00	-55.50	0.00	55.50	2,917.31	1,458.66	3,941.06	1,973.46	1.42	-0.19	0.033
78.67	-13.34	-1.27	0.00	-50.77	0.00	50.77	2,843.19	1,421.59	3,742.24	1,873.90	1.57	-0.20	0.032
80.00	-10.57	-1.12	0.00	-49.07	0.00	49.07	2,816.31	1,408.15	3,671.40	1,838.43	1.62	-0.20	0.030
83.33	-10.37	-1.11	0.00	-45.33	0.00	45.33	2,319.25	1,159.63	3,022.32	1,513.41	1.77	-0.21	0.034
85.00	-10.13	-1.10	0.00	-43.47	0.00	43.47	2,298.48	1,149.24	2,958.90	1,481.65	1.85	-0.22	0.034
87.00	-8.48	-1.00	0.00	-41.27	0.00	41.27	2,273.40	1,136.70	2,883.60	1,443.94	1.94	-0.22	0.032
90.00	-7.90	-0.96	0.00	-38.28	0.00	38.28	2,229.24	1,114.62	2,764.32	1,384.22	2.08	-0.23	0.031
95.00	-7.33	-0.92	0.00	-33.49	0.00	33.49	2,145.07	1,072.54	2,558.49	1,281.15	2.33	-0.25	0.030
100.00	-6.78	-0.87	0.00	-28.90	0.00	28.90	2,060.90	1,030.45	2,360.62	1,182.06	2.60	-0.26	0.028
105.00	-6.25	-0.83	0.00	-24.53	0.00	24.53	1,976.73	988.37	2,170.71	1,086.97	2.88	-0.28	0.026
110.00	-5.84	-0.79	0.00	-20.40	0.00	20.40	1,892.56	946.28	1,988.77	995.86	3.18	-0.29	0.024
114.00	-5.77	-0.78	0.00	-17.25	0.00	17.25	1,825.27	912.63	1,849.04	925.89	3.43	-0.30	0.022
114.00	-5.77	-0.78	0.00	-17.25	0.00	17.25	1,004.24	502.12	1,027.61	514.57	3.43	-0.30	0.039
115.00	-5.35	-0.74	0.00	-16.46	0.00	16.46	998.34	499.17	1,012.11	506.81	3.49	-0.30	0.038
120.00	-5.02	-0.70	0.00	-12.77	0.00	12.77	968.03	484.02	935.59	468.49	3.82	-0.32	0.032
125.00	-3.75	-0.55	0.00	-9.26	0.00	9.26	936.17	468.09	860.51	430.90	4.16	-0.34	0.025
130.00	-3.50	-0.52	0.00	-6.50	0.00	6.50	902.76	451.38	787.11	394.14	4.52	-0.35	0.020
135.00	-3.36	-0.50	0.00	-3.89	0.00	3.89	867.81	433.91	715.59	358.32	4.90	-0.36	0.015
138.00	-2.36	-0.36	0.00	-2.39	0.00	2.39	846.10	423.05	673.67	337.34	5.12	-0.36	0.010
140.00	-2.18	-0.33	0.00	-1.67	0.00	1.67	831.32	415.66	646.17	323.57	5.28	-0.37	0.008
145.00	0.00	-0.32	0.00	0.00	0.00	0.00	787.55	393.77	574.90	287.88	5.66	-0.37	0.000

Equivalent Modal Forces Analysis

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period (S_s):	0.18
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.06
Importance Factor (I_E):	1.00
Site Coefficient F_a:	1.60
Site Coefficient F_v	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.19
Desing Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Period Based on Rayleigh Method (sec):	2.08
Redundancy Factor (p):	1.30

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
37	142.50	209	1.825	1.656	1.022	0.329	60	259
36	139.00	87	1.737	1.267	0.872	0.275	21	108
35	136.50	164	1.675	1.029	0.777	0.240	34	204
34	132.50	283	1.578	0.713	0.641	0.188	46	351
33	127.50	295	1.461	0.410	0.498	0.130	33	365
32	122.50	381	1.349	0.194	0.381	0.082	27	472
31	117.50	393	1.241	0.047	0.287	0.042	14	486
30	114.50	85	1.178	-0.015	0.239	0.022	2	105
29	112.00	479	1.128	-0.053	0.204	0.008	3	593
28	107.50	616	1.039	-0.098	0.151	-0.012	-6	763
27	102.50	636	0.944	-0.120	0.106	-0.026	-14	787
26	97.50	655	0.855	-0.120	0.071	-0.033	-18	811
25	92.50	674	0.769	-0.106	0.045	-0.031	-18	835
24	88.50	414	0.704	-0.088	0.031	-0.025	-9	512
23	86.00	280	0.665	-0.076	0.024	-0.020	-5	346
22	84.16	236	0.637	-0.066	0.019	-0.016	-3	293
21	81.66	901	0.599	-0.053	0.014	-0.009	-7	1,116
20	79.33	382	0.566	-0.040	0.011	-0.002	-1	474
19	76.83	658	0.531	-0.027	0.009	0.006	3	815
18	72.50	917	0.472	-0.006	0.006	0.018	14	1,136
17	67.50	940	0.410	0.015	0.006	0.030	25	1,164
16	62.50	963	0.351	0.032	0.009	0.039	33	1,193
15	57.50	986	0.297	0.046	0.012	0.045	39	1,222
14	53.50	603	0.257	0.054	0.016	0.048	25	747
13	51.00	407	0.234	0.058	0.019	0.049	17	504
12	49.40	247	0.219	0.060	0.021	0.049	10	306
11	46.90	1,479	0.198	0.063	0.023	0.049	63	1,832
10	44.10	709	0.175	0.066	0.027	0.049	30	879
9	41.60	756	0.156	0.067	0.029	0.048	32	936
8	37.50	1,201	0.126	0.070	0.034	0.048	50	1,488
7	32.50	1,228	0.095	0.071	0.038	0.046	49	1,521
6	27.50	1,255	0.068	0.072	0.041	0.045	49	1,555
5	22.50	1,282	0.046	0.071	0.042	0.043	48	1,588
4	17.50	1,309	0.028	0.067	0.040	0.041	46	1,622

3	12.50	1,336	0.014	0.060	0.035	0.037	42	1,655
2	7.50	1,363	0.005	0.045	0.025	0.029	34	1,689
1	2.50	1,390	0.001	0.019	0.010	0.013	16	1,722
RFS PD620-2	150.00	53	2.023	2.755	1.409	0.459	21	66
12' Omni	148.00	40	1.969	2.423	1.296	0.423	15	50
Alcatel-Lucent ALU 8	145.00	26	1.890	1.980	1.140	0.370	8	33
Alcatel-Lucent RRH2x	145.00	159	1.890	1.980	1.140	0.370	51	197
Alcatel-Lucent 800 M	145.00	159	1.890	1.980	1.140	0.370	51	197
Alcatel-Lucent 1900M	145.00	132	1.890	1.980	1.140	0.370	42	163
Alcatel-Lucent TD-RR	145.00	210	1.890	1.980	1.140	0.370	67	260
RFS APXVSPP18-C-A20	145.00	171	1.890	1.980	1.140	0.370	55	212
Commscope DT465B-	145.00	174	1.890	1.980	1.140	0.370	56	216
Flat Low Profile Pla	145.00	1,500	1.890	1.980	1.140	0.370	481	1,858
GPS	138.00	10	1.712	1.168	0.833	0.261	2	12
TTA	138.00	60	1.712	1.168	0.833	0.261	14	74
Amphenol Antel LPA-8	138.00	108	1.712	1.168	0.833	0.261	24	134
Amphenol Antel BXA-1	138.00	39	1.712	1.168	0.833	0.261	9	48
Round T-Arm	138.00	750	1.712	1.168	0.833	0.261	170	929
Amphenol Antel BXA-7	138.00	112	1.712	1.168	0.833	0.261	25	139
E-911 GPS	125.00	5	1.405	0.293	0.437	0.105	0	6
RFS ATM1900D-1CWA	125.00	25	1.405	0.293	0.437	0.105	2	31
RFS ATMAA1412D-1A20	125.00	39	1.405	0.293	0.437	0.105	4	48
RFS APX16DWV-16DWV-	125.00	238	1.405	0.293	0.437	0.105	22	294
Round T-Arm	125.00	750	1.405	0.293	0.437	0.105	68	929
Commscope LNX-	125.00	131	1.405	0.293	0.437	0.105	12	162
GPS	115.00	10	1.189	-0.006	0.247	0.025	0	12
RFS APXV18-206517	115.00	79	1.189	-0.006	0.247	0.025	2	98
Empty Flat Low Profi	87.00	1,500	0.680	-0.081	0.026	-0.022	-29	1,858
Spinner Bias-T	80.00	4	0.575	-0.044	0.012	-0.004	0	6
Powerwave Allgon LGP	80.00	33	0.575	-0.044	0.012	-0.004	0	41
Powerwave Allgon LGP	80.00	85	0.575	-0.044	0.012	-0.004	0	105
Raycap DC6-48-60-18-	80.00	33	0.575	-0.044	0.012	-0.004	0	41
Ericsson RRUS 11 (Ba	80.00	300	0.575	-0.044	0.012	-0.004	-1	372
Powerwave Allgon 777	80.00	210	0.575	-0.044	0.012	-0.004	-1	260
KMW AM-X-CD-16-65-00	80.00	97	0.575	-0.044	0.012	-0.004	0	120
Powerwave Allgon P65	80.00	50	0.575	-0.044	0.012	-0.004	0	62
Flat Low Profile Pla	80.00	1,500	0.575	-0.044	0.012	-0.004	-5	1,858
PCTEL GPS-TMG-HR-	52.00	1	0.243	0.056	0.018	0.048	0	1
		34,996	69.922	34.736	25.922	7.958	1,949	43,347

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
37	142.50	209	1.825	1.656	1.022	0.329	60	180
36	139.00	87	1.737	1.267	0.872	0.275	21	75
35	136.50	164	1.675	1.029	0.777	0.240	34	142
34	132.50	283	1.578	0.713	0.641	0.188	46	244
33	127.50	295	1.461	0.410	0.498	0.130	33	254
32	122.50	381	1.349	0.194	0.381	0.082	27	328
31	117.50	393	1.241	0.047	0.287	0.042	14	338
30	114.50	85	1.178	-0.015	0.239	0.022	2	73
29	112.00	479	1.128	-0.053	0.204	0.008	3	413
28	107.50	616	1.039	-0.098	0.151	-0.012	-6	531
27	102.50	636	0.944	-0.120	0.106	-0.026	-14	548
26	97.50	655	0.855	-0.120	0.071	-0.033	-18	564
25	92.50	674	0.769	-0.106	0.045	-0.031	-18	581
24	88.50	414	0.704	-0.088	0.031	-0.025	-9	356
23	86.00	280	0.665	-0.076	0.024	-0.020	-5	241

