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March 9, 2017

Via USPS and Email

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

RE: Notice of Exempt Modification

Please accept this Sprint Spectrum L.P. notice of intent to modify an existing telecommunications facility located at Eastover Road, Stamford, CT 06905, (Lat: 41.11275, Long: -73.53835). Known to Sprint Spectrum L.P. as site CT03XC345.

Dear Ms. Bachman:

Sprint Spectrum L.P. currently maintains three antennas at the 120-ft. level of the existing 150 ft. monopole at the Eastover Rd. telecommunications facility. The tower is owned by American Tower Corp. The property is owned by Cellco Partnership.

Sprint Spectrum L.P. now intends to install three additional 2.5 mm antennas at the 120-ft. level of the existing tower. Sprint Spectrum L.P. also intends to install three remote radio heads, one junction box and associated cabling. to the site.

Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and its attachments is being sent to the Mayor's Office in the City of Stamford Connecticut, as well as to American Tower Corp the tower owner.

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



The changes to the facility do not constitute modification as defined Connecticut General Statutes (“C.G.S.”) Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for the R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will not be affected.
2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound.
3. The proposed changes will not increase the noise level at the existing facility by 6 decibels or more.
4. Radio Frequency power density may increase due to the use of one or more CDMA transmissions. Moreover, LTE will utilize additional radio frequencies newly licensed by the FCC for cellular mobile communications. However, the changes will not increase the calculated “worst case” power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

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

Please feel free to call me at 617-680-1291 or email dmadden@airosmithdevelopment.com with questions concerning this matter.

Thank you for your consideration.

Sincerely,

Don Madden
Site Acquisition Specialist
dmadden@airosmithdevelopment.com

cc: Mayor of Stamford CT.
American Tower Co.



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

SPRINT Existing Facility

Site ID: CT03XC345

Turn of the River
268 Turn of the River Rd
Stamford, CT 06905

March 9, 2017

EBI Project Number: 6217000918

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	9.36 %



March 9, 2017

SPRINT

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

Emissions Analysis for Site: **CT03XC345 – Turn of the River**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **268 Turn of the River Rd, Stamford, CT**, for the purpose of determining whether the emissions from the Proposed SPRINT Antenna Installation located on this property are within specified federal limits.

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

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

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

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



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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed SPRINT Wireless antenna facility located at **268 Turn of the River Rd, Stamford, 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) 2 CDMA channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 2 CDMA channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 3) 2 LTE channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 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 60 Watts per Channel.
- 5) 2 LTE channels (2500 MHz (BRS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.



- 6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 7) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antennas used in this modeling are the **RFS APXVSP18-C-A20 and the Commscope LLPX310R-V1** 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 **120 feet** above ground level (AGL) for **Sector A**, **120 feet** above ground level (AGL) for **Sector B** and **120 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 APXVSP18-C-A20	Make / Model:	RFS APXVSP18-C-A20	Make / Model:	RFS APXVSP18-C-A20
Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd	Gain:	13.4 / 15.9 dBd
Height (AGL):	120 feet	Height (AGL):	120 feet	Height (AGL):	120 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	8	Channel Count	8	Channel Count	8
Total TX Power(W):	360 Watts	Total TX Power(W):	360 Watts	Total TX Power(W):	360 Watts
ERP (W):	10,940.78	ERP (W):	10,940.78	ERP (W):	10,940.78
Antenna A1 MPE%	3.86 %	Antenna B1 MPE%	3.86 %	Antenna C1 MPE%	3.86 %
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Commscope LLPX310R-V1	Make / Model:	Commscope LLPX310R-V1	Make / Model:	Commscope LLPX310R-V1
Gain:	15.65 dBd	Gain:	15.65 dBd	Gain:	15.65 dBd
Height (AGL):	120 feet	Height (AGL):	120 feet	Height (AGL):	120 feet
Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)
Channel Count	2	Channel Count	2	Channel Count	2
Total TX Power(W):	40 Watts	Total TX Power(W):	40 Watts	Total TX Power(W):	40 Watts
ERP (W):	1,469.13	ERP (W):	1,469.13	ERP (W):	1,469.13
Antenna A2 MPE%	0.41 %	Antenna B2 MPE%	0.41 %	Antenna C2 MPE%	0.41 %

Site Composite MPE%	
Carrier	MPE%
SPRINT – Max per sector	4.26 %
Sensus (CL&P)	0.12 %
AT&T	1.01 %
Clearwire	0.11 %
Nextel	0.76 %
Verizon Wireless	2.08 %
T-Mobile	1.02 %
Site Total MPE %:	9.36 %

SPRINT Sector A Total:	4.26 %
SPRINT Sector B Total:	4.26 %
SPRINT Sector C Total:	4.26 %
Site Total:	9.36 %

SPRINT _ Frequency Band / Technology Max Values per Sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
Sprint 850 MHz CDMA	2	656.33	120	3.63	850 MHz	567	0.64%
Sprint 1900 MHz (PCS) CDMA	2	1,167.14	120	6.46	1900 MHz (PCS)	1000	0.65%
Sprint 850 MHz LTE	2	1,312.66	120	7.26	850 MHz	567	1.28%
Sprint 1900 MHz (PCS) LTE	2	2,334.27	120	12.91	1900 MHz (PCS)	1000	1.29%
Sprint 2500 MHz (BRS) LTE	2	734.56	120	4.06	2500 MHz (BRS)	1000	0.41%
						Total:	4.26%



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:	4.26 %
Sector B:	4.26 %
Sector C:	4.26 %
SPRINT Maximum Total (per sector):	4.26 %
Site Total:	9.36 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **9.36 %** 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®
C O R P O R A T I O N

Structural Analysis Report

Structure : 148 ft Monopole
ATC Site Name : SMFR - North, CT
ATC Site Number : 302515
Engineering Number : OAA695961_C3_01
Proposed Carrier : Sprint Nextel
Carrier Site Name : Turn of River
Carrier Site Number : CT03XC345
Site Location : 0 Lot 4 Eastover Road
Stamford, CT 06905-1403
41.112750,-73.538353
County : Fairfield
Date : February 15, 2017
Max Usage : 67%
Result : Pass

Prepared By:
Travis J. Gatling
Structural Engineer I

Reviewed By:

COA: PEC.0001553



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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 148 ft monopole to reflect the change in loading by Sprint Nextel.

Supporting Documents

Tower Drawings	Engineered Endeavors Job #5591, dated November 22, 1999
Foundation Drawing	Engineered Endeavors Job #5591, dated November 17, 1999
Geotechnical Report	Dr. Clarence Welti, dated October 25, 2000
Modifications	ATC Project #43868633, dated September 1, 2009 ATC Project #51772939, dated April 11, 2013

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:	50 mph (3-Second Gust) w/ 3/4" 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:	$S_s = 0.25$, $S_1 = 0.07$
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					
159.0	161.0	3	Andrew E15S09P94	Pole Mount	(18) 1 5/8" Coax	T-Mobile
		3	RFS ATMAP1412D-1A20			
	159.0	3	Commscope ATSBT-TOP-MF-4G			
		3	Andrew SBNHH-1D65B			
151.0	151.0	12	Powerwave LGP21401	Platform w/ Handrails	(12) 1 1/4" Coax (4) 0.78" 8 AWG 6 (2) 0.39" Fiber Trunk (2) 0.74" 8 AWG 7 (1) 3" Conduit	AT&T Mobility
		2	Raycap DC6-48-60-18-8F			
		3	Ericsson RRUS 11 (Band 12) (55 lb)			
		3	Ericsson RRUS 32			
		3	Ericsson RRUS 32 B2			
		3	Powerwave 7770.00			
		3	Quintel QS66512-2			
		3	CCI OPA-65R-LCUU-H6			
141.0	142.0	6	RFS FD9R6004	Low Profile Platform	(12) 1 5/8" Coax (1) 1 5/8" Hybriflex	Verizon
		3	Alcatel-Lucent RRH2x40-AWS			
		3	Antel BXA-171063/8CF			
		3	Rymsa MGD3-800T0			
		1	RFS DB-T1-6Z-8AB-0Z			
		1	Antel BXA-80063-6BF-EDIN-X			
		1	Antel BXA-70063/6CF __ 2°			
		3	Antel BXA-70063/6CF (5" Depth)			
		1	Antel BXA-80080/6CF			
138.0	138.0	1	DragonWave Horizon Compact	Side Arms	(6) 5/16" (0.31") Coax (1) 1/2" Coax	Clearwire
		3	NextNet BTS-2500			
		3	Argus LLPX310R			
		1	DragonWave A-ANT-18G-2.5-C			
132.0	132.0	3	KMW KMDAPS2040000 (E-F Band)	Low Profile Platform	(9) 1 1/4" Coax (6) 1 5/8" Coax	Sprint Nextel
		3	KMW AM-X-WM-17-65-00T (48")			
		9	Decibel DB844H90E-XY			
120.0	120.0	3	Alcatel-Lucent 800MHz 2X50W RRH w/ Filter	Low Profile Platform	(3) 1 1/4" Hybriflex	
		3	Alcatel-Lucent 4x40W RRH (91 lb)			
		3	RFS APXVSP18-C-A20			
110.0	110.0	2	Diamond X50A	Side Arms	(2) 1/2" Coax	Senet
100.0	105.0	1	Antel BCD-87010 __ 4°	Side Arm	(1) 7/8" Coax	Sensus USA
75.0	75.0	1	PCTEL GPS-TMG-HR-26N	Side Arm	(1) 1/2" Coax	Sprint Nextel

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
120.0	120.0	3	RFS APXVTM14-C-I20	-	(1) 1 1/4" Hybriflex	Sprint Nextel
		3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			

Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
120.0	120.0	2	Box Enclosures BEN-92P	Low Profile Platform	(2) 1" Conduit	Sprint Nextel
		3	Commscope LLPX310R-V1			
		3	Nokia FWHR			

¹Mount 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	43%	Pass
Shaft	45%	Pass
Base Plate	21%	Pass
Reinforcement	54%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	2,818.3	62%
Axial (Kips)	100.7	7%
Shear (Kips)	24.2	67%

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

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
138.0	DragonWave A-ANT-18G-2.5-C	Clearwire	1.286	1.082
120.0	Box Enclosures BEN-92P	Sprint Nextel	0.966	0.940
	Nokia FWHR			