22	84.16	236	0.637	-0.066	0.019	-0.016	-3	203
21	81.66	901	0.599	-0.053	0.014	-0.009	-7	776
20	79.33	382	0.566	-0.040	0.011	-0.002	-1	329
19	76.83	658	0.531	-0.027	0.009	0.006	3	567
18	72.50	917	0.472	-0.006	0.006	0.018	14	790
17	67.50	940	0.410	0.015	0.006	0.030	25	810
16	62.50	963	0.351	0.032	0.009	0.039	33	830
15	57.50	986	0.297	0.046	0.012	0.045	39	850
14	53.50	603	0.257	0.054	0.016	0.048	25	519
13	51.00	407	0.234	0.058	0.019	0.049	17	351
12	49.40	247	0.219	0.060	0.021	0.049	10	213
11	46.90	1,479	0.198	0.063	0.023	0.049	63	1,274
10	44.10	709	0.175	0.066	0.027	0.049	30	611
9	41.60	756	0.156	0.067	0.029	0.048	32	651
8	37.50	1,201	0.126	0.070	0.034	0.048	50	1,035
7	32.50	1,228	0.095	0.071	0.038	0.046	49	1,058
6	27.50	1,255	0.068	0.072	0.041	0.045	49	1,081
5	22.50	1,282	0.046	0.071	0.042	0.043	48	1,105
4	17.50	1,309	0.028	0.067	0.040	0.041	46	1,128
3	12.50	1,336	0.014	0.060	0.035	0.037	42	1,151
2	7.50	1,363	0.005	0.045	0.025	0.029	34	1,174
1	2.50	1,390	0.001	0.019	0.010	0.013	16	1,198
RFS PD620-2	150.00	53	2.023	2.755	1.409	0.459	21	46
12' Omni	148.00	40	1.969	2.423	1.296	0.423	15	34
Alcatel-Lucent ALU 8	145.00	26	1.890	1.980	1.140	0.370	8	23
Alcatel-Lucent RRH2x	145.00	159	1.890	1.980	1.140	0.370	51	137
Alcatel-Lucent 800 M	145.00	159	1.890	1.980	1.140	0.370	51	137
Alcatel-Lucent 1900M	145.00	132	1.890	1.980	1.140	0.370	42	114
Alcatel-Lucent TD-RR	145.00	210	1.890	1.980	1.140	0.370	67	181
RFS APXVSPP18-C-A20	145.00	171	1.890	1.980	1.140	0.370	55	147
Commscope DT465B-	145.00	174	1.890	1.980	1.140	0.370	56	150
Flat Low Profile Pla	145.00	1,500	1.890	1.980	1.140	0.370	481	1,292
GPS	138.00	10	1.712	1.168	0.833	0.261	2	9
TTA	138.00	60	1.712	1.168	0.833	0.261	14	52
Amphenol Antel LPA-8	138.00	108	1.712	1.168	0.833	0.261	24	93
Amphenol Antel BXA-1	138.00	39	1.712	1.168	0.833	0.261	9	34
Round T-Arm	138.00	750	1.712	1.168	0.833	0.261	170	646
Amphenol Antel BXA-7	138.00	112	1.712	1.168	0.833	0.261	25	97
E-911 GPS	125.00	5	1.405	0.293	0.437	0.105	0	4
RFS ATM1900D-1CWA	125.00	25	1.405	0.293	0.437	0.105	2	22
RFS ATMAA1412D-1A20	125.00	39	1.405	0.293	0.437	0.105	4	34
RFS APX16DWV-16DWV-	125.00	238	1.405	0.293	0.437	0.105	22	205
Round T-Arm	125.00	750	1.405	0.293	0.437	0.105	68	646
Commscope LNX-	125.00	131	1.405	0.293	0.437	0.105	12	113
GPS	115.00	10	1.189	-0.006	0.247	0.025	0	9
RFS APXV18-206517	115.00	79	1.189	-0.006	0.247	0.025	2	68
Empty Flat Low Profi	87.00	1,500	0.680	-0.081	0.026	-0.022	-29	1,292
Spinner Bias-T	80.00	4	0.575	-0.044	0.012	-0.004	0	4
Powerwave Allgon LGP	80.00	33	0.575	-0.044	0.012	-0.004	0	28
Powerwave Allgon LGP	80.00	85	0.575	-0.044	0.012	-0.004	0	73
Raycap DC6-48-60-18-	80.00	33	0.575	-0.044	0.012	-0.004	0	28
Ericsson RRUS 11 (Ba	80.00	300	0.575	-0.044	0.012	-0.004	-1	258
Powerwave Allgon 777	80.00	210	0.575	-0.044	0.012	-0.004	-1	181
KMW AM-X-CD-16-65-00	80.00	97	0.575	-0.044	0.012	-0.004	0	84
Powerwave Allgon P65	80.00	50	0.575	-0.044	0.012	-0.004	0	43
Flat Low Profile Pla	80.00	1,500	0.575	-0.044	0.012	-0.004	-5	1,292
PCTEL GPS-TMG-HR-	52.00	1	0.243	0.056	0.018	0.048	0	1
		34,996	69.922	34.736	25.922	7.958	1,949	30,145

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-41.51	-1.90	0.00	-216.55	0.00	216.55	4,897.86	2,448.93	9,914.38	4,964.56	0.00	0.00	0.052
5.00	-39.82	-1.88	0.00	-207.04	0.00	207.04	4,817.00	2,408.50	9,522.86	4,768.51	0.01	-0.01	0.052
10.00	-38.17	-1.85	0.00	-197.65	0.00	197.65	4,734.60	2,367.30	9,136.02	4,574.80	0.03	-0.03	0.051
15.00	-36.54	-1.81	0.00	-188.42	0.00	188.42	4,650.66	2,325.33	8,754.06	4,383.53	0.07	-0.04	0.051
20.00	-34.95	-1.77	0.00	-179.39	0.00	179.39	4,565.16	2,282.58	8,377.20	4,194.83	0.12	-0.06	0.050
25.00	-33.40	-1.73	0.00	-170.55	0.00	170.55	4,478.12	2,239.06	8,005.67	4,008.78	0.19	-0.08	0.050
30.00	-31.88	-1.68	0.00	-161.92	0.00	161.92	4,380.25	2,190.13	7,623.52	3,817.43	0.28	-0.09	0.050
35.00	-30.39	-1.64	0.00	-153.50	0.00	153.50	4,262.42	2,131.21	7,216.83	3,613.78	0.39	-0.11	0.050
40.00	-29.45	-1.61	0.00	-145.30	0.00	145.30	4,144.58	2,072.29	6,821.28	3,415.71	0.51	-0.13	0.050
43.21	-28.57	-1.59	0.00	-140.12	0.00	140.12	4,069.03	2,034.51	6,573.54	3,291.66	0.60	-0.14	0.050
45.00	-26.74	-1.52	0.00	-137.27	0.00	137.27	4,026.74	2,013.37	6,436.88	3,223.22	0.65	-0.14	0.049
48.79	-26.44	-1.52	0.00	-131.49	0.00	131.49	3,394.32	1,697.16	5,426.90	2,717.49	0.77	-0.16	0.056
50.00	-25.93	-1.50	0.00	-129.66	0.00	129.66	3,376.65	1,688.32	5,360.14	2,684.05	0.81	-0.16	0.056
52.00	-25.18	-1.48	0.00	-126.66	0.00	126.66	3,347.13	1,673.57	5,249.96	2,628.88	0.88	-0.17	0.056
55.00	-23.96	-1.44	0.00	-122.22	0.00	122.22	3,302.40	1,651.20	5,086.09	2,546.82	0.99	-0.18	0.055
60.00	-22.77	-1.42	0.00	-115.00	0.00	115.00	3,220.32	1,610.16	4,807.35	2,407.25	1.19	-0.20	0.055
65.00	-21.60	-1.40	0.00	-107.92	0.00	107.92	3,119.32	1,559.66	4,509.03	2,257.87	1.42	-0.23	0.055
70.00	-20.47	-1.38	0.00	-100.95	0.00	100.95	3,018.31	1,509.16	4,220.27	2,113.27	1.67	-0.25	0.055
75.00	-19.65	-1.38	0.00	-94.03	0.00	94.03	2,917.31	1,458.66	3,941.06	1,973.46	1.94	-0.27	0.054
78.67	-19.18	-1.39	0.00	-88.95	0.00	88.95	2,843.19	1,421.59	3,742.24	1,873.90	2.16	-0.29	0.054
80.00	-15.20	-1.38	0.00	-87.10	0.00	87.10	2,816.31	1,408.15	3,671.40	1,838.43	2.24	-0.30	0.053
83.33	-14.90	-1.39	0.00	-82.50	0.00	82.50	2,319.25	1,159.63	3,022.32	1,513.41	2.45	-0.31	0.061
85.00	-14.56	-1.39	0.00	-80.18	0.00	80.18	2,298.48	1,149.24	2,958.90	1,481.65	2.56	-0.32	0.060
87.00	-12.19	-1.42	0.00	-77.39	0.00	77.39	2,273.40	1,136.70	2,883.60	1,443.94	2.70	-0.33	0.059
90.00	-11.35	-1.44	0.00	-73.12	0.00	73.12	2,229.24	1,114.62	2,764.32	1,384.22	2.91	-0.35	0.058
95.00	-10.54	-1.46	0.00	-65.92	0.00	65.92	2,145.07	1,072.54	2,558.49	1,281.15	3.29	-0.38	0.056
100.00	-9.75	-1.47	0.00	-58.63	0.00	58.63	2,060.90	1,030.45	2,360.62	1,182.06	3.71	-0.41	0.054
105.00	-8.99	-1.48	0.00	-51.27	0.00	51.27	1,976.73	988.37	2,170.71	1,086.97	4.15	-0.44	0.052
110.00	-8.39	-1.47	0.00	-43.89	0.00	43.89	1,892.56	946.28	1,988.77	995.86	4.62	-0.46	0.049
114.00	-8.29	-1.47	0.00	-38.00	0.00	38.00	1,825.27	912.63	1,849.04	925.89	5.02	-0.49	0.046
114.00	-8.29	-1.47	0.00	-38.00	0.00	38.00	1,004.24	502.12	1,027.61	514.57	5.02	-0.49	0.082
115.00	-7.69	-1.45	0.00	-36.52	0.00	36.52	998.34	499.17	1,012.11	506.81	5.12	-0.49	0.080
120.00	-7.22	-1.43	0.00	-29.25	0.00	29.25	968.03	484.02	935.59	468.49	5.66	-0.53	0.070
125.00	-5.38	-1.27	0.00	-22.11	0.00	22.11	936.17	468.09	860.51	430.90	6.24	-0.57	0.057
130.00	-5.03	-1.22	0.00	-15.75	0.00	15.75	902.76	451.38	787.11	394.14	6.85	-0.60	0.046
135.00	-4.83	-1.19	0.00	-9.63	0.00	9.63	867.81	433.91	715.59	358.32	7.50	-0.63	0.032
138.00	-3.38	-0.91	0.00	-6.06	0.00	6.06	846.10	423.05	673.67	337.34	7.89	-0.64	0.022
140.00	-3.13	-0.85	0.00	-4.24	0.00	4.24	831.32	415.66	646.17	323.57	8.16	-0.64	0.017
145.00	0.00	-0.81	0.00	0.00	0.00	0.00	787.55	393.77	574.90	287.88	8.84	-0.65	0.000

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-28.87	-1.90	0.00	-213.73	0.00	213.73	4,897.86	2,448.93	9,914.38	4,964.56	0.00	0.00	0.049
5.00	-27.69	-1.87	0.00	-204.23	0.00	204.23	4,817.00	2,408.50	9,522.86	4,768.51	0.01	-0.01	0.049
10.00	-26.54	-1.84	0.00	-194.86	0.00	194.86	4,734.60	2,367.30	9,136.02	4,574.80	0.03	-0.03	0.048
15.00	-25.41	-1.80	0.00	-185.67	0.00	185.67	4,650.66	2,325.33	8,754.06	4,383.53	0.07	-0.04	0.048
20.00	-24.31	-1.75	0.00	-176.69	0.00	176.69	4,565.16	2,282.58	8,377.20	4,194.83	0.12	-0.06	0.047
25.00	-23.23	-1.71	0.00	-167.91	0.00	167.91	4,478.12	2,239.06	8,005.67	4,008.78	0.19	-0.07	0.047
30.00	-22.17	-1.67	0.00	-159.36	0.00	159.36	4,380.25	2,190.13	7,623.52	3,817.43	0.28	-0.09	0.047
35.00	-21.13	-1.62	0.00	-151.03	0.00	151.03	4,262.42	2,131.21	7,216.83	3,613.78	0.38	-0.11	0.047
40.00	-20.48	-1.59	0.00	-142.92	0.00	142.92	4,144.58	2,072.29	6,821.28	3,415.71	0.50	-0.12	0.047
43.21	-19.87	-1.56	0.00	-137.81	0.00	137.81	4,069.03	2,034.51	6,573.54	3,291.66	0.59	-0.13	0.047
45.00	-18.60	-1.50	0.00	-135.01	0.00	135.01	4,026.74	2,013.37	6,436.88	3,223.22	0.64	-0.14	0.047
48.79	-18.38	-1.49	0.00	-129.31	0.00	129.31	3,394.32	1,697.16	5,426.90	2,717.49	0.76	-0.15	0.053
50.00	-18.03	-1.48	0.00	-127.51	0.00	127.51	3,376.65	1,688.32	5,360.14	2,684.05	0.80	-0.16	0.053
52.00	-17.51	-1.45	0.00	-124.55	0.00	124.55	3,347.13	1,673.57	5,249.96	2,628.88	0.87	-0.17	0.053
55.00	-16.66	-1.42	0.00	-120.19	0.00	120.19	3,302.40	1,651.20	5,086.09	2,546.82	0.98	-0.18	0.052
60.00	-15.83	-1.39	0.00	-113.09	0.00	113.09	3,220.32	1,610.16	4,807.35	2,407.25	1.18	-0.20	0.052
65.00	-15.02	-1.37	0.00	-106.15	0.00	106.15	3,119.32	1,559.66	4,509.03	2,257.87	1.40	-0.22	0.052
70.00	-14.23	-1.35	0.00	-99.32	0.00	99.32	3,018.31	1,509.16	4,220.27	2,113.27	1.64	-0.24	0.052
75.00	-13.66	-1.35	0.00	-92.54	0.00	92.54	2,917.31	1,458.66	3,941.06	1,973.46	1.91	-0.27	0.052
78.67	-13.33	-1.36	0.00	-87.57	0.00	87.57	2,843.19	1,421.59	3,742.24	1,873.90	2.12	-0.28	0.051
80.00	-10.57	-1.36	0.00	-85.77	0.00	85.77	2,816.31	1,408.15	3,671.40	1,838.43	2.20	-0.29	0.050
83.33	-10.36	-1.36	0.00	-81.25	0.00	81.25	2,319.25	1,159.63	3,022.32	1,513.41	2.41	-0.31	0.058
85.00	-10.12	-1.37	0.00	-78.97	0.00	78.97	2,298.48	1,149.24	2,958.90	1,481.65	2.52	-0.32	0.058
87.00	-8.47	-1.40	0.00	-76.24	0.00	76.24	2,273.40	1,136.70	2,883.60	1,443.94	2.66	-0.33	0.057
90.00	-7.89	-1.42	0.00	-72.04	0.00	72.04	2,229.24	1,114.62	2,764.32	1,384.22	2.87	-0.34	0.056
95.00	-7.33	-1.44	0.00	-64.96	0.00	64.96	2,145.07	1,072.54	2,558.49	1,281.15	3.24	-0.37	0.054
100.00	-6.78	-1.45	0.00	-57.78	0.00	57.78	2,060.90	1,030.45	2,360.62	1,182.06	3.65	-0.40	0.052
105.00	-6.25	-1.46	0.00	-50.53	0.00	50.53	1,976.73	988.37	2,170.71	1,086.97	4.08	-0.43	0.050
110.00	-5.83	-1.45	0.00	-43.25	0.00	43.25	1,892.56	946.28	1,988.77	995.86	4.55	-0.46	0.047
114.00	-5.76	-1.45	0.00	-37.45	0.00	37.45	1,825.27	912.63	1,849.04	925.89	4.94	-0.48	0.044
114.00	-5.76	-1.45	0.00	-37.45	0.00	37.45	1,004.24	502.12	1,027.61	514.57	4.94	-0.48	0.079
115.00	-5.34	-1.43	0.00	-36.00	0.00	36.00	998.34	499.17	1,012.11	506.81	5.04	-0.48	0.076
120.00	-5.02	-1.41	0.00	-28.84	0.00	28.84	968.03	484.02	935.59	468.49	5.57	-0.52	0.067
125.00	-3.74	-1.25	0.00	-21.81	0.00	21.81	936.17	468.09	860.51	430.90	6.14	-0.56	0.055
130.00	-3.49	-1.21	0.00	-15.53	0.00	15.53	902.76	451.38	787.11	394.14	6.75	-0.59	0.043
135.00	-3.35	-1.17	0.00	-9.50	0.00	9.50	867.81	433.91	715.59	358.32	7.38	-0.62	0.030
138.00	-2.35	-0.90	0.00	-5.98	0.00	5.98	846.10	423.05	673.67	337.34	7.77	-0.63	0.020
140.00	-2.17	-0.84	0.00	-4.18	0.00	4.18	831.32	415.66	646.17	323.57	8.04	-0.63	0.016
145.00	0.00	-0.81	0.00	0.00	0.00	0.00	787.55	393.77	574.90	287.88	8.71	-0.64	0.000

Analysis Summary

	Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	21.15	0.00	41.97	0.00	0.00	2229.33	114.00	0.53
0.9D + 1.6W	21.14	0.00	31.47	0.00	0.00	2206.86	114.00	0.52
1.2D + 1.0Di + 1.0Wi	4.46	0.00	72.52	0.00	0.00	479.56	114.00	0.13
(1.2 + 0.2Sds) * DL + E ELFM	1.50	0.00	41.51	0.00	0.00	166.53	114.00	0.04
(1.2 + 0.2Sds) * DL + E EMAM	1.90	0.00	41.51	0.00	0.00	216.55	114.00	0.08
(0.9 - 0.2Sds) * DL + E ELFM	1.50	0.00	28.87	0.00	0.00	164.58	114.00	0.04
(0.9 - 0.2Sds) * DL + E EMAM	1.90	0.00	28.87	0.00	0.00	213.73	114.00	0.08
1.0D + 1.0W	5.50	0.00	34.99	0.00	0.00	576.45	114.00	0.14

Base/Flange Plate	Plate Type	***Baseplate***	
	Pole Diameter	49.75	in
	Pole Thickness	0.4375	in
	Plate Diameter	75	in
	Plate Thickness	2.75	in
	Plate Fy	60	ksi
	Weld Length	0.375	in
	ϕ_s Resistance	797.83	k-in
	Applied	626.90	k-in
Stiffeners	#	***0***	

Bolts	#	***20***	
	Bolt Circle	69	in
	(R)adial / (S)quare	R	
●	Diameter	2.25	in
	Hole Diameter	2.75	in
	Type	A615-75	
	Fy	75	ksi
	Fu	100	ksi
	ϕ_s Resistance	259.82	k
	Applied	79.61	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***0***	

Code Rev. ***G***

Moment 2229.3 k-ft

Axial 42.0 k

Date	10/24/2017
Engineer	Vivian.Chung
Site #	411182
Carrier	SPRINT NEXTEL

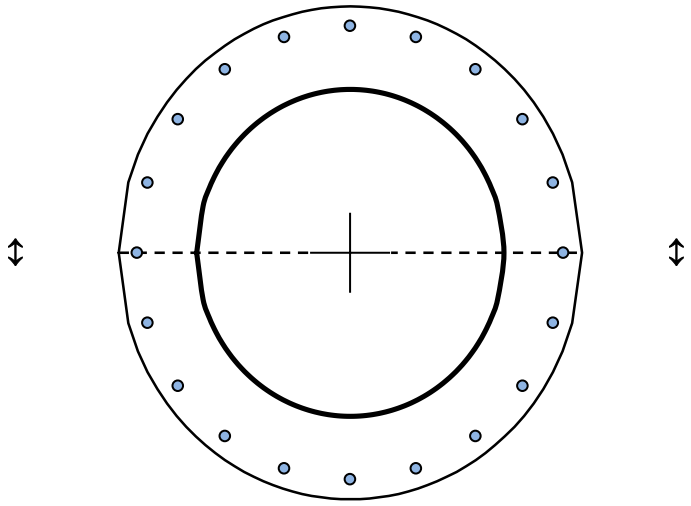


Plate Stress Ratio:

0.79 (Pass)

Bolt Stress Ratio:

0.31 (Pass)

Base/Flange Plate	Plate Type	***Flange***	***@ 114.0 ft***
	Pole Diameter	25.125	in
	Pole Thickness	0.1875	in
	Plate Diameter	32	in
	Plate Thickness	1.5	in
	Plate Fy	65	ksi
	Weld Length	0.1875	in
	ϕ_s Resistance	108.22	k-in
	Applied	20.87	k-in
Stiffeners	#	***0***	

Bolts	#	***24***	
	Bolt Circle	29	in
	(R)adial / (S)quare	R	
●	Diameter	1	in
	Hole Diameter	1.1875	in
	Type	A325	
	Fy	92	ksi
	Fu	120	ksi
	ϕ_s Resistance	54.52	k
	Applied	18.05	k
Reinforcement ●	#	***0***	
Extra Bolts O	#	***0***	

Code Rev. ***G***

Moment 266.3 k-ft
Axial 7.5 k

Date	10/24/2017
Engineer	Vivian.Chung
Site #	411182
Carrier	SPRINT NEXTEL

Required Flange Thickness:
0.66 in OK

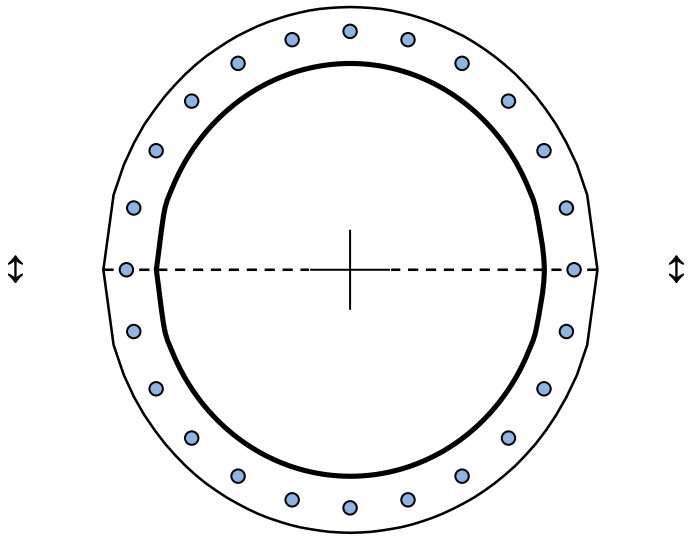


Plate Stress Ratio:
0.19 (Pass)

Bolt Stress Ratio:
0.33 (Pass)

Sprint

PROJECT: DO MACRO UPGRADE

SITE NAME: NEW HARTFORD - (AT&T)

SITE CASCADE: CT33XC022

SITE ADDRESS: 20 ANTOLINI ROAD
NEW HARFORD, CT 06057

SITE TYPE: MONOPOLE TOWER

MARKET: CONNECTICUT

SITE INFORMATION

TOWER OWNER:
AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBURN, MA 01801

LATITUDE (NAD83):
41° 49' 40.97"
N 41.82804722°

LONGITUDE (NAD83):
73° 0' 56.4" W
-73.01566666°

COUNTY:
LITCHFIELD COUNTY

ZONING JURISDICTION:
CONNECTICUT SITING COUNCIL

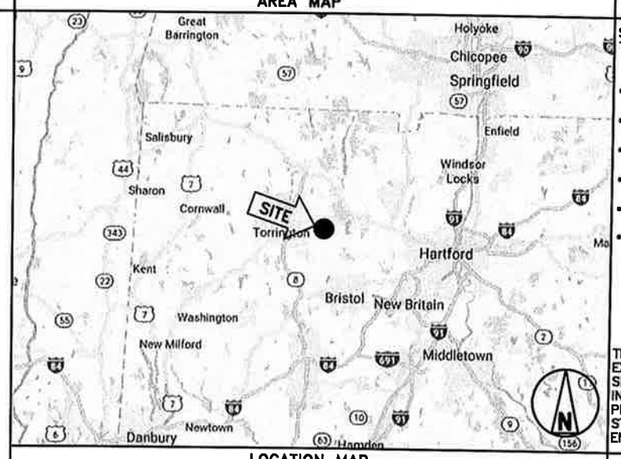
ZONING DISTRICT:
TBD

POWER COMPANY:
TBD

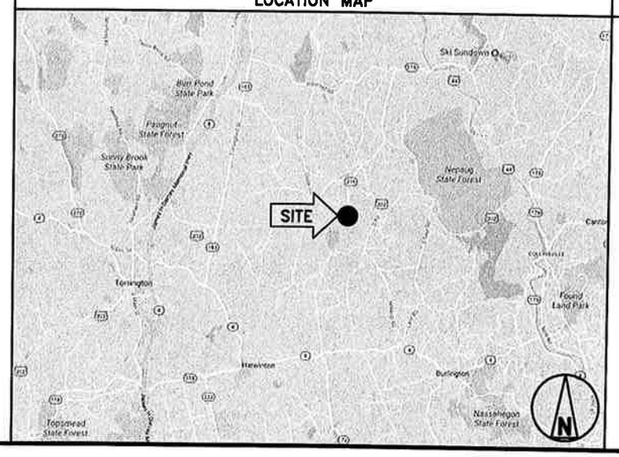
AAV PROVIDER:
TBD

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
TERRI BURKHOLDER
(315)719-2928
TBURKHOLDER@AIROSMITHDEVELOPMENT.COM

AREA MAP



LOCATION MAP



PROJECT DESCRIPTION

SPRINT PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY.