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



Standard Conditions

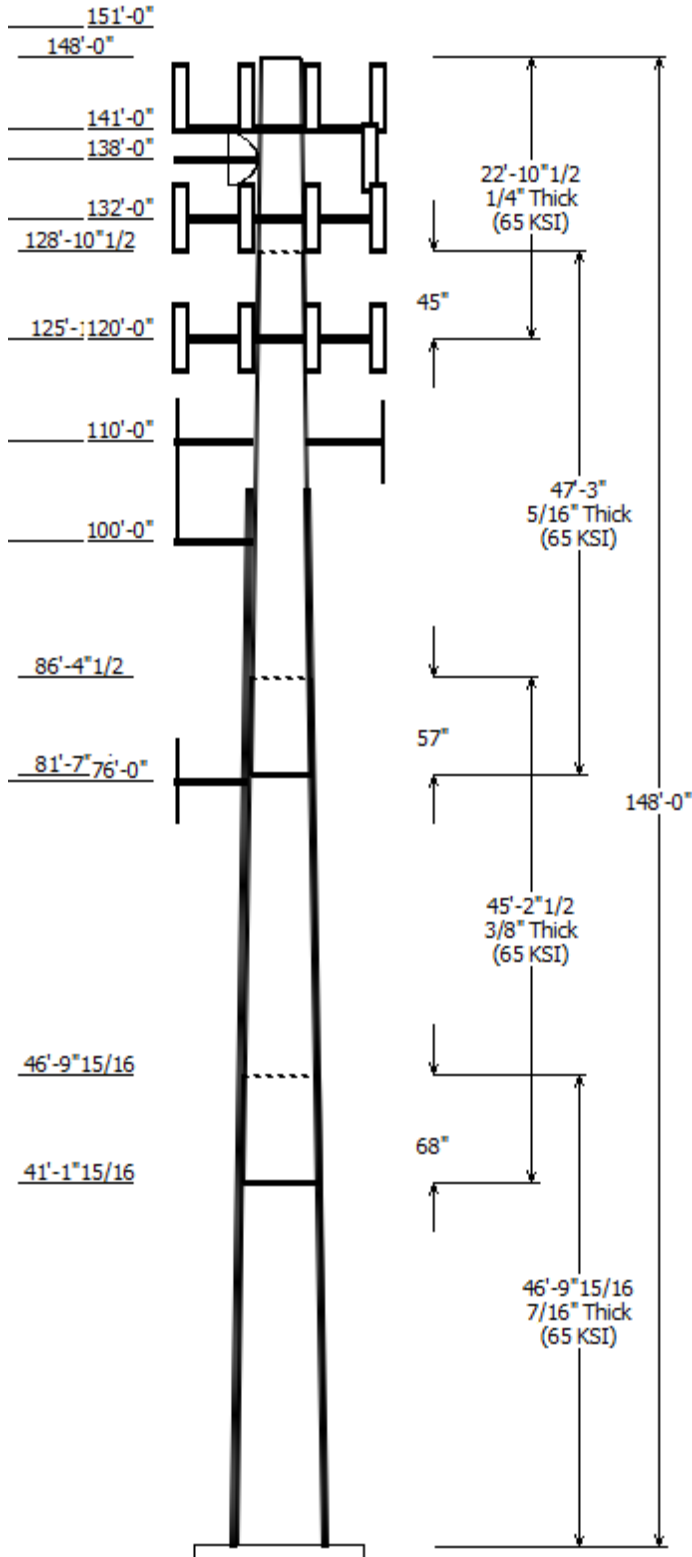
All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

- 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

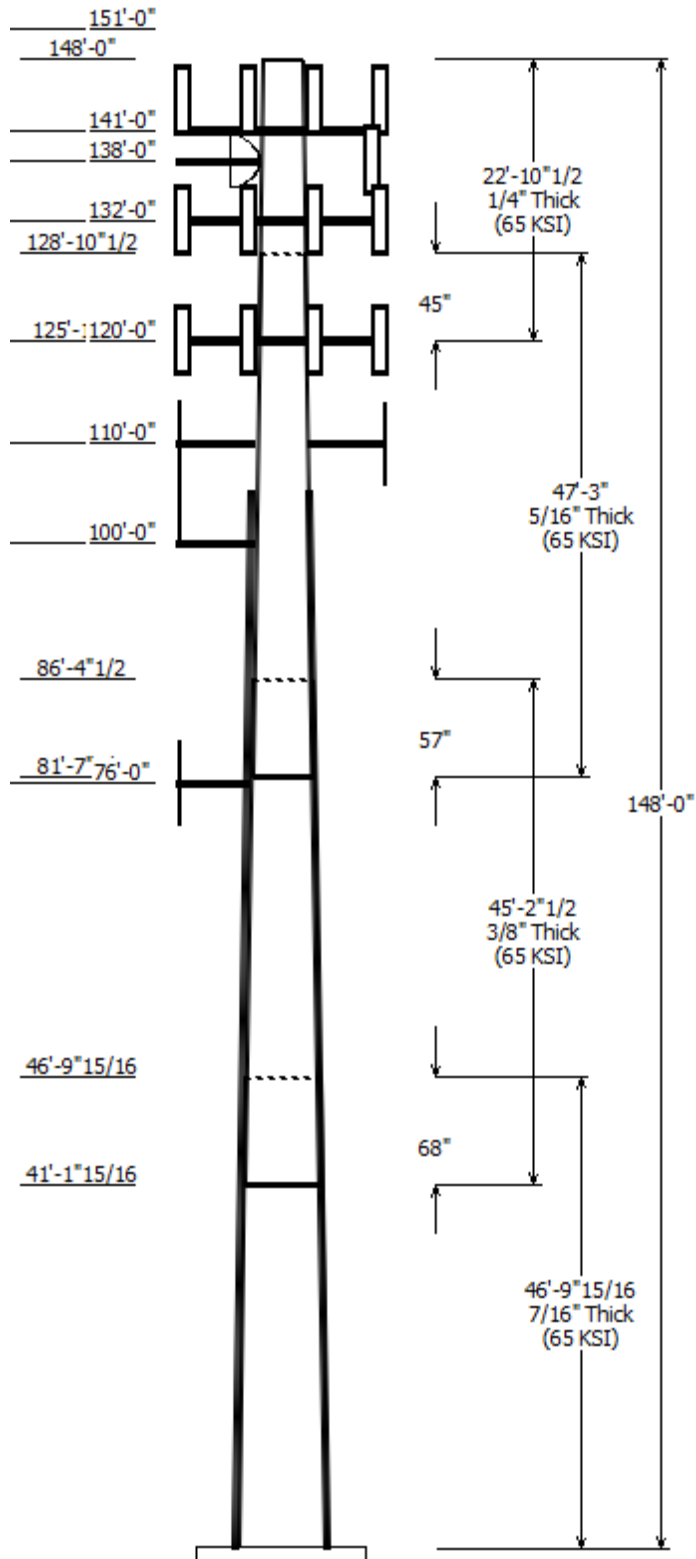
Pole : 302515 Code: ANSI/TIA-222-G
 Description : 148 ft EEI Monopole
 Client : SPRINT NEXTEL Struct Class : II
 Location : SMFR - North, CT
 Shape : 18 Sides Exposure : B
 Height : 148.00 (ft) Topo : 1
 Base Elev (ft): 0.00
 Taper: 0.195101(in/ft)

Sections Properties

Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)		Steel Taper (in/ft)	Grade (ksi)
		Top	Bottom						
1	46.830	38.86	48.00	0.438		0.000	0.195100	65	
2	45.210	31.89	40.71	0.375	Slip Joint	68.000	0.195100	65	
3	47.250	24.23	33.45	0.313	Slip Joint	57.000	0.195100	65	
4	22.877	21.00	25.46	0.250	Slip Joint	45.000	0.195100	65	

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
159.000	161.000	3	RFS ATMAP1412D-1A20
159.000	161.000	3	Andrew E15S09P94
159.000	159.000	3	Andrew SBNHH-1D65B
159.000	159.000	3	Commscope ATSBT-TOP-MF-
151.000	151.000	1	Flat Platform w/ Handrails
151.000	151.000	3	CCI OPA-65R-LCUU-H6
151.000	151.000	3	Quintel QS66512-2
151.000	151.000	3	Powerwave Allgon 7770.00
151.000	151.000	3	Ericsson RRUS 32 B2
151.000	151.000	3	Ericsson RRUS 32
151.000	151.000	3	Ericsson RRUS 11 (Band 12) (55
151.000	151.000	2	Raycap DC6-48-60-18-8F
151.000	151.000	12	Powerwave Allgon LGP21401
148.000	148.000	1	Pipe Mount
141.000	142.000	3	Antel BXA-70063/6CF (5" Depth)
141.000	142.000	3	Ryma MGD3-800T0
141.000	142.000	3	Antel BXA-171063/8CF
141.000	142.000	3	Alcatel-Lucent RRH2x40-AWS
141.000	142.000	1	RFS DB-T1-6Z-8AB-0Z
141.000	142.000	1	Antel BXA-70063/6CF 2°
141.000	141.000	1	Flat Low Profile Platform
141.000	142.000	1	Antel BXA-80080/6CF
141.000	142.000	6	RFS FD9R6004
141.000	142.000	1	Antel BXA-80063-6BF-EDIN-X
138.000	138.000	1	Side Arms
138.000	138.000	1	DragonWave A-ANT-18G-2.5-C
138.000	138.000	3	Argus LLPX310R
138.000	138.000	3	NextNet BTS-2500
138.000	138.000	1	DragonWave Horizon Compact
132.000	132.000	1	Flat Low Profile Platform
132.000	132.000	9	Decibel DB844H90E-XY
132.000	132.000	3	KMW AM-X-WM-17-65-00T (48")
132.000	132.000	3	KMW KMDAPS2040000 (E-F
120.000	120.000	2	Box Enclosures BEN-92P
120.000	120.000	3	Nokia FWHR
120.000	120.000	3	Commscope LLPX310R-V1
120.000	120.000	1	Flat Low Profile Platform
120.000	120.000	3	RFS APXVSPP18-C-A20
120.000	120.000	3	Alcatel-Lucent 4x40W RRH (91 I
120.000	120.000	3	Alcatel-Lucent 800 MHz 2X50W
110.000	110.000	2	Diamond X50A
110.000	110.000	2	Flat Side Arm
100.000	100.000	1	Flat Side Arm
100.000	105.000	1	Antel BCD-87010 4°



76.000	76.000	1	Round Side Arm
76.000	76.000	1	PCTEL GPS-TMG-HR-26N

Linear Appurtenance

Elev (ft)			
From	To	Description	Exposed To Wind
10.000	120.0	1 1/4" Hybriflex	Yes
10.000	120.0	1" Conduit	Yes
10.000	132.0	1 1/4" Coax	No
10.000	132.0	1 5/8" Coax	No
10.000	138.0	1/2" Coax	Yes
10.000	138.0	5/16" (0.31",	No
10.000	141.0	1 5/8" Coax	No
10.000	141.0	1 5/8" Hybriflex	Yes
10.000	151.0	0.39" (10mm)	No
10.000	151.0	0.74" 8 (18.7mm)	No
10.000	151.0	0.78" 8 (19.7mm)	No
10.000	151.0	1 1/4" Coax	No
10.000	151.0	3" Conduit	No
10.000	159.0	1 5/8" Coax	No
10.000	159.0	1 5/8" Coax	Yes
10.000	76.000	1/2" Coax	Yes
10.000	100.0	7/8" Coax	Yes
10.000	110.0	1/2" Coax	No
0.000	113.2	DYWIDAG	Yes