- INSTALL (3) PANEL ANTENNAS
- INSTALL (3) 800 MHZ RRH'S BEHIND ANTENNAS
- INSTALL (3) 2.5 GHZ RRH'S BEHIND ANTENNAS
- INSTALL (30) JUMPER CABLES
- INSTALL (1) HYBRID CABLE
- INSTALL 2.5 EQUIPMENT INSIDE EXISTING N.V. MMBS 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.

1. INTERNATIONAL BUILDING CODE (2015 IBC)
2. TIA-222-G OR LATEST EDITION
3. NFPA 780 – LIGHTNING PROTECTION CODE
4. 2011 NATIONAL ELECTRIC CODE OR LATEST EDITION
5. ANY OTHER NATIONAL OR LOCAL APPLICABLE CODES, MOST RECENT EDITIONS
6. CT BUILDING CODE
7. LOCAL BUILDING CODE
8. CITY/COUNTY ORDINANCES

811 Know what's below. Call before you dig. www.call811.com

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	0
A-3	ANTENNA LAYOUT & MOUNTING DETAILS	0
A-4	EQUIPMENT & MOUNTING DETAILS	0
A-5	CIVIL DETAILS	0
A-6	PLUMBING DIAGRAM	0
E-1	ELECTRICAL & GROUNDING PLAN	0
E-2	ELECTRICAL & GROUNDING DETAILS	0

PLANS PREPARED FOR: Sprint

PLANS PREPARED BY:
INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
JAN 23 2018
No. 24705
LICENSED PROFESSIONAL ENGINEER

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	1/18/18	SKB	0

SITE NAME: NEW HARTFORD - (AT&T)

SITE NUMBER: CT33XC022

SITE ADDRESS: 20 ANTOLINI ROAD
NEW HARTFORD, CT 06057

SHEET DESCRIPTION: TITLE SHEET & PROJECT DATA

SHEET NUMBER: T-1

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:

Sprint

PLANS PREPARED BY:

INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:

AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	1/18/18	SKB	0

SITE NAME:

NEW HARTFORD - (AT&T)

SITE NUMBER:

CT33XC022

SITE ADDRESS:

20 ANTOLINI ROAD
NEW HARTFORD, CT 06057

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, AASJTO, AND OTHER METHODS IS NEEDED.
4. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASJTO, 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 - ANTENNALIGN ALIGNMENT TOOL (AAT)

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JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	1/18/18	SKB	0

SITE NAME:
NEW HARTFORD - (AT&T)

SITE NUMBER:
CT33XC022

SITE ADDRESS:
20 ANTOLINI ROAD
NEW HARTFORD, CT 06057

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. 1SHELTER 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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PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	1/18/18	SKB	0

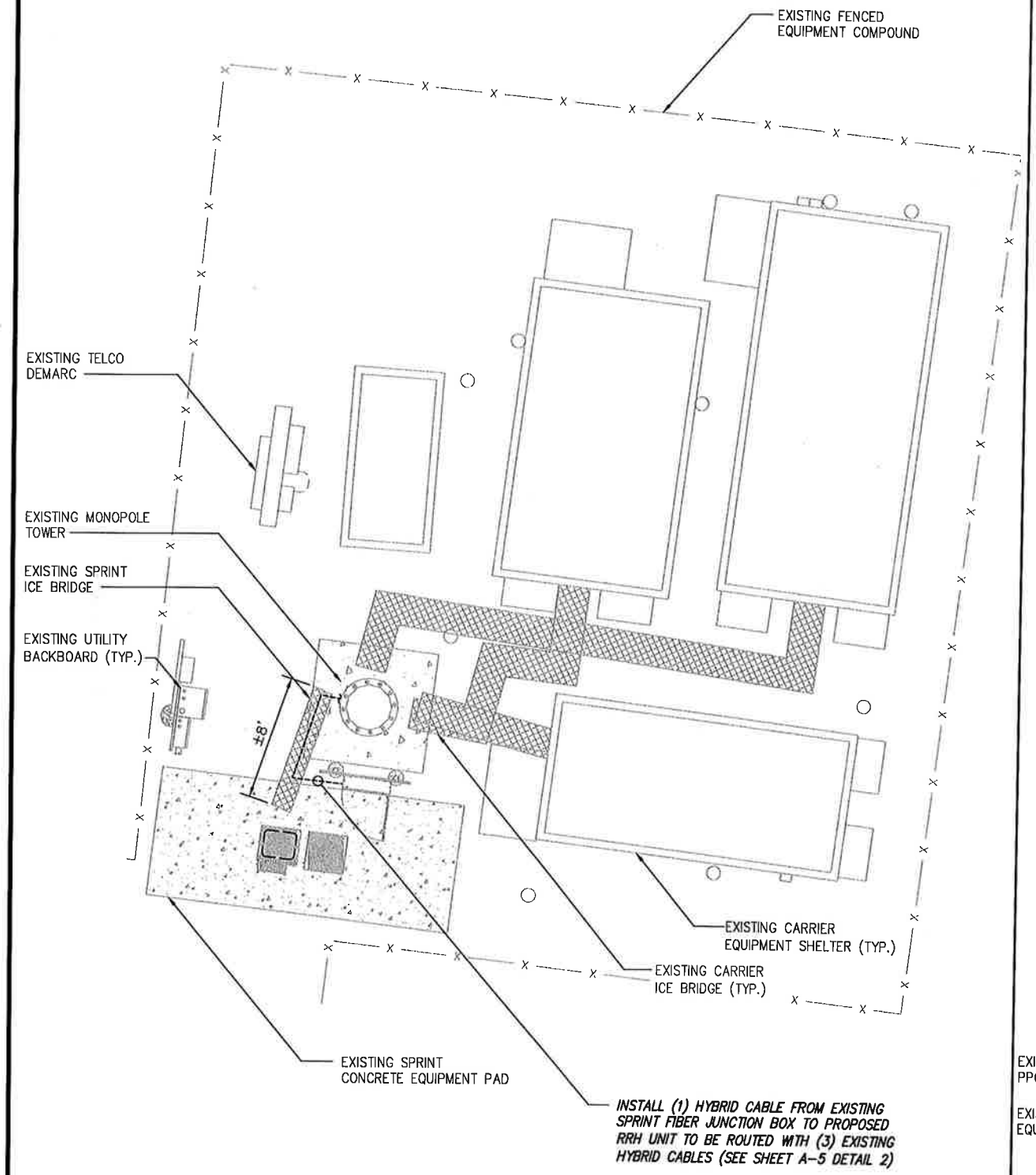
SITE NAME:
NEW HARTFORD - (AT&T)

SITE NUMBER:
CT33XC022

SITE ADDRESS:
20 ANTOLINI ROAD
NEW HARTFORD, CT 06057

SHEET DESCRIPTION:
SPRINT SPECIFICATIONS

SHEET NUMBER:
SP-3

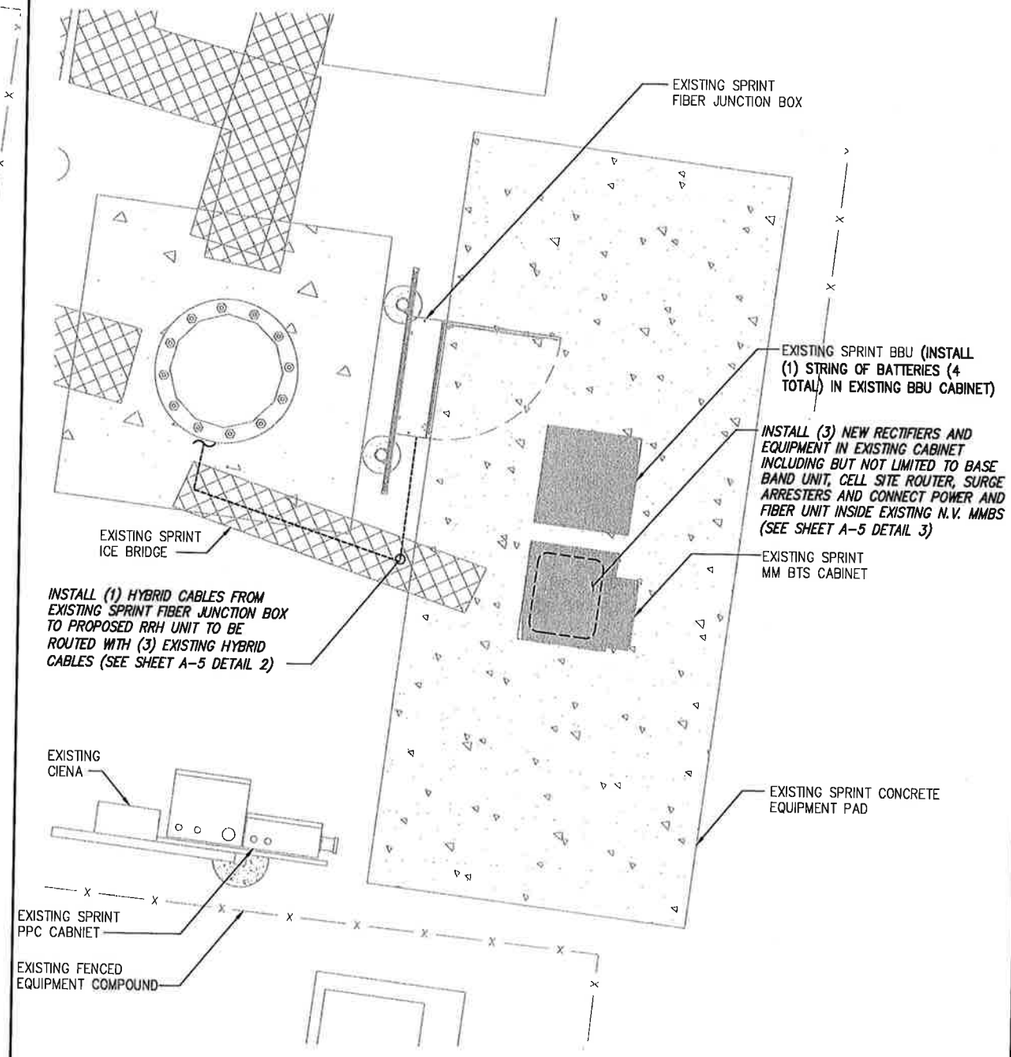


INFORMATION CONTAINED WITHIN DRAWINGS ARE BASED ON PROVIDED INFORMATION AND ARE NOT THE RESULT OF A FIELD SURVEY.