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	50 mph with 0.75 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

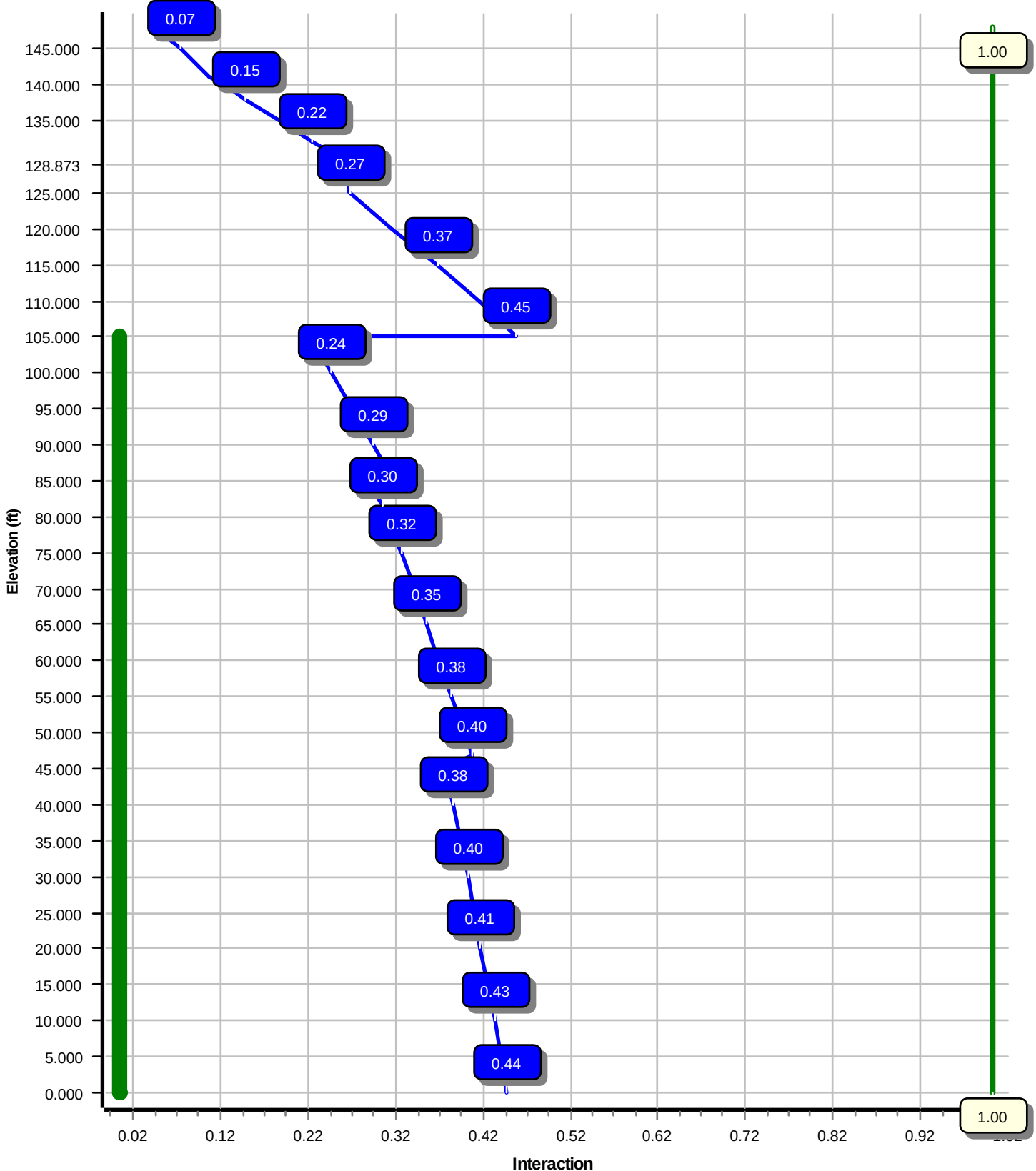
Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	2818.30	24.23	67.12
0.9D + 1.6W	2655.49	22.82	50.34
1.2D + 1.0Di + 1.0Wi	788.56	6.79	100.66
(1.2 + 0.2Sds) * DL + E ELFM	202.13	1.81	63.41
(1.2 + 0.2Sds) * DL + E EMAM	269.86	2.87	63.41
(0.9 - 0.2Sds) * DL + E ELFM	199.52	1.81	42.85
(0.9 - 0.2Sds) * DL + E EMAM	266.21	2.86	42.85
1.0D + 1.0W	694.33	5.94	55.96

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	138.00	15.427	1.082

Load Case : 1.2D + 1.6W
Max Ratio 45.48% at 105.1 ft



Site Number: 302515	Code: ANSI/TIA-222-G	© 2007 - 2017 by ATC IP LLC. All rights reserved.
Site Name: SMFR - North, CT	Engineering Number: OAA695961_C3_01	2/15/2017 1:49:29 PM
Customer: SPRINT NEXTEL		

Analysis Parameters

Location:	FAIRFIELD County, CT	Height (ft):	148
Code:	ANSI/TIA-222-G	Base Diameter (in):	48.00
Shape:	18 Sides	Top Diameter (in):	21.00
Pole Type:	Taper	Taper (in/ft) :	0.195
Pole Manufacturer:	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:	50 mph
Topographic Category:	1	Operational Wind Speed:	60 mph
Crest Height:	0.0 ft	Design Ice Thickness:	0.75 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	2.42		
T_L (sec):	6	p :	1.3
S_s :	0.249	S_1 :	0.069
F_a :	1.600	F_v :	2.400
S_{ds} :	0.266	S_{d1} :	0.110
		C_s :	0.030
		C_s Max:	0.030
		C_s Min:	0.030

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	50 mph with 0.75 in Radial Ice
(1.2 + 0.2S _{ds}) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2S _{ds}) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2S _{ds}) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2S _{ds}) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

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Customer: SPRINT NEXTEL

Shaft Section Properties

Slip							Bottom				Top									
Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)	
1-18	46.830	0.4375	65		0.00	9,513	48.00	0.00	66.04	18876.3	17.93	109.71	38.86	46.83	53.36	9953.9	14.25	88.83	0.195101	
2-18	45.210	0.3750	65	Slip	68.00	6,579	40.71	41.16	48.02	9874.4	17.74	108.58	31.89	86.37	37.52	4710.6	13.59	85.06	0.195101	
3-18	47.250	0.3125	65	Slip	57.00	4,549	33.45	81.62	32.87	4560.0	17.46	107.04	24.23	128.87	23.72	1714.9	12.26	77.54	0.195101	
4-18	22.877	0.2500	65	Slip	45.00	1,420	25.46	125.12	20.01	1606.8	16.55	101.85	21.00	148.00	16.46	895.7	13.40	84.00	0.195101	
Shaft Weight						22,062														

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Weight (lb)	No Ice EPAA (sf)	Orientation Factor	Weight (lb)	Ice EPAA (sf)	Orientation Factor	Distance From Face (ft)	Vert Ecc (ft)
159.00	Andrew E15S09P94	3	14.60	0.660	0.50	38.83	0.914	0.50	0.000	2.000
159.00	Andrew SBNHH-1D65B	3	50.70	8.170	0.69	253.57	9.474	0.69	0.000	0.000
159.00	Commscope ATSBT-TOP-MF-	3	1.80	0.200	0.50	12.09	0.391	0.50	0.000	0.000
159.00	RFS ATMAP1412D-1A20	3	13.00	1.000	0.50	48.06	1.431	0.50	0.000	2.000
151.00	CCI OPA-65R-LCUU-H6	3	73.00	9.660	0.66	304.12	11.023	0.66	0.000	0.000
151.00	Ericsson RRUS 11 (Band 12)	3	55.00	2.520	0.50	135.17	3.163	0.50	0.000	0.000
151.00	Ericsson RRUS 32	3	50.80	2.690	0.50	135.99	3.415	0.50	0.000	0.000
151.00	Ericsson RRUS 32 B2	3	53.00	2.740	0.50	140.85	3.472	0.50	0.000	0.000
151.00	Flat Platform w/ Handrails	1	2000.00	42.400	1.00	3,420.72	63.366	1.00	0.000	0.000
151.00	Powerwave Allgon 7770.00	3	35.00	5.510	0.65	169.69	6.557	0.65	0.000	0.000
151.00	Powerwave Allgon LGP21401	12	14.10	1.100	0.50	47.64	1.562	0.50	0.000	0.000
151.00	Quintel QS66512-2	3	111.00	8.130	0.74	337.65	9.426	0.74	0.000	0.000
151.00	Raycap DC6-48-60-18-8F	2	20.00	1.110	1.00	100.34	2.523	1.00	0.000	0.000
148.00	Pipe Mount	1	200.00	6.400	1.00	339.29	7.291	1.00	0.000	0.000
141.00	Alcatel-Lucent RRH2x40-AWS	3	44.00	2.160	0.67	116.93	2.800	0.67	0.000	1.000
141.00	Antel BXA-171063/8CF	3	10.50	2.900	0.90	95.07	3.762	0.90	0.000	1.000
141.00	Antel BXA-70063/6CF (5"	3	14.90	7.580	0.66	186.00	8.835	0.66	0.000	1.000
141.00	Antel BXA-70063/6CF ____ 2°	1	17.00	7.570	0.65	183.28	8.835	0.65	0.000	1.000
141.00	Antel BXA-80063-6BF-EDIN-X	1	19.20	7.260	0.66	187.68	8.492	0.66	0.000	1.000
141.00	Antel BXA-80080/6CF	1	22.00	7.780	0.65	192.50	9.047	0.65	0.000	1.000
141.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	2,144.99	45.106	1.00	0.000	0.000
141.00	RFS DB-T1-6Z-8AB-0Z	1	44.00	4.800	0.67	186.62	5.668	0.67	0.000	1.000
141.00	RFS FD9R6004	6	3.10	0.370	0.50	5.25	0.627	0.50	0.000	1.000
141.00	Ryma MGD3-800T0	3	19.80	3.450	0.69	109.28	5.266	0.69	0.000	1.000
138.00	Argus LLPX310R	3	28.60	4.290	0.63	135.19	5.180	0.63	0.000	0.000
138.00	DragonWave A-ANT-18G-2.5-	1	47.60	8.430	1.00	221.04	10.074	1.00	0.000	0.000
138.00	DragonWave Horizon	1	10.60	0.430	0.50	40.46	0.658	0.50	0.000	0.000
138.00	NextNet BTS-2500	3	35.00	1.820	0.50	92.14	2.392	0.50	0.000	0.000
138.00	Side Arms	1	560.00	8.500	1.00	1,024.71	15.554	1.00	0.000	0.000
132.00	Decibel DB844H90E-XY	9	14.00	3.610	0.74	122.81	3.910	0.74	0.000	0.000
132.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	2,140.49	44.974	1.00	0.000	0.000
132.00	KMW AM-X-WM-17-65-00T	3	14.20	3.360	0.64	92.92	4.222	0.64	0.000	0.000
132.00	KMW KMDAPS2040000 (E-F	3	15.90	0.970	0.50	50.19	1.418	0.50	0.000	0.000
120.00	Alcatel-Lucent 4x40W RRH	3	91.00	3.290	0.67	213.33	3.119	0.67	0.000	0.000
120.00	Alcatel-Lucent 800 MHz	3	64.00	2.060	0.67	152.13	2.640	0.67	0.000	0.000
120.00	Box Enclosures BEN-92P	2	2.20	0.780	0.50	31.06	1.018	0.50	0.000	0.000
120.00	Commscope LLPX310R-V1	3	27.60	4.340	0.63	120.05	5.824	0.63	0.000	0.000
120.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	2,133.56	44.770	1.00	0.000	0.000
120.00	Nokia FWHR	3	26.50	1.030	0.50	68.05	1.467	0.50	0.000	0.000
120.00	RFS APXVSP18-C-A20	3	57.00	8.020	0.69	250.96	9.281	0.69	0.000	0.000
110.00	Diamond X50A	2	2.30	1.120	1.00	59.70	2.467	1.00	0.000	0.000
110.00	Flat Side Arm	2	150.00	6.300	1.00	220.90	8.682	1.00	0.000	0.000
100.00	Antel BCD-87010 ____ 4°	1	26.50	2.900	1.00	154.36	6.564	1.00	0.000	5.000
100.00	Flat Side Arm	1	150.00	6.300	1.00	220.21	8.659	1.00	0.000	0.000
76.00	PCTEL GPS-TMG-HR-26N	1	0.60	0.090	1.00	0.99	0.149	1.00	0.000	0.000
76.00	Round Side Arm	1	150.00	5.200	1.00	218.44	7.742	1.00	0.000	0.000

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

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Customer: SPRINT NEXTEL

Totals 120 11131.00

25,116.64

Number of Loadings : 46

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
10.00	159.00	6	1 5/8" Coax	1.98	0.82	N	0.00	N	T-Mobile
10.00	159.00	12	1 5/8" Coax	1.98	0.82	N	3.96	Y	T-Mobile
10.00	151.00	2	0.39" (10mm) Fiber	0.39	0.06	N	0.00	N	AT&T Mobility
10.00	151.00	2	0.74" 8 (18.7mm)	0.74	0.49	N	0.00	N	AT&T Mobility
10.00	151.00	4	0.78" 8 (19.7mm)	0.78	0.59	N	0.00	N	AT&T Mobility
10.00	151.00	12	1 1/4" Coax	1.55	0.63	N	0.00	N	AT&T Mobility
10.00	151.00	1	3" Conduit	3.50	7.58	N	0.00	N	AT&T Mobility
10.00	141.00	12	1 5/8" Coax	1.98	0.82	N	0.00	N	Verizon
10.00	141.00	1	1 5/8" Hybriflex	1.98	1.30	N	0.00	Y	Verizon
10.00	138.00	1	1/2" Coax	0.63	0.15	N	0.00	Y	Clearwire
10.00	138.00	6	5/16" (0.31", 7.9mm)	0.31	0.05	N	0.00	N	Clearwire
10.00	132.00	9	1 1/4" Coax	1.55	0.63	N	0.00	N	Sprint Nextel
10.00	132.00	6	1 5/8" Coax	1.98	0.82	N	0.00	N	Sprint Nextel
10.00	120.00	3	1 1/4" Hybriflex Cable	1.54	1.00	N	0.00	Y	Sprint Nextel
10.00	120.00	2	1" Conduit	1.30	1.68	N	0.00	Y	Sprint Nextel
0.00	113.25	4	DYWIDAG	2.50	16.70	N	1.66	Y	-
10.00	110.00	2	1/2" Coax	0.63	0.15	N	0.00	N	Senet
10.00	100.00	1	7/8" Coax	1.09	0.33	N	0.00	Y	Sensus USA
10.00	76.00	1	1/2" Coax	0.63	0.15	N	0.00	Y	Sprint Nextel

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Intermediate Connections			Connectors	Continuation?
						Description	Spacing (in)	Len (in)		
0.00	105.1	4	SOL #20 All Thread	80	2.19	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	No

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

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Customer: 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)	Additional Reinforcing		
												Area (in ²)	Ix (in ⁴)	Weight (lb)
0.00		0.4375	48.000	66.044	18,876.3	17.93	109.71	80.3	774.6	0.0	0.0	19.64	7,401	0.0
5.00		0.4375	47.024	64.690	17,738.5	17.54	107.48	80.8	743.0	0.0	1,112.1	19.64	7,141	334.0
10.00		0.4375	46.049	63.335	16,647.3	17.15	105.25	81.2	712.0	0.0	1,089.1	19.64	6,885	334.0
15.00		0.4375	45.073	61.980	15,601.9	16.76	103.03	81.7	681.8	0.0	1,066.1	19.64	6,634	334.0
20.00		0.4375	44.098	60.626	14,601.2	16.36	100.80	82.2	652.2	0.0	1,043.0	19.64	6,387	334.0
25.00		0.4375	43.122	59.271	13,644.2	15.97	98.57	82.6	623.2	0.0	1,020.0	19.64	6,145	334.0
30.00		0.4375	42.147	57.917	12,729.9	15.58	96.34	82.6	594.9	0.0	996.9	19.64	5,908	334.0
35.00		0.4375	41.171	56.562	11,857.5	15.18	94.11	82.6	567.3	0.0	973.9	19.64	5,676	334.0
40.00		0.4375	40.196	55.208	11,025.8	14.79	91.88	82.6	540.3	0.0	950.8	19.64	5,448	334.0
41.16	Bot - Section 2	0.4375	39.969	54.892	10,838.1	14.70	91.36	82.6	534.1	0.0	217.9	19.64	5,396	77.7
45.00		0.4375	39.220	53.853	10,234.0	14.40	89.65	82.6	513.9	0.0	1,330.9	19.64	5,396	256.3
46.83	Top - Section 1	0.3750	39.613	46.702	9,084.7	17.22	105.64	81.2	451.7	0.0	625.9	19.64	5,314	122.2
50.00		0.3750	38.995	45.966	8,661.8	16.93	103.99	81.5	437.5	0.0	499.8	19.64	5,174	211.8
55.00		0.3750	38.019	44.805	8,021.9	16.47	101.39	82.0	415.6	0.0	772.2	19.64	4,956	334.0
60.00		0.3750	37.044	43.644	7,414.3	16.01	98.78	82.6	394.2	0.0	752.4	19.64	4,744	334.0
65.00		0.3750	36.068	42.483	6,838.2	15.55	96.18	82.6	373.4	0.0	732.7	19.64	4,536	334.0
70.00		0.3750	35.093	41.321	6,292.7	15.09	93.58	82.6	353.2	0.0	712.9	19.64	4,332	334.0
75.00		0.3750	34.117	40.160	5,777.0	14.63	90.98	82.6	333.5	0.0	693.2	19.64	4,134	334.0
76.00		0.3750	33.922	39.928	5,677.4	14.54	90.46	82.6	329.6	0.0	136.3	19.64	4,094	66.8
80.00		0.3750	33.142	38.999	5,290.3	14.17	88.38	82.6	314.4	0.0	537.1	19.64	3,940	267.2
81.62	Bot - Section 3	0.3750	32.825	38.622	5,138.4	14.02	87.53	82.6	308.3	0.0	214.4	19.64	3,878	108.4
85.00		0.3750	32.166	37.838	4,831.7	13.71	85.78	82.6	295.9	0.0	813.2	19.64	3,871	225.6
86.37	Top - Section 2	0.3125	32.523	31.948	4,188.0	16.94	104.08	81.5	253.6	0.0	326.0	19.64	3,819	91.7
90.00		0.3125	31.816	31.246	3,918.0	16.54	101.81	81.9	242.6	0.0	389.9	19.64	3,683	242.3
95.00		0.3125	30.840	30.279	3,565.2	15.99	98.69	82.6	227.7	0.0	523.4	19.64	3,500	334.0
100.0		0.3125	29.865	29.311	3,234.2	15.44	95.57	82.6	213.3	0.0	506.9	19.64	3,322	334.0
105.0		0.3125	28.889	28.344	2,924.4	14.89	92.45	82.6	199.4	0.0	490.5	19.64	3,148	334.0
105.1	Reinf. Top	0.3125	28.865	28.319	2,916.9	14.88	92.37	82.6	199.0	0.0	12.1	19.64	3,144	8.3
110.0		0.3125	27.914	27.376	2,635.0	14.34	89.32	82.6	185.9	0.0	462.0			
115.0		0.3125	26.938	26.409	2,365.4	13.79	86.20	82.6	172.9	0.0	457.5			
120.0		0.3125	25.963	25.441	2,114.8	13.24	83.08	82.6	160.4	0.0	441.1			
125.0		0.3125	24.987	24.473	1,882.6	12.69	79.96	82.6	148.4	0.0	424.6			
125.1	Bot - Section 4	0.3125	24.963	24.450	1,877.1	12.67	79.88	82.6	148.1	0.0	10.3			
128.8	Top - Section 3	0.2500	24.732	19.425	1,471.0	16.03	98.93	82.5	117.1	0.0	558.9			
130.0		0.2500	24.512	19.251	1,431.7	15.88	98.05	82.6	115.0	0.0	74.1			
132.0		0.2500	24.122	18.941	1,363.7	15.60	96.49	82.6	111.4	0.0	130.0			
135.0		0.2500	23.536	18.477	1,265.9	15.19	94.15	82.6	105.9	0.0	191.0			
138.0		0.2500	22.951	18.013	1,172.8	14.78	91.80	82.6	100.6	0.0	186.2			
140.0		0.2500	22.561	17.703	1,113.3	14.50	90.24	82.6	97.2	0.0	121.5			
141.0		0.2500	22.366	17.548	1,084.4	14.36	89.46	82.6	95.5	0.0	60.0			
145.0		0.2500	21.585	16.929	973.6	13.81	86.34	82.6	88.8	0.0	234.6			
148.0		0.2500	21.000	16.465	895.7	13.40	84.00	82.6	84.0	0.0	170.4			
											22,061.8	7,022.3		