N

GRAPHIC SCALE:
10' 5' 0 5' 10'
SCALE (11x17): 1" = 10'-0"
SCALE (22x34): 1" = 5'-0"

OVERALL SITE PLAN | SCALE: AS NOTED | 1



N

GRAPHIC SCALE:
4' 2' 0 2' 4'
SCALE (11x17): 1" = 4'-0"
SCALE (22x34): 1" = 2'-0"

SPRINT EQUIPMENT PLAN | SCALE: AS NOTED | 2

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JOB NUMBER 526-104

PROJECT MANAGER:
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32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (516) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
JAN 16 2018

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	1/16/18	SKB	0

SITE NAME:
NEW HARTFORD - (AT&T)

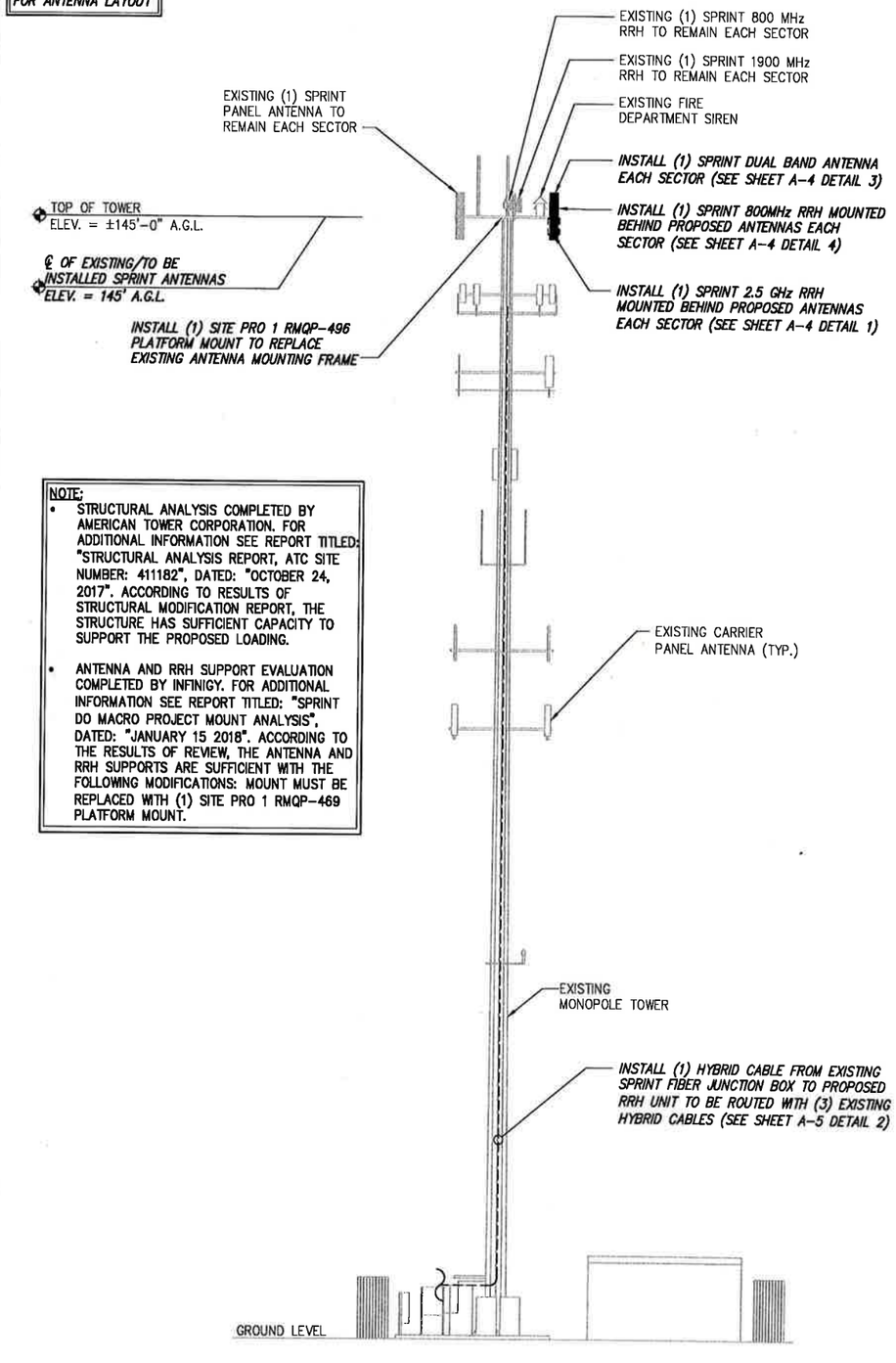
SITE NUMBER:
CT33XC022

SITE ADDRESS:
20 ANTOLINI ROAD
NEW HARTFORD, CT 06057

SHEET DESCRIPTION:
SITE PLAN

SHEET NUMBER:
A-1

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



NOTE:

- STRUCTURAL ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "STRUCTURAL ANALYSIS REPORT, ATC SITE NUMBER: 411182", DATED: "OCTOBER 24, 2017". ACCORDING TO RESULTS OF STRUCTURAL MODIFICATION REPORT, THE STRUCTURE HAS SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED LOADING.
- ANTENNA AND RRH SUPPORT EVALUATION COMPLETED BY INFINIGY. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "SPRINT DO MACRO PROJECT MOUNT ANALYSIS", DATED: "JANUARY 15 2018". ACCORDING TO THE RESULTS OF REVIEW, THE ANTENNA AND RRH SUPPORTS ARE SUFFICIENT WITH THE FOLLOWING MODIFICATIONS: MOUNT MUST BE REPLACED WITH (1) SITE PRO 1 RMQP-469 PLATFORM MOUNT.

TOWER ELEVATION | NO SCALE | 1

SITE LOADING CHART

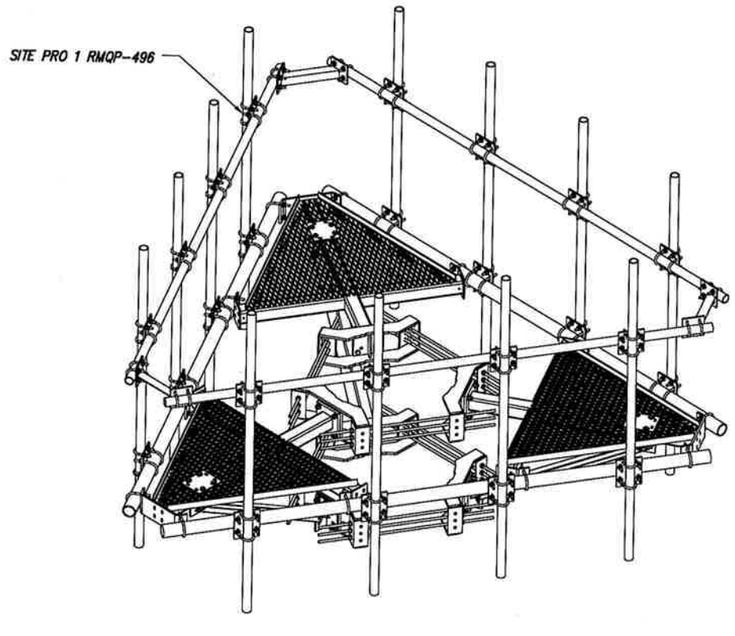
SECTOR	EXISTING/ PROPOSED	ANTENNA MODEL #	VENDOR	AZIMUTH	QTY.	REMAIN/ REMOVED	RRH (QTY/MODEL)	CABLE	CABLE LENGTH	RAD CENTER
ALPHA	PROPOSED	DT465B-2XR	COMMSCOPE	0°	1	–	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	SEE SHEET A-5 DETAIL 1	±175'*	±145' AGL
	EXISTING	APXVSPP18-C-A20	RFS	0°	1	REMAIN	(2) 800 MHz RRH (1) 1900 MHz RRH	EXISTING HYBRID CABLE		
BETA	PROPOSED	DT465B-2XR	COMMSCOPE	110°	1	–	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	SEE SHEET A-5 DETAIL 1		±145' AGL
	EXISTING	APXVSPP18-C-A20	RFS	110°	1	REMAIN	(2) 800 MHz RRH (1) 1900 MHz RRH	EXISTING HYBRID CABLE		
GAMMA	EXISTING	APXVSPP18-C-A20	RFS	290°	1	REMAIN	(2) 800 MHz RRH (1) 1900 MHz RRH	EXISTING HYBRID CABLE		±145' AGL
	PROPOSED	DT465B-2XR	COMMSCOPE	290°	1	–	(1) TD-RRH8X20-25 W/ SOLAR SHIELD	SEE SHEET A-5 DETAIL 1		

PROJECT SCOPE:

INSTALL: (3) PANEL ANTENNAS AND (6) RRH'S

* PROPOSED CABLE LENGTH WAS DETERMINED USING THE SUM OF THE RAD CENTER OF ANTENNAS, AND DISTANCE FROM EXISTING EQUIPMENT AREA TO TOWER BASE WITH AN ADDITIONAL 20' BUFFER. LENGTH TO BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

SITE LOADING CHART | NO SCALE | 2



PLATFORM MOUNT DETAIL | NO SCALE | 3

PLANS PREPARED FOR:
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Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#: (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS, JR.
No. 24705
LICENSED PROFESSIONAL ENGINEER

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	1/18/18	SKB	0

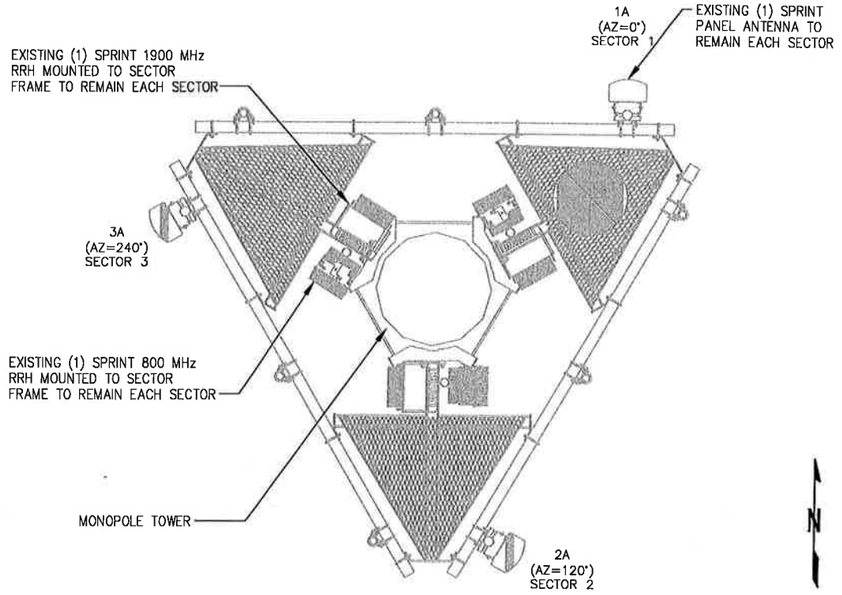
SITE NAME:
NEW HARTFORD - (AT&T)

SITE NUMBER:
CT33XC022

SITE ADDRESS:
20 ANTOLINI ROAD
NEW HARTFORD, CT 06057

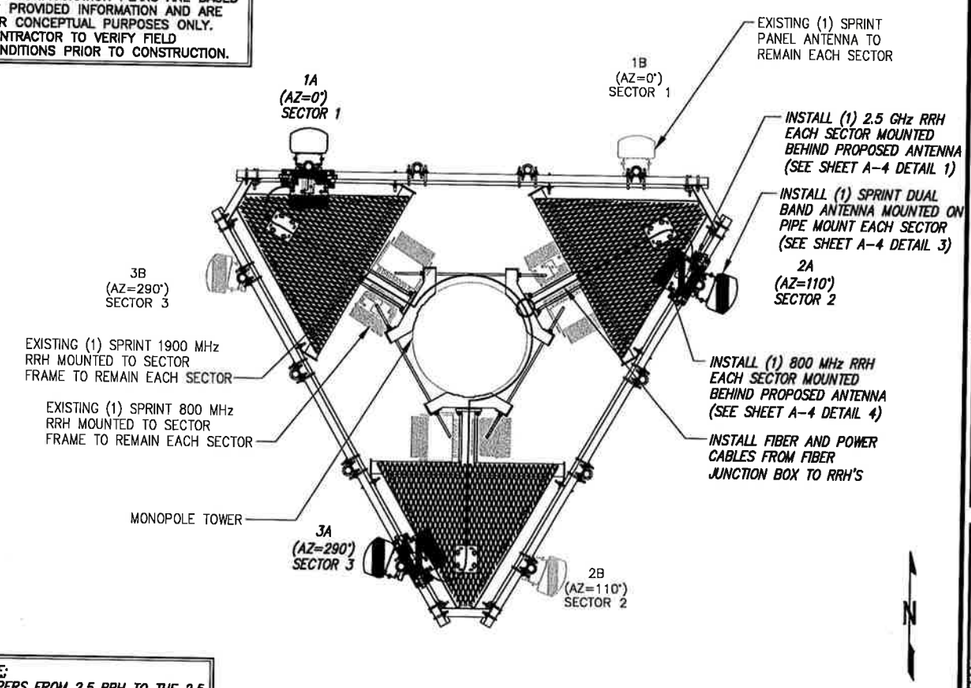
SHEET DESCRIPTION:
TOWER ELEVATION

SHEET NUMBER:
A-2



EXISTING ANTENNA LAYOUT | NO SCALE | 1

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

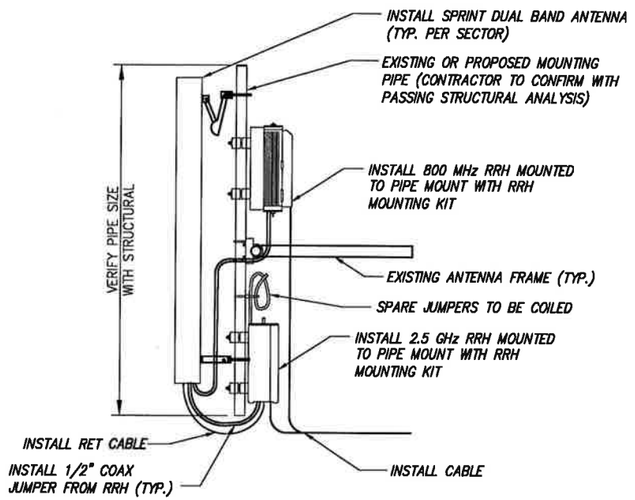


NOTE:
JUMPERS FROM 2.5 RRH TO THE 2.5 ANTENNA CANNOT EXCEED 15 FEET

FINAL ANTENNA & RRH LAYOUT | NO SCALE | 2

NOTE:
CONTRACTOR TO POSITION RRH ON MOUNT BEHIND ANTENNA SUCH THAT THE RRH 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 RRH MOUNTING DETAILS



NOTES:

1. CUT DC CONDUCTORS TO LENGTH.
2. COIL FIBER CABLE AND SECURE AT SIDE OF RRH.
3. DO NO EXCEED BEND RADIUS.

TYPICAL ANTENNA & RRH MOUNTING DETAILS | NO SCALE | 3

DETAIL NOT USED | NO SCALE | 4

PLANS PREPARED FOR:
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www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
CHRISTOPHER S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
1/26/18

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	1/18/18	SKB	0

SITE NAME:
NEW HARTFORD - (AT&T)

SITE NUMBER:
CT33XC022

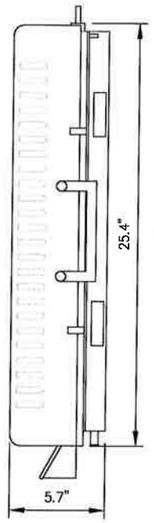
SITE ADDRESS:
20 ANTOLINI ROAD
NEW HARTFORD, CT 06057

SHEET DESCRIPTION:
ANTENNA LAYOUT & MOUNTING DETAILS

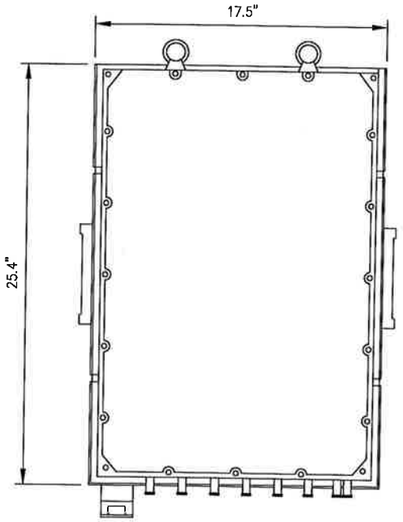
SHEET NUMBER:
A-3

RRH: ALCATEL LUCENT TD-RRH8X20

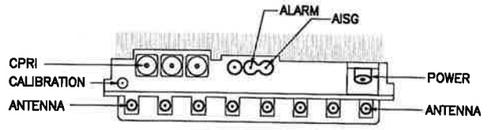
COLOR: LIGHT GREY
WEIGHT: 70 LBS.



SIDE VIEW



FRONT VIEW



PLAN VIEW

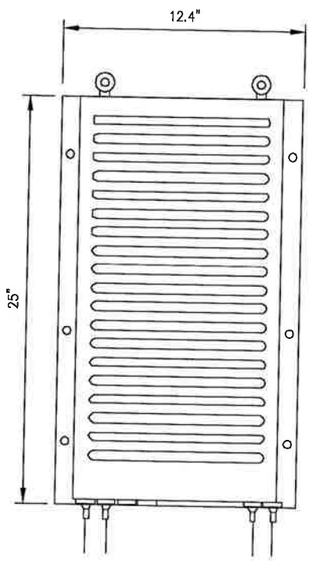
NOTES

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

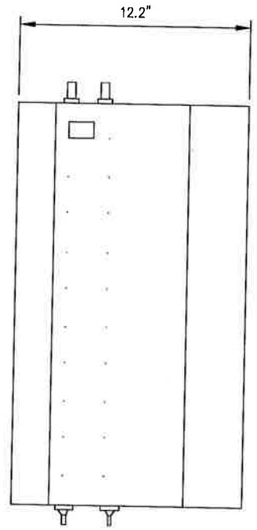
2500 MHZ RRH | NO SCALE | 1

RRH: ALCATEL LUCENT 1900 MHz

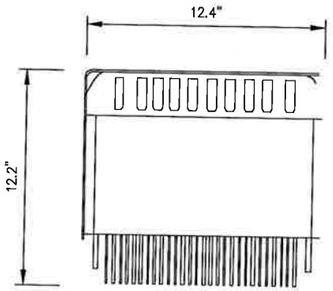
COLOR: LIGHT GREY
WEIGHT: 70 LBS.
(INCLUDING OPTIONAL SOLAR SHIELD)



FRONT VIEW



SIDE VIEW

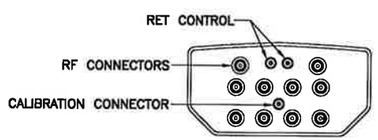


TOP VIEW

EXISTING 1900 MHZ RRH | NO SCALE | 2

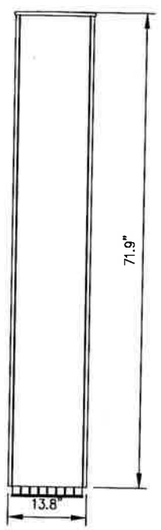
ANTENNA COMMSCOPE DT465B-2XR

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



PLAN VIEW

SIDE VIEW



FRONT VIEW

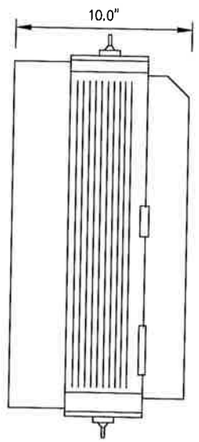
DUAL BAND ANTENNA | NO SCALE | 3

RRH: ALCATEL LUCENT RRH 800 MHz 2x50W

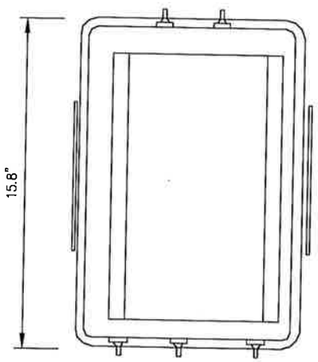
COLOR: LIGHT GREY
WEIGHT: 53 LBS.

NOTES

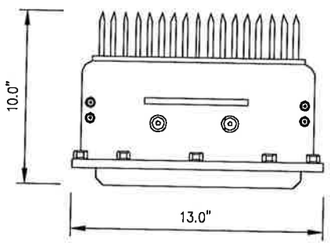
COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRH'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRH PACKAGES IN THE RAIN.



SIDE VIEW



FRONT VIEW



PLAN VIEW

800 MHz RRH | NO SCALE | 4

PLANS PREPARED FOR:
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JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#: (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
NO. 24708
LICENSED
PROFESSIONAL ENGINEER
1/26/2018

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR PERMIT	1/18/18	SKB	0

SITE NAME:
NEW HARTFORD - (AT&T)

SITE NUMBER:
CT33XC022

SITE ADDRESS:
20 ANTOLINI ROAD
NEW HARTFORD, CT 06057

SHEET DESCRIPTION:
EQUIPMENT & MOUNTING DETAILS

SHEET NUMBER:
A-4

RFS HYBRIFLEX RISER CABLE SCHEDULE

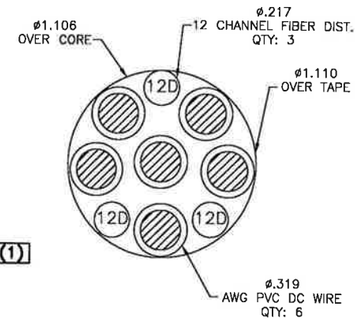
Fiber Only (Existing DC Power)	**Hybrid cable** MN: HB058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft
	MN: HB058-M12-075F	75 ft
	MN: HB058-M12-100F	100 ft
	MN: HB058-M12-125F	125 ft
	MN: HB058-M12-150F	150 ft
	MN: HB058-M12-175F	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 (1)
	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 1/4 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 1/4 cable, 325 ft	325 ft
	MN: HB114-21U3M12-350F	350 ft
	MN: HB114-21U3M12-375F	375 ft

RFS HYBRIFLEX JUMPER CABLE SCHEDULE

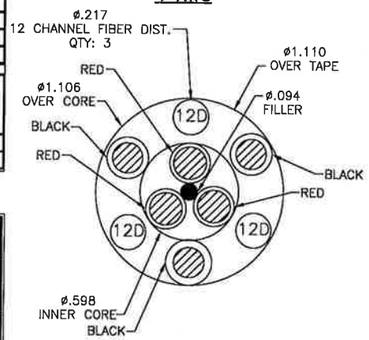
Fiber Only	**Hybrid Jumper cable** MN: HBF012-M3-5F1 5 ft, 3x multi-mode fiber pairs, Outdoor & LC connectors, 1/2 cable	5 ft
	MN: HBF012-M3-10F1	10 ft
	MN: HBF012-M3-15F1	15 ft
	MN: HBF012-M3-20F1	20 ft
	MN: HBF012-M3-25F1	25 ft
	MN: HBF012-M3-30F1	30 ft
8 AWG Power	**Hybrid Jumper cable** MN: HBF058-08U1M3-5F1 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

* PROPOSED CABLE LENGTH WAS DETERMINED USING THE SUM OF THE RAD CENTER OF ANTENNAS, AND DISTANCE FROM EXISTING EQUIPMENT AREA TO TOWER BASE WITH AN ADDITIONAL 20' BUFFER. LENGTH TO BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

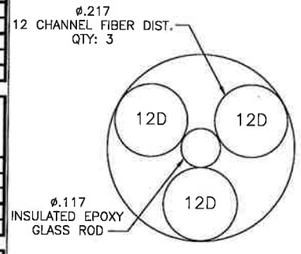
NOTE:
SPRINT CM TO CONFIRM HYBRID OR FIBER RISER CABLE AND HYBRID OR FIBER JUMPER CABLE MODEL NUMBERS IF HYBRID CABLES ARE REQUIRED BEFORE PREPARING BOM.