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

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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			Dead	Torsion		Moment	Dead		Dead		Torsion	Moment	
Elev		Wind FX	Load	Wind FX	MY	MZ	Load	Wind FX	Load	Wind FX	Load	MY	MZ
(ft)	Description	(lb)	(lb)	(lb)	(lb-ft)	(lb-ft)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb-ft)	(lb)
0.00		169.3	0.0					0.0	0.0	169.3	0.0	0.0	0.0
5.00		335.1	1,334.6					0.0	801.6	335.1	2,136.2	0.0	0.0
10.00		338.6	1,306.9					0.0	801.6	338.6	2,108.5	0.0	0.0
15.00		343.2	1,279.3					0.0	1,177.7	343.2	2,456.9	0.0	0.0
20.00		338.3	1,251.6					0.0	1,177.7	338.3	2,429.3	0.0	0.0
25.00		333.5	1,223.9					0.0	1,177.7	333.5	2,401.6	0.0	0.0
30.00		332.5	1,196.3					0.0	1,177.7	332.5	2,374.0	0.0	0.0
35.00		338.4	1,168.6					0.0	1,177.7	338.4	2,346.3	0.0	0.0
40.00		211.8	1,141.0					0.0	1,177.7	211.8	2,318.6	0.0	0.0
41.16	Bot - Section 2	177.4	261.5					0.0	274.0	177.4	535.5	0.0	0.0
45.00		203.1	1,597.1					0.0	903.7	203.1	2,500.8	0.0	0.0
46.83	Top - Section 1	180.4	751.1					0.0	431.0	180.4	1,182.2	0.0	0.0
50.00		296.7	599.8					0.0	746.6	296.7	1,346.4	0.0	0.0
55.00		366.4	926.6					0.0	1,177.7	366.4	2,104.3	0.0	0.0
60.00		369.7	902.9					0.0	1,177.7	369.7	2,080.6	0.0	0.0
65.00		372.2	879.2					0.0	1,177.7	372.2	2,056.9	0.0	0.0
70.00		374.0	855.5					0.0	1,177.7	374.0	2,033.2	0.0	0.0
75.00		224.9	831.8					0.0	1,177.7	224.9	2,009.5	0.0	0.0
76.00	Appertunance(s)	187.8	163.5	178.9	0.0	0.0	180.7	0.0	235.5	366.7	579.8	0.0	0.0
80.00		211.2	644.6					0.0	941.4	211.2	1,586.0	0.0	0.0
81.62	Bot - Section 3	190.3	257.3					0.0	382.1	190.3	639.3	0.0	0.0
85.00		181.9	975.8					0.0	794.7	181.9	1,770.5	0.0	0.0
86.37	Top - Section 2	190.3	391.2					0.0	323.2	190.3	714.4	0.0	0.0
90.00		327.3	467.9					0.0	853.5	327.3	1,321.5	0.0	0.0
95.00		378.6	628.1					0.0	1,176.8	378.6	1,804.8	0.0	0.0
100.00	Appertunance(s)	377.3	608.3	338.1	0.0	537.9	211.8	0.0	1,176.8	715.4	1,996.9	0.0	0.0
105.00		193.0	588.6					0.0	1,174.8	193.0	1,763.3	0.0	0.0
105.13	Reinf. Top	187.4	14.5					0.0	29.4	187.4	43.8	0.0	0.0
110.00	Appertunance(s)	360.0	554.3	557.9	0.0	0.0	365.5	0.0	754.6	917.9	1,674.5	0.0	0.0
115.00		336.5	549.1					0.0	631.9	336.5	1,181.0	0.0	0.0
120.00	Appertunance(s)	316.6	529.3	2,173.9	0.0	0.0	2,763.2	0.0	371.4	2,490.5	3,663.9	0.0	0.0
125.00		161.3	509.5					0.0	333.2	161.3	842.8	0.0	0.0
125.12	Bot - Section 4	123.1	12.3					0.0	8.2	123.1	20.5	0.0	0.0
128.87	Top - Section 3	154.5	670.7					0.0	249.9	154.5	920.6	0.0	0.0
130.00		97.7	89.0					0.0	75.1	97.7	164.1	0.0	0.0
132.00	Appertunance(s)	155.5	156.0	2,046.0	0.0	0.0	2,059.6	0.0	133.3	2,201.4	2,348.8	0.0	0.0
135.00		185.3	229.2					0.0	161.8	185.3	391.0	0.0	0.0
138.00	Appertunance(s)	153.4	223.5	1,033.8	0.0	0.0	970.8	0.0	161.8	1,187.1	1,356.1	0.0	0.0
140.00		91.5	145.8					0.0	106.8	91.5	252.6	0.0	0.0
141.00	Appertunance(s)	151.1	72.0	2,781.5	0.0	1,728.1	2,266.1	0.0	53.4	2,932.6	2,391.4	0.0	0.0
145.00		210.3	281.6					0.0	160.1	210.3	441.7	0.0	0.0
148.00	Appertunance(s)	89.6	204.5	196.4	0.0	0.0	240.0	0.0	120.1	286.0	564.6	0.0	0.0
Totals:										19,623.4	62,854.6	0.00	0.00

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

2/15/2017 1:49:32 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

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	-67.12	-24.23	0.00	-2,818.30	0.00	2,818.30	4,773.35	2,386.68	9,316.44	4,665.14	0.00	0.00	0.445
5.00	-64.92	-24.06	0.00	-2,697.14	0.00	2,697.14	4,702.37	2,351.19	8,987.95	4,500.66	0.08	-0.15	0.438
10.00	-62.75	-23.88	0.00	-2,576.83	0.00	2,576.83	4,630.27	2,315.13	8,663.09	4,337.98	0.32	-0.30	0.431
15.00	-60.24	-23.68	0.00	-2,457.42	0.00	2,457.42	4,557.03	2,278.52	8,341.98	4,177.19	0.71	-0.45	0.423
20.00	-57.75	-23.48	0.00	-2,339.00	0.00	2,339.00	4,482.67	2,241.34	8,024.78	4,018.36	1.27	-0.61	0.415
25.00	-55.29	-23.27	0.00	-2,221.61	0.00	2,221.61	4,403.56	2,201.78	7,705.28	3,858.37	1.99	-0.76	0.407
30.00	-52.86	-23.04	0.00	-2,105.29	0.00	2,105.29	4,302.92	2,151.46	7,355.37	3,683.15	2.87	-0.92	0.400
35.00	-50.45	-22.80	0.00	-1,990.07	0.00	1,990.07	4,202.28	2,101.14	7,013.59	3,512.01	3.91	-1.07	0.392
40.00	-48.10	-22.62	0.00	-1,876.07	0.00	1,876.07	4,101.65	2,050.82	6,679.95	3,344.94	5.12	-1.23	0.384
41.16	-47.54	-22.50	0.00	-1,849.75	0.00	1,849.75	4,078.23	2,039.12	6,603.48	3,306.65	5.42	-1.27	0.382
45.00	-45.01	-22.31	0.00	-1,763.42	0.00	1,763.42	4,001.01	2,000.51	6,354.43	3,181.94	6.49	-1.39	0.371
46.83	-43.80	-22.16	0.00	-1,722.59	0.00	1,722.59	3,410.94	1,705.47	5,490.25	2,749.21	7.03	-1.45	0.405
50.00	-42.41	-21.93	0.00	-1,652.34	0.00	1,652.34	3,371.32	1,685.66	5,340.15	2,674.05	8.03	-1.55	0.396
55.00	-40.26	-21.62	0.00	-1,542.70	0.00	1,542.70	3,307.92	1,653.96	5,106.10	2,556.85	9.73	-1.71	0.382
60.00	-38.13	-21.29	0.00	-1,434.62	0.00	1,434.62	3,242.50	1,621.25	4,874.14	2,440.69	11.61	-1.87	0.367
65.00	-36.03	-20.95	0.00	-1,328.17	0.00	1,328.17	3,156.24	1,578.12	4,616.98	2,311.92	13.66	-2.03	0.353
70.00	-33.95	-20.59	0.00	-1,223.42	0.00	1,223.42	3,069.98	1,534.99	4,366.78	2,186.64	15.88	-2.19	0.339
75.00	-31.92	-20.34	0.00	-1,120.45	0.00	1,120.45	2,983.72	1,491.86	4,123.56	2,064.84	18.26	-2.35	0.324
76.00	-31.33	-19.99	0.00	-1,100.11	0.00	1,100.11	2,966.47	1,483.23	4,075.75	2,040.91	18.76	-2.38	0.320
80.00	-29.72	-19.76	0.00	-1,020.13	0.00	1,020.13	2,897.46	1,448.73	3,887.31	1,946.54	20.81	-2.51	0.307
81.62	-29.07	-19.58	0.00	-988.06	0.00	988.06	2,869.45	1,434.73	3,812.10	1,908.88	21.67	-2.56	0.302
85.00	-27.28	-19.35	0.00	-921.94	0.00	921.94	2,811.20	1,405.60	3,658.02	1,831.73	23.51	-2.66	0.286
86.37	-26.55	-19.16	0.00	-895.36	0.00	895.36	2,342.68	1,171.34	3,095.01	1,549.81	24.28	-2.70	0.309
90.00	-25.21	-18.83	0.00	-825.86	0.00	825.86	2,304.43	1,152.21	2,976.95	1,490.69	26.37	-2.80	0.293
95.00	-23.38	-18.42	0.00	-731.73	0.00	731.73	2,249.56	1,124.78	2,815.20	1,409.69	29.39	-2.95	0.268
100.00	-21.38	-17.65	0.00	-639.10	0.00	639.10	2,177.68	1,088.84	2,637.27	1,320.60	32.55	-3.09	0.245
105.00	-19.61	-17.38	0.00	-550.87	0.00	550.87	2,105.79	1,052.90	2,465.16	1,234.41	35.85	-3.22	0.221
105.13	-19.56	-17.21	0.00	-548.70	0.00	548.70	2,103.99	1,052.00	2,460.93	1,232.29	35.94	-3.22	0.220
105.13	-19.56	-17.21	0.00	-548.70	0.00	548.70	2,103.99	1,052.00	2,460.93	1,232.29	35.94	-3.22	0.455
110.00	-17.89	-16.25	0.00	-464.79	0.00	464.79	2,033.91	1,016.95	2,298.85	1,151.13	39.29	-3.34	0.413
115.00	-16.67	-15.91	0.00	-383.53	0.00	383.53	1,962.02	981.01	2,138.35	1,070.76	42.90	-3.56	0.367
120.00	-13.13	-13.23	0.00	-303.98	0.00	303.98	1,890.14	945.07	1,983.66	993.30	46.75	-3.77	0.313
125.00	-12.28	-13.04	0.00	-237.81	0.00	237.81	1,818.26	909.13	1,834.77	918.75	50.79	-3.95	0.266
125.12	-12.25	-12.93	0.00	-236.20	0.00	236.20	1,816.48	908.24	1,831.17	916.95	50.90	-3.96	0.265
128.87	-11.33	-12.72	0.00	-187.73	0.00	187.73	1,443.09	721.55	1,448.31	725.23	54.05	-4.08	0.267
130.00	-11.16	-12.62	0.00	-173.40	0.00	173.40	1,430.26	715.13	1,422.41	712.26	55.02	-4.11	0.252
132.00	-8.97	-10.27	0.00	-148.16	0.00	148.16	1,407.26	703.63	1,376.79	689.42	56.75	-4.18	0.221
135.00	-8.58	-10.07	0.00	-117.35	0.00	117.35	1,372.75	686.38	1,309.76	655.86	59.40	-4.26	0.185
138.00	-7.30	-8.79	0.00	-87.16	0.00	87.16	1,338.25	669.12	1,244.41	623.13	62.10	-4.33	0.145
140.00	-7.06	-8.68	0.00	-69.58	0.00	69.58	1,315.24	657.62	1,201.77	601.78	63.92	-4.37	0.121
141.00	-4.89	-5.58	0.00	-59.17	0.00	59.17	1,303.74	651.87	1,180.73	591.24	64.84	-4.38	0.104
145.00	-4.46	-5.34	0.00	-36.87	0.00	36.87	1,257.74	628.87	1,098.42	550.03	68.53	-4.43	0.071
148.00	0.00	-4.97	0.00	-20.86	0.00	20.86	1,223.23	611.62	1,038.64	520.09	71.32	-4.46	0.040

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

2/15/2017 1:49:33 PM

Customer: SPRINT NEXTEL

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

Applied Segment Forces Summary

		Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
Seg			Dead		Torsion	Moment	Dead			Dead	Torsion	Moment	
Elev		Wind FX	Load	Wind FX	MY	MZ	Load	Wind FX	Load	Wind FX	Load	MY	MZ
(ft)	Description	(lb)	(lb)	(lb)	(lb-ft)	(lb-ft)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb-ft)	(lb)
0.00		169.3	0.0					0.0	0.0	169.3	0.0	0.0	0.0
5.00		335.1	1,000.9					0.0	601.2	335.1	1,602.1	0.0	0.0
10.00		328.2	980.2					0.0	601.2	328.2	1,581.4	0.0	0.0
15.00		321.2	959.4					0.0	883.3	321.2	1,842.7	0.0	0.0
20.00		314.3	938.7					0.0	883.3	314.3	1,822.0	0.0	0.0
25.00		307.3	918.0					0.0	883.3	307.3	1,801.2	0.0	0.0
30.00		303.9	897.2					0.0	883.3	303.9	1,780.5	0.0	0.0
35.00		306.7	876.5					0.0	883.3	306.7	1,759.7	0.0	0.0
40.00		190.9	855.7					0.0	883.3	190.9	1,739.0	0.0	0.0
41.16	Bot - Section 2	158.7	196.1					0.0	205.5	158.7	401.6	0.0	0.0
45.00		181.1	1,197.8					0.0	677.7	181.1	1,875.6	0.0	0.0
46.83	Top - Section 1	160.5	563.3					0.0	323.3	160.5	886.6	0.0	0.0
50.00		263.0	449.8					0.0	560.0	263.0	1,009.8	0.0	0.0
55.00		322.3	695.0					0.0	883.3	322.3	1,578.2	0.0	0.0
60.00		322.0	677.2					0.0	883.3	322.0	1,560.4	0.0	0.0
65.00		320.8	659.4					0.0	883.3	320.8	1,542.7	0.0	0.0
70.00		318.8	641.6					0.0	883.3	318.8	1,524.9	0.0	0.0
75.00		190.4	623.8					0.0	883.3	190.4	1,507.1	0.0	0.0
76.00	Appertunance(s)	157.3	122.6	178.9	0.0	0.0	135.5	0.0	176.7	336.2	434.8	0.0	0.0
80.00		176.4	483.4					0.0	706.1	176.4	1,189.5	0.0	0.0
81.62	Bot - Section 3	157.5	192.9					0.0	286.5	157.5	479.5	0.0	0.0
85.00		150.0	731.8					0.0	596.0	150.0	1,327.9	0.0	0.0
86.37	Top - Section 2	156.4	293.4					0.0	242.4	156.4	535.8	0.0	0.0
90.00		267.4	350.9					0.0	640.2	267.4	991.1	0.0	0.0
95.00		305.7	471.1					0.0	882.6	305.7	1,353.6	0.0	0.0
100.00	Appertunance(s)	300.4	456.2	338.1	0.0	537.9	158.8	0.0	882.6	638.5	1,497.7	0.0	0.0
105.00		152.5	441.4					0.0	881.1	152.5	1,322.5	0.0	0.0
105.13	Reinf. Top	145.9	10.8					0.0	22.0	145.9	32.9	0.0	0.0
110.00	Appertunance(s)	284.9	415.8	557.9	0.0	0.0	274.1	0.0	566.0	842.8	1,255.9	0.0	0.0
115.00		282.0	411.8					0.0	473.9	282.0	885.7	0.0	0.0
120.00	Appertunance(s)	275.1	397.0	2,173.9	0.0	0.0	2,072.4	0.0	278.5	2,449.1	2,747.9	0.0	0.0
125.00		139.1	382.2					0.0	249.9	139.1	632.1	0.0	0.0
125.12	Bot - Section 4	104.7	9.2					0.0	6.2	104.7	15.4	0.0	0.0
128.87	Top - Section 3	131.4	503.0					0.0	187.4	131.4	690.5	0.0	0.0
130.00		82.9	66.7					0.0	56.3	82.9	123.0	0.0	0.0
132.00	Appertunance(s)	131.0	117.0	2,046.0	0.0	0.0	1,544.7	0.0	100.0	2,176.9	1,761.6	0.0	0.0
135.00		154.8	171.9					0.0	121.4	154.8	293.3	0.0	0.0
138.00	Appertunance(s)	127.0	167.6	1,033.8	0.0	0.0	728.1	0.0	121.4	1,160.8	1,017.1	0.0	0.0
140.00		75.2	109.4					0.0	80.1	75.2	189.5	0.0	0.0
141.00	Appertunance(s)	122.9	54.0	2,781.5	0.0	1,728.1	1,699.6	0.0	40.0	2,904.4	1,793.6	0.0	0.0
145.00		169.6	211.2					0.0	120.1	169.6	331.3	0.0	0.0
148.00	Appertunance(s)	71.7	153.4	196.4	0.0	0.0	180.0	0.0	90.1	268.1	423.5	0.0	0.0
Totals:										18,242.8	47,141.0	0.00	0.00

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

2/15/2017 1:49:36 PM

Customer: SPRINT NEXTEL

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	-50.34	-22.82	0.00	-2,655.49	0.00	2,655.49	4,773.35	2,386.68	9,316.44	4,665.14	0.00	0.00	0.417
5.00	-48.68	-22.61	0.00	-2,541.38	0.00	2,541.38	4,702.37	2,351.19	8,987.95	4,500.66	0.08	-0.14	0.411
10.00	-47.04	-22.39	0.00	-2,428.34	0.00	2,428.34	4,630.27	2,315.13	8,663.09	4,337.98	0.30	-0.28	0.404
15.00	-45.15	-22.17	0.00	-2,316.40	0.00	2,316.40	4,557.03	2,278.52	8,341.98	4,177.19	0.67	-0.43	0.397
20.00	-43.27	-21.95	0.00	-2,205.55	0.00	2,205.55	4,482.67	2,241.34	8,024.78	4,018.36	1.20	-0.57	0.389
25.00	-41.42	-21.73	0.00	-2,095.80	0.00	2,095.80	4,403.56	2,201.78	7,705.28	3,858.37	1.87	-0.72	0.382
30.00	-39.59	-21.50	0.00	-1,987.16	0.00	1,987.16	4,302.92	2,151.46	7,355.37	3,683.15	2.70	-0.86	0.375
35.00	-37.78	-21.26	0.00	-1,879.65	0.00	1,879.65	4,202.28	2,101.14	7,013.59	3,512.01	3.69	-1.01	0.369
40.00	-36.01	-21.10	0.00	-1,773.33	0.00	1,773.33	4,101.65	2,050.82	6,679.95	3,344.94	4.82	-1.16	0.361
41.16	-35.58	-20.98	0.00	-1,748.79	0.00	1,748.79	4,078.23	2,039.12	6,603.48	3,306.65	5.11	-1.19	0.360
45.00	-33.68	-20.81	0.00	-1,668.31	0.00	1,668.31	4,001.01	2,000.51	6,354.43	3,181.94	6.12	-1.31	0.350
46.83	-32.77	-20.67	0.00	-1,630.24	0.00	1,630.24	3,410.94	1,705.47	5,490.25	2,749.21	6.63	-1.36	0.381
50.00	-31.73	-20.45	0.00	-1,564.72	0.00	1,564.72	3,371.32	1,685.66	5,340.15	2,674.05	7.57	-1.46	0.373
55.00	-30.10	-20.17	0.00	-1,462.48	0.00	1,462.48	3,307.92	1,653.96	5,106.10	2,556.85	9.18	-1.61	0.360
60.00	-28.50	-19.87	0.00	-1,361.66	0.00	1,361.66	3,242.50	1,621.25	4,874.14	2,440.69	10.95	-1.77	0.346
65.00	-26.91	-19.58	0.00	-1,262.29	0.00	1,262.29	3,156.24	1,578.12	4,616.98	2,311.92	12.89	-1.92	0.334
70.00	-25.35	-19.27	0.00	-1,164.41	0.00	1,164.41	3,069.98	1,534.99	4,366.78	2,186.64	14.99	-2.07	0.321
75.00	-23.82	-19.06	0.00	-1,068.06	0.00	1,068.06	2,983.72	1,491.86	4,123.56	2,064.84	17.24	-2.22	0.307
76.00	-23.38	-18.74	0.00	-1,049.00	0.00	1,049.00	2,966.47	1,483.23	4,075.75	2,040.91	17.71	-2.25	0.304
80.00	-22.17	-18.55	0.00	-974.04	0.00	974.04	2,897.46	1,448.73	3,887.31	1,946.54	19.65	-2.37	0.292
81.62	-21.67	-18.40	0.00	-943.94	0.00	943.94	2,869.45	1,434.73	3,812.10	1,908.88	20.46	-2.42	0.287
85.00	-20.33	-18.21	0.00	-881.82	0.00	881.82	2,811.20	1,405.60	3,658.02	1,831.73	22.21	-2.52	0.272
86.37	-19.78	-18.06	0.00	-856.81	0.00	856.81	2,342.68	1,171.34	3,095.01	1,549.81	22.94	-2.56	0.295
90.00	-18.77	-17.78	0.00	-791.32	0.00	791.32	2,304.43	1,152.21	2,976.95	1,490.69	24.92	-2.66	0.279
95.00	-17.39	-17.46	0.00	-702.40	0.00	702.40	2,249.56	1,124.78	2,815.20	1,409.69	27.78	-2.80	0.256
100.00	-15.89	-16.78	0.00	-614.58	0.00	614.58	2,177.68	1,088.84	2,637.27	1,320.60	30.78	-2.93	0.234
105.00	-14.55	-16.57	0.00	-530.68	0.00	530.68	2,105.79	1,052.90	2,465.16	1,234.41	33.91	-3.05	0.211
105.13	-14.51	-16.44	0.00	-528.61	0.00	528.61	2,103.99	1,052.00	2,460.93	1,232.29	33.99	-3.06	0.211
105.13	-14.51	-16.44	0.00	-528.61	0.00	528.61	2,103.99	1,052.00	2,460.93	1,232.29	33.99	-3.06	0.436
110.00	-13.26	-15.57	0.00	-448.46	0.00	448.46	2,033.91	1,016.95	2,298.85	1,151.13	37.17	-3.17	0.396
115.00	-12.33	-15.28	0.00	-370.60	0.00	370.60	1,962.02	981.01	2,138.35	1,070.76	40.61	-3.39	0.353
120.00	-9.70	-12.70	0.00	-294.18	0.00	294.18	1,890.14	945.07	1,983.66	993.30	44.26	-3.59	0.301
125.00	-9.06	-12.54	0.00	-230.66	0.00	230.66	1,818.26	909.13	1,834.77	918.75	48.12	-3.76	0.256
125.12	-9.04	-12.44	0.00	-229.12	0.00	229.12	1,816.48	908.24	1,831.17	916.95	48.21	-3.77	0.255
128.87	-8.34	-12.28	0.00	-182.46	0.00	182.46	1,443.09	721.55	1,448.31	725.23	51.22	-3.89	0.258
130.00	-8.21	-12.19	0.00	-168.63	0.00	168.63	1,430.26	715.13	1,422.41	712.26	52.14	-3.92	0.243
132.00	-6.59	-9.91	0.00	-144.24	0.00	144.24	1,407.26	703.63	1,376.79	689.42	53.80	-3.98	0.214
135.00	-6.30	-9.74	0.00	-114.52	0.00	114.52	1,372.75	686.38	1,309.76	655.86	56.32	-4.06	0.179
138.00	-5.36	-8.52	0.00	-85.30	0.00	85.30	1,338.25	669.12	1,244.41	623.13	58.90	-4.13	0.141
140.00	-5.17	-8.43	0.00	-68.27	0.00	68.27	1,315.24	657.62	1,201.77	601.78	60.63	-4.17	0.118
141.00	-3.59	-5.40	0.00	-58.11	0.00	58.11	1,303.74	651.87	1,180.73	591.24	61.51	-4.18	0.101
145.00	-3.27	-5.21	0.00	-36.50	0.00	36.50	1,257.74	628.87	1,098.42	550.03	65.03	-4.23	0.069
148.00	0.00	-4.96	0.00	-20.86	0.00	20.86	1,223.23	611.62	1,038.64	520.09	67.70	-4.26	0.040