4 AWG



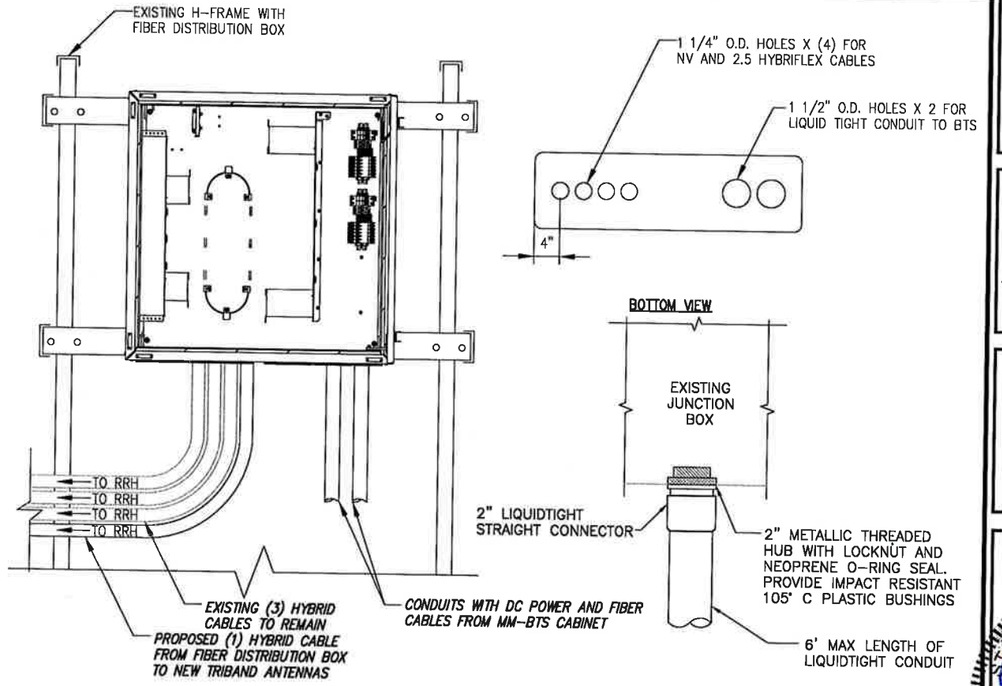
8 & 6 AWG



FIBER ONLY

800/1900/2500 CABLE CROSS SECTION DATA

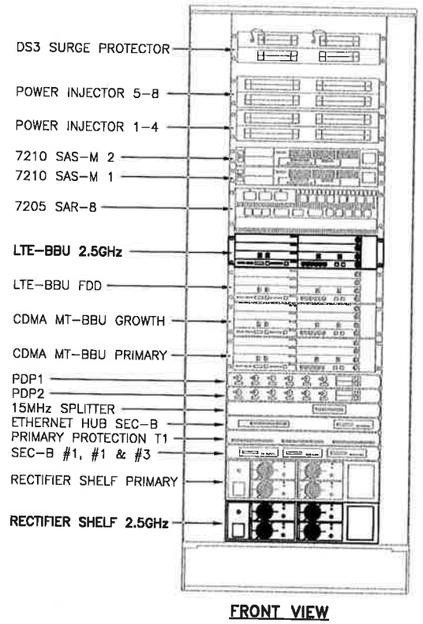
NO SCALE | 1



FRONT VIEW

FIBER JUNCTION BOX PENETRATION

NO SCALE | 2



FRONT VIEW

NEW EQUIPMENT IN EXISTING CABINET

NO SCALE | 3

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PLANS PREPARED BY:
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OFFICE#. (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
No. 27705
LICENSED PROFESSIONAL ENGINEER
12/26/2018

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	1/18/18	SKB	0

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NEW HARTFORD - (AT&T)

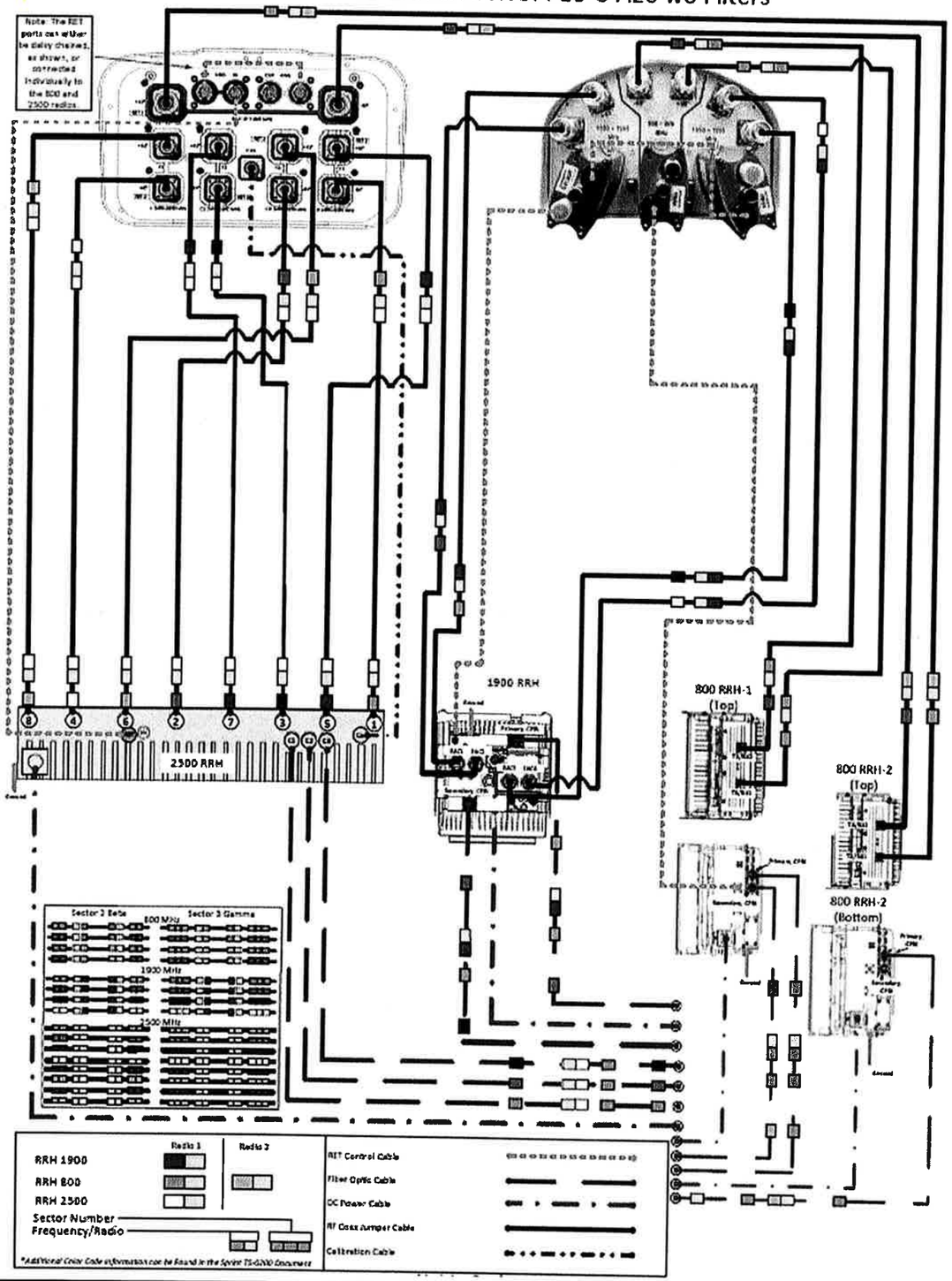
SITE NUMBER:
CT33XC022

SITE ADDRESS:
20 ANTOLINI ROAD
NEW HARTFORD, CT 06057

SHEET DESCRIPTION:
CIVIL DETAILS

SHEET NUMBER:
A-5

ALU 211 DT465B-2XR & APXVSPP18-C-A20 wo Filters



PLUMBING DIAGRAM | NO SCALE | 1

PLANS PREPARED FOR:

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PLANS PREPARED BY:

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SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24126
JAN 26 2018
LICENSED PROFESSIONAL ENGINEER

DRAWING NOTICE:

REVISIONS:

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ISSUED FOR PERMIT	1/18/18	SKB	0

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SITE NUMBER:

CT33XC022

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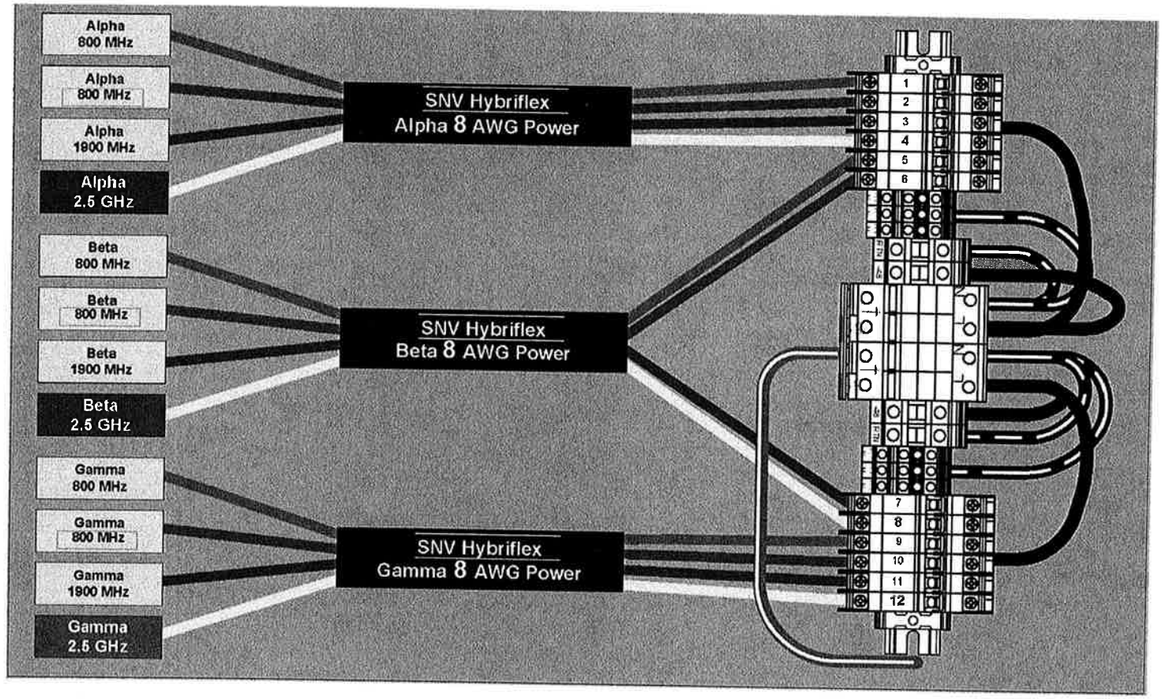
20 ANTOLINI ROAD
NEW HARTFORD, CT 06057