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

2/15/2017 1:49:36 PM

Customer: SPRINT NEXTEL

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 0.75 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

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		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		59.2	0.0					0.0	0.0	59.2	0.0	0.0	0.0
5.00		117.5	1,684.4					0.0	865.3	117.5	2,549.7	0.0	0.0
10.00		115.7	1,690.5					0.0	872.5	115.7	2,563.0	0.0	0.0
15.00		113.6	1,675.2					0.0	1,545.0	113.6	3,220.2	0.0	0.0
20.00		111.5	1,652.9					0.0	1,559.5	111.5	3,212.4	0.0	0.0
25.00		109.3	1,626.9					0.0	1,570.8	109.3	3,197.7	0.0	0.0
30.00		108.4	1,598.7					0.0	1,580.1	108.4	3,178.8	0.0	0.0
35.00		109.7	1,568.9					0.0	1,588.1	109.7	3,157.0	0.0	0.0
40.00		68.4	1,537.9					0.0	1,595.1	68.4	3,133.0	0.0	0.0
41.16	Bot - Section 2	56.9	354.1					0.0	372.0	56.9	726.1	0.0	0.0
45.00		65.0	1,904.4					0.0	1,229.3	65.0	3,133.7	0.0	0.0
46.83	Top - Section 1	57.7	897.4					0.0	587.5	57.7	1,484.9	0.0	0.0
50.00		94.7	850.7					0.0	1,019.4	94.7	1,870.2	0.0	0.0
55.00		116.3	1,316.2					0.0	1,612.1	116.3	2,928.3	0.0	0.0
60.00		116.5	1,286.5					0.0	1,616.8	116.5	2,903.4	0.0	0.0
65.00		116.4	1,256.4					0.0	1,621.2	116.4	2,877.6	0.0	0.0
70.00		116.0	1,225.9					0.0	1,625.4	116.0	2,851.2	0.0	0.0
75.00		69.4	1,195.0					0.0	1,629.2	69.4	2,824.2	0.0	0.0
76.00	Appertunance(s)	57.5	236.1	48.2	0.0	0.0	221.6	0.0	326.3	105.7	784.0	0.0	0.0
80.00		64.5	929.4					0.0	1,289.5	64.5	2,218.8	0.0	0.0
81.62	Bot - Section 3	57.7	372.2					0.0	523.9	57.7	896.1	0.0	0.0
85.00		54.9	1,215.4					0.0	1,090.8	54.9	2,306.2	0.0	0.0
86.37	Top - Section 2	57.4	488.2					0.0	444.0	57.4	932.2	0.0	0.0
90.00		98.4	719.5					0.0	1,173.7	98.4	1,893.2	0.0	0.0
95.00		112.8	966.5					0.0	1,620.7	112.8	2,587.2	0.0	0.0
100.00	Appertunance(s)	111.3	938.4	101.2	0.0	220.0	329.9	0.0	1,623.4	212.5	2,891.7	0.0	0.0
105.00		56.6	910.1					0.0	1,599.3	56.6	2,509.4	0.0	0.0
105.13	Reinf. Top	54.3	22.5					0.0	40.0	54.3	62.5	0.0	0.0
110.00	Appertunance(s)	106.4	859.4	151.4	0.0	0.0	462.1	0.0	1,170.8	257.8	2,492.4	0.0	0.0
115.00		105.8	853.1					0.0	1,028.1	105.8	1,881.2	0.0	0.0
120.00	Appertunance(s)	103.6	824.3	562.5	0.0	0.0	4,762.4	0.0	708.3	666.1	6,295.0	0.0	0.0
125.00		52.5	795.4					0.0	583.6	52.5	1,379.0	0.0	0.0
125.12	Bot - Section 4	39.6	19.4					0.0	14.4	39.6	33.8	0.0	0.0
128.87	Top - Section 3	49.8	883.9					0.0	438.5	49.8	1,322.4	0.0	0.0
130.00		31.5	152.6					0.0	131.9	31.5	284.5	0.0	0.0
132.00	Appertunance(s)	49.9	267.4	529.4	0.0	0.0	3,818.4	0.0	234.2	579.3	4,320.0	0.0	0.0
135.00		59.1	392.9					0.0	313.5	59.1	706.4	0.0	0.0
138.00	Appertunance(s)	48.6	383.8	265.2	0.0	0.0	1,955.8	0.0	313.9	313.8	2,653.5	0.0	0.0
140.00		28.9	251.2					0.0	199.3	28.9	450.5	0.0	0.0
141.00	Appertunance(s)	47.3	124.3	720.9	0.0	392.1	4,565.5	0.0	99.7	768.3	4,789.5	0.0	0.0
145.00		65.5	484.4					0.0	319.0	65.5	803.4	0.0	0.0
148.00	Appertunance(s)	27.8	353.2	40.4	0.0	0.0	579.3	0.0	239.5	68.2	1,172.0	0.0	0.0
Totals:										5,682.92	91,476.4	0.00	0.00