SHEET DESCRIPTION:

PLUMBING DIAGRAM

SHEET NUMBER:

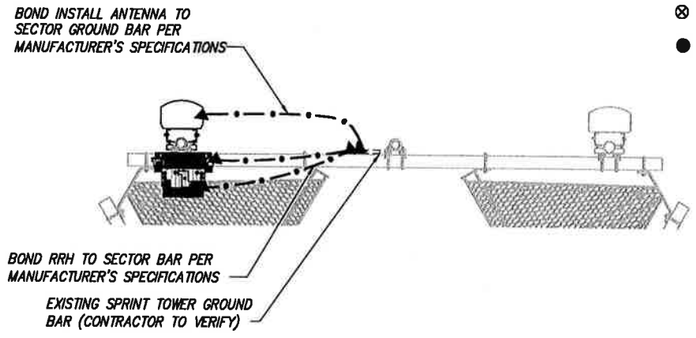
A-6



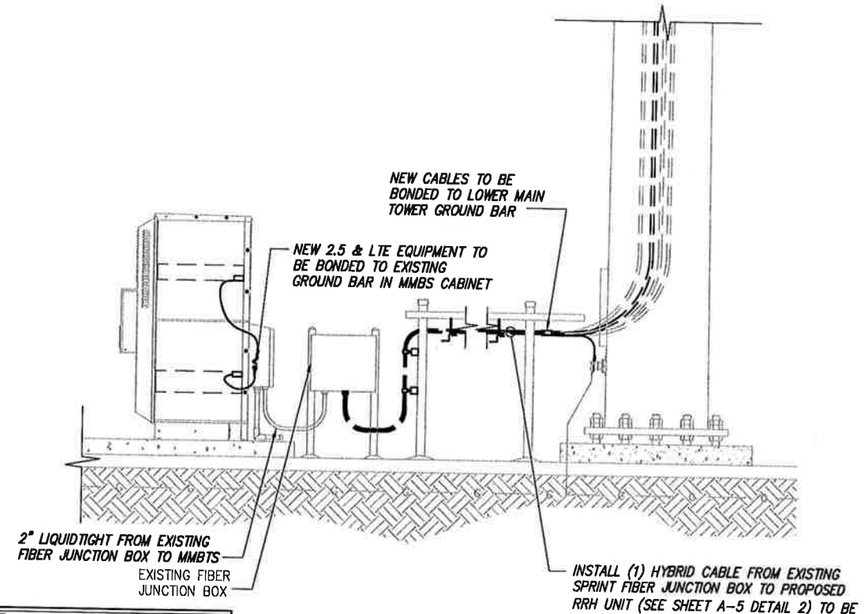
RRH TO DISTRIBUTION BOX POWER CONNECTIVITY | NO SCALE | 1

LEGEND:

- G — EXISTING GROUND RING
- ■ CADWELD CONNECTION (EXOTHERMIC WELD)
- ▲ MECHANICAL CONNECTION
- ⊗ GROUND ROD
- ● CABLE GROUND KIT



TYPICAL ANTENNA GROUNDING PLAN | NO SCALE | 2



NOTE:
DEPICTION IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR IS TO FIELD VERIFY PRIOR TO CONSTRUCTION

TYPICAL EQUIPMENT GROUNDING PLAN (ELEVATION) | NO SCALE | 3

PLANS PREPARED FOR:
Sprint

PLANS PREPARED BY:
INFINIGY
FROM ZERO TO INFINIGY
the solutions are endless
1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:
AIROSMITH DEVELOPMENT
32 CLINTON ST.
SARATOGA SPRINGS, NY 12866
OFFICE#. (518) 306-3740

ENGINEERING LICENSE:
STATE OF CONNECTICUT
JOHN S. STEVENS
JAN 26 2018
No. 24705
LICENSED PROFESSIONAL ENGINEER

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT	1/18/18	SKB	0

SITE NAME:
NEW HARTFORD - (AT&T)

SITE NUMBER:
CT33XC022

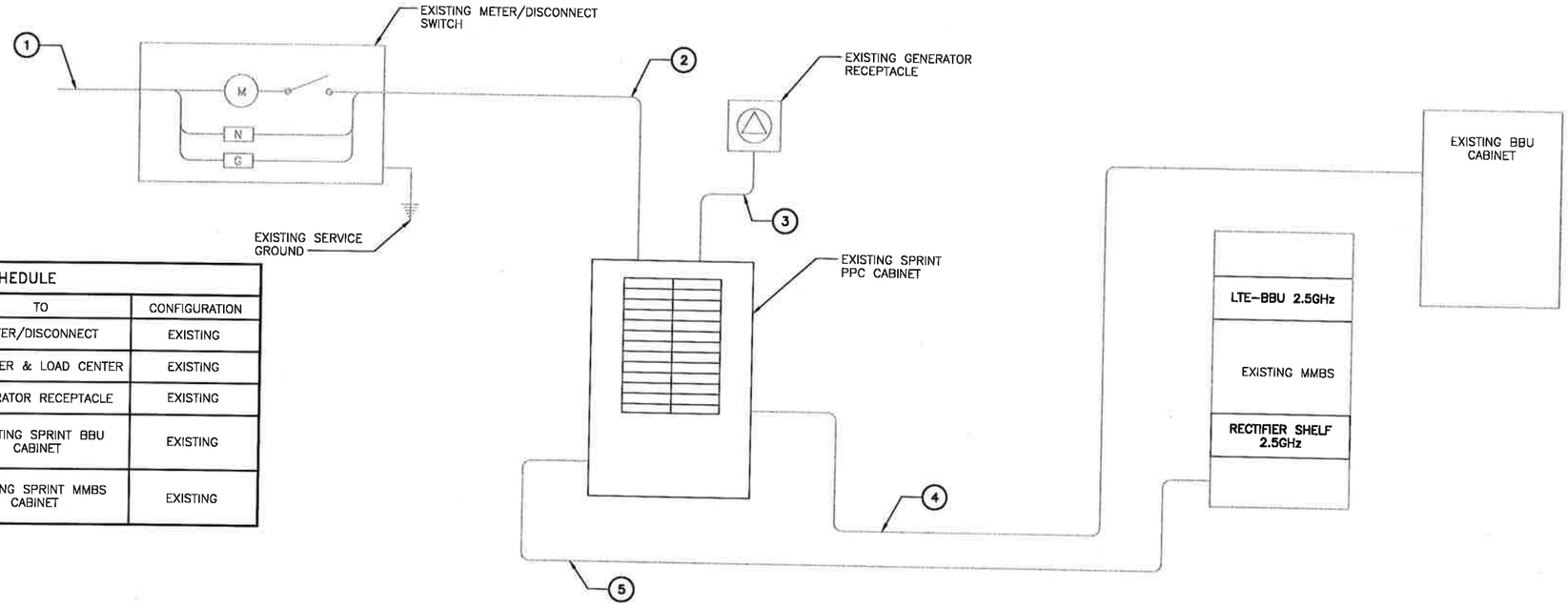
SITE ADDRESS:
20 ANTOLINI ROAD
NEW HARTFORD, CT 06057

SHEET DESCRIPTION:
ELECTRICAL & GROUNDING PLAN

SHEET NUMBER:
E-1

NOTES

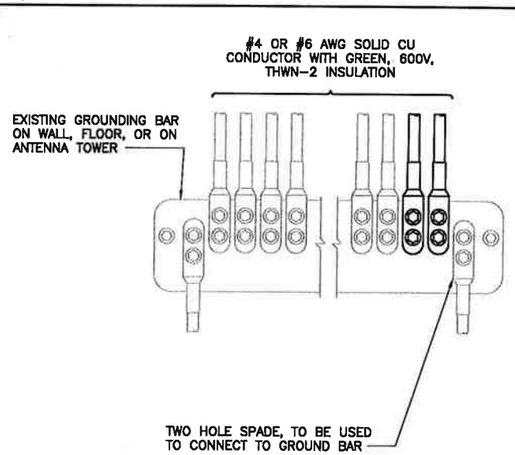
CG SHALL REFERENCE ALL SPECS FOR "CONNECTING THE POWER SUPPLY" OF THE NEW INSTALLATION DOCUMENTS, FOR ALL CONNECTION SPECIFICATIONS.



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

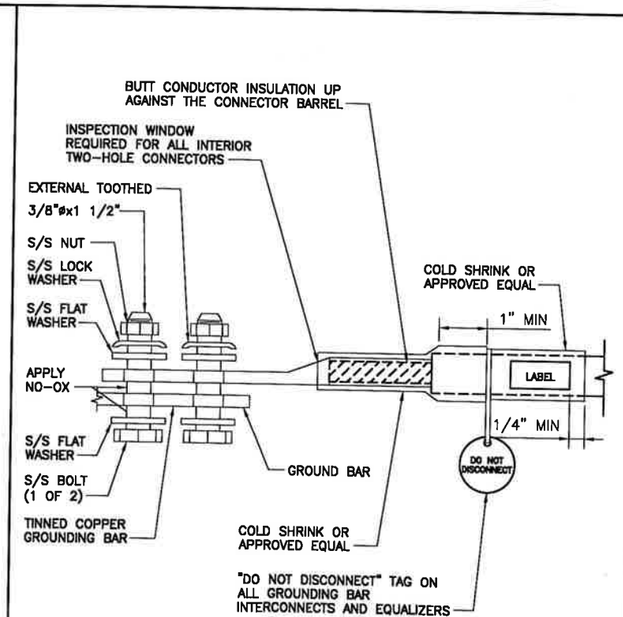


NOTES

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.

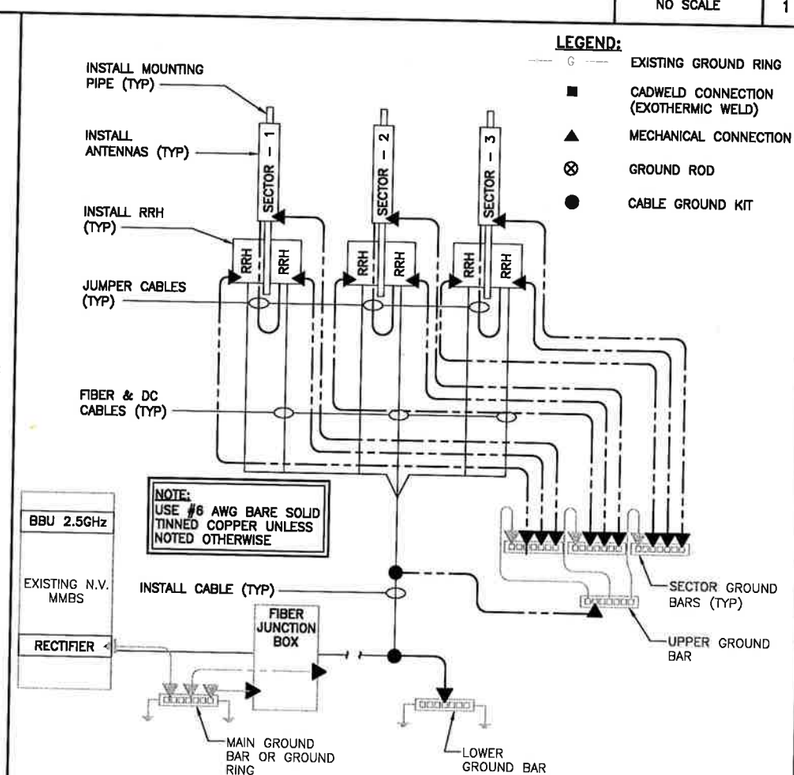
INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR

NO SCALE | 2



TWO HOLE LUG

NO SCALE | 3



GROUNDING RISER DIAGRAM

NO SCALE | 4

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NEW HARTFORD, CT 06057

SHEET DESCRIPTION:

ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:

E-2