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

2/15/2017 1:49:40 PM

Customer: SPRINT NEXTEL

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 0.75 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	-100.66	-6.79	0.00	-788.56	0.00	788.56	4,773.35	2,386.68	9,316.44	4,665.14	0.00	0.00	0.138
5.00	-98.11	-6.74	0.00	-754.64	0.00	754.64	4,702.37	2,351.19	8,987.95	4,500.66	0.02	-0.04	0.136
10.00	-95.54	-6.69	0.00	-720.95	0.00	720.95	4,630.27	2,315.13	8,663.09	4,337.98	0.09	-0.08	0.133
15.00	-92.31	-6.64	0.00	-687.49	0.00	687.49	4,557.03	2,278.52	8,341.98	4,177.19	0.20	-0.13	0.131
20.00	-89.10	-6.59	0.00	-654.29	0.00	654.29	4,482.67	2,241.34	8,024.78	4,018.36	0.36	-0.17	0.128
25.00	-85.90	-6.53	0.00	-621.36	0.00	621.36	4,403.56	2,201.78	7,705.28	3,858.37	0.56	-0.21	0.126
30.00	-82.71	-6.47	0.00	-588.70	0.00	588.70	4,302.92	2,151.46	7,355.37	3,683.15	0.80	-0.26	0.124
35.00	-79.55	-6.41	0.00	-556.33	0.00	556.33	4,202.28	2,101.14	7,013.59	3,512.01	1.09	-0.30	0.121
40.00	-76.41	-6.36	0.00	-524.28	0.00	524.28	4,101.65	2,050.82	6,679.95	3,344.94	1.43	-0.34	0.119
41.16	-75.69	-6.33	0.00	-516.89	0.00	516.89	4,078.23	2,039.12	6,603.48	3,306.65	1.52	-0.35	0.118
45.00	-72.55	-6.27	0.00	-492.61	0.00	492.61	4,001.01	2,000.51	6,354.43	3,181.94	1.82	-0.39	0.115
46.83	-71.06	-6.23	0.00	-481.13	0.00	481.13	3,410.94	1,705.47	5,490.25	2,749.21	1.97	-0.40	0.125
50.00	-69.19	-6.17	0.00	-461.37	0.00	461.37	3,371.32	1,685.66	5,340.15	2,674.05	2.25	-0.43	0.122
55.00	-66.26	-6.08	0.00	-430.52	0.00	430.52	3,307.92	1,653.96	5,106.10	2,556.85	2.72	-0.48	0.118
60.00	-63.35	-5.99	0.00	-400.11	0.00	400.11	3,242.50	1,621.25	4,874.14	2,440.69	3.25	-0.52	0.113
65.00	-60.47	-5.89	0.00	-370.15	0.00	370.15	3,156.24	1,578.12	4,616.98	2,311.92	3.82	-0.57	0.109
70.00	-57.62	-5.79	0.00	-340.68	0.00	340.68	3,069.98	1,534.99	4,366.78	2,186.64	4.44	-0.61	0.105
75.00	-54.79	-5.72	0.00	-311.71	0.00	311.71	2,983.72	1,491.86	4,123.56	2,064.84	5.11	-0.66	0.100
76.00	-54.01	-5.62	0.00	-305.99	0.00	305.99	2,966.47	1,483.23	4,075.75	2,040.91	5.24	-0.67	0.099
80.00	-51.79	-5.55	0.00	-283.50	0.00	283.50	2,897.46	1,448.73	3,887.31	1,946.54	5.82	-0.70	0.095
81.62	-50.89	-5.50	0.00	-274.48	0.00	274.48	2,869.45	1,434.73	3,812.10	1,908.88	6.06	-0.71	0.094
85.00	-48.58	-5.44	0.00	-255.89	0.00	255.89	2,811.20	1,405.60	3,658.02	1,831.73	6.57	-0.74	0.089
86.37	-47.65	-5.38	0.00	-248.43	0.00	248.43	2,342.68	1,171.34	3,095.01	1,549.81	6.79	-0.75	0.096
90.00	-45.75	-5.29	0.00	-228.90	0.00	228.90	2,304.43	1,152.21	2,976.95	1,490.69	7.37	-0.78	0.091
95.00	-43.16	-5.17	0.00	-202.46	0.00	202.46	2,249.56	1,124.78	2,815.20	1,409.69	8.21	-0.82	0.084
100.00	-40.27	-4.94	0.00	-176.40	0.00	176.40	2,177.68	1,088.84	2,637.27	1,320.60	9.10	-0.86	0.077
105.00	-37.76	-4.86	0.00	-151.70	0.00	151.70	2,105.79	1,052.90	2,465.16	1,234.41	10.02	-0.90	0.070
105.13	-37.70	-4.81	0.00	-151.09	0.00	151.09	2,103.99	1,052.00	2,460.93	1,232.29	10.04	-0.90	0.070
105.13	-37.70	-4.81	0.00	-151.09	0.00	151.09	2,103.99	1,052.00	2,460.93	1,232.29	10.04	-0.90	0.141
110.00	-35.21	-4.54	0.00	-127.63	0.00	127.63	2,033.91	1,016.95	2,298.85	1,151.13	10.97	-0.93	0.128
115.00	-33.32	-4.44	0.00	-104.91	0.00	104.91	1,962.02	981.01	2,138.35	1,070.76	11.98	-0.99	0.115
120.00	-27.04	-3.69	0.00	-82.71	0.00	82.71	1,890.14	945.07	1,983.66	993.30	13.05	-1.05	0.098
125.00	-25.66	-3.62	0.00	-64.27	0.00	64.27	1,818.26	909.13	1,834.77	918.75	14.18	-1.10	0.084
125.12	-25.62	-3.59	0.00	-63.82	0.00	63.82	1,816.48	908.24	1,831.17	916.95	14.21	-1.10	0.084
128.87	-24.30	-3.52	0.00	-50.36	0.00	50.36	1,443.09	721.55	1,448.31	725.23	15.08	-1.13	0.086
130.00	-24.02	-3.49	0.00	-46.40	0.00	46.40	1,430.26	715.13	1,422.41	712.26	15.35	-1.14	0.082
132.00	-19.71	-2.83	0.00	-39.42	0.00	39.42	1,407.26	703.63	1,376.79	689.42	15.83	-1.16	0.071
135.00	-19.00	-2.76	0.00	-30.93	0.00	30.93	1,372.75	686.38	1,309.76	655.86	16.57	-1.18	0.061
138.00	-16.36	-2.40	0.00	-22.63	0.00	22.63	1,338.25	669.12	1,244.41	623.13	17.31	-1.20	0.049
140.00	-15.91	-2.36	0.00	-17.84	0.00	17.84	1,315.24	657.62	1,201.77	601.78	17.82	-1.21	0.042
141.00	-11.13	-1.50	0.00	-15.08	0.00	15.08	1,303.74	651.87	1,180.73	591.24	18.07	-1.21	0.034
145.00	-10.33	-1.41	0.00	-9.10	0.00	9.10	1,257.74	628.87	1,098.42	550.03	19.09	-1.22	0.025
148.00	0.00	-1.19	0.00	-4.86	0.00	4.86	1,223.23	611.62	1,038.64	520.09	19.86	-1.23	0.009

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

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Customer: SPRINT NEXTEL

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		Discrete Forces			Linear Forces		Sum of Forces				
		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		44.0	0.0					0.0	0.0	44.0	0.0	0.0	0.0
5.00		87.2	1,112.1					0.0	668.0	87.2	1,780.1	0.0	0.0
10.00		85.4	1,089.1					0.0	668.0	85.4	1,757.1	0.0	0.0
15.00		83.6	1,066.1					0.0	981.4	83.6	2,047.4	0.0	0.0
20.00		81.8	1,043.0					0.0	981.4	81.8	2,024.4	0.0	0.0
25.00		79.9	1,020.0					0.0	981.4	79.9	2,001.3	0.0	0.0
30.00		79.1	996.9					0.0	981.4	79.1	1,978.3	0.0	0.0
35.00		79.8	973.9					0.0	981.4	79.8	1,955.3	0.0	0.0
40.00		49.7	950.8					0.0	981.4	49.7	1,932.2	0.0	0.0
41.16	Bot - Section 2	41.3	217.9					0.0	228.3	41.3	446.3	0.0	0.0
45.00		47.1	1,330.9					0.0	753.1	47.1	2,084.0	0.0	0.0
46.83	Top - Section 1	41.8	625.9					0.0	359.2	41.8	985.1	0.0	0.0
50.00		68.4	499.8					0.0	622.2	68.4	1,122.0	0.0	0.0
55.00		83.9	772.2					0.0	981.4	83.9	1,753.6	0.0	0.0
60.00		83.8	752.4					0.0	981.4	83.8	1,733.8	0.0	0.0
65.00		83.4	732.7					0.0	981.4	83.4	1,714.1	0.0	0.0
70.00		82.9	712.9					0.0	981.4	82.9	1,694.3	0.0	0.0
75.00		49.5	693.2					0.0	981.4	49.5	1,674.6	0.0	0.0
76.00	Appertunance(s)	40.9	136.3	46.5	0.0	0.0	150.6	0.0	196.3	87.5	483.1	0.0	0.0
80.00		45.9	537.1					0.0	784.5	45.9	1,321.7	0.0	0.0
81.62	Bot - Section 3	41.0	214.4					0.0	318.4	41.0	532.8	0.0	0.0
85.00		39.0	813.2					0.0	662.3	39.0	1,475.4	0.0	0.0
86.37	Top - Section 2	40.7	326.0					0.0	269.3	40.7	595.3	0.0	0.0
90.00		69.6	389.9					0.0	711.3	69.6	1,101.2	0.0	0.0
95.00		79.5	523.4					0.0	980.6	79.5	1,504.0	0.0	0.0
100.00	Appertunance(s)	78.2	506.9	87.9	0.0	139.9	176.5	0.0	980.6	166.1	1,664.1	0.0	0.0
105.00		39.7	490.5					0.0	979.0	39.7	1,469.5	0.0	0.0
105.13	Reinf. Top	37.9	12.1					0.0	24.5	37.9	36.5	0.0	0.0
110.00	Appertunance(s)	74.1	462.0	145.1	0.0	0.0	304.6	0.0	628.9	219.2	1,395.4	0.0	0.0
115.00		73.4	457.5					0.0	526.6	73.4	984.1	0.0	0.0
120.00	Appertunance(s)	71.6	441.1	565.5	0.0	0.0	2,302.7	0.0	309.5	637.1	3,053.3	0.0	0.0
125.00		36.2	424.6					0.0	277.7	36.2	702.3	0.0	0.0
125.12	Bot - Section 4	27.2	10.3					0.0	6.8	27.2	17.1	0.0	0.0
128.87	Top - Section 3	34.2	558.9					0.0	208.3	34.2	767.2	0.0	0.0
130.00		21.6	74.1					0.0	62.6	21.6	136.7	0.0	0.0
132.00	Appertunance(s)	34.1	130.0	532.2	0.0	0.0	1,716.3	0.0	111.1	566.3	1,957.3	0.0	0.0
135.00		40.3	191.0					0.0	134.8	40.3	325.8	0.0	0.0
138.00	Appertunance(s)	33.0	186.2	268.9	0.0	0.0	809.0	0.0	134.8	302.0	1,130.1	0.0	0.0
140.00		19.6	121.5					0.0	89.0	19.6	210.5	0.0	0.0
141.00	Appertunance(s)	32.0	60.0	723.6	0.0	449.6	1,888.4	0.0	44.5	755.6	1,992.9	0.0	0.0
145.00		44.1	234.6					0.0	133.4	44.1	368.1	0.0	0.0
148.00	Appertunance(s)	18.6	170.4	51.1	0.0	0.0	200.0	0.0	100.1	69.7	470.5	0.0	0.0
Totals:										4,745.79	52,378.9	0.00	0.00

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

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Customer: SPRINT NEXTEL

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	-55.96	-5.94	0.00	-694.33	0.00	694.33	4,773.35	2,386.68	9,316.44	4,665.14	0.00	0.00	0.116
5.00	-54.18	-5.89	0.00	-664.64	0.00	664.64	4,702.37	2,351.19	8,987.95	4,500.66	0.02	-0.04	0.114
10.00	-52.42	-5.83	0.00	-635.21	0.00	635.21	4,630.27	2,315.13	8,663.09	4,337.98	0.08	-0.07	0.112
15.00	-50.36	-5.78	0.00	-606.05	0.00	606.05	4,557.03	2,278.52	8,341.98	4,177.19	0.18	-0.11	0.110
20.00	-48.34	-5.72	0.00	-577.15	0.00	577.15	4,482.67	2,241.34	8,024.78	4,018.36	0.31	-0.15	0.108
25.00	-46.33	-5.67	0.00	-548.53	0.00	548.53	4,403.56	2,201.78	7,705.28	3,858.37	0.49	-0.19	0.106
30.00	-44.35	-5.61	0.00	-520.18	0.00	520.18	4,302.92	2,151.46	7,355.37	3,683.15	0.71	-0.23	0.104
35.00	-42.39	-5.55	0.00	-492.11	0.00	492.11	4,202.28	2,101.14	7,013.59	3,512.01	0.96	-0.26	0.102
40.00	-40.46	-5.51	0.00	-464.35	0.00	464.35	4,101.65	2,050.82	6,679.95	3,344.94	1.26	-0.30	0.100
41.16	-40.01	-5.48	0.00	-457.93	0.00	457.93	4,078.23	2,039.12	6,603.48	3,306.65	1.34	-0.31	0.100
45.00	-37.92	-5.44	0.00	-436.90	0.00	436.90	4,001.01	2,000.51	6,354.43	3,181.94	1.60	-0.34	0.097
46.83	-36.94	-5.40	0.00	-426.95	0.00	426.95	3,410.94	1,705.47	5,490.25	2,749.21	1.74	-0.36	0.106
50.00	-35.81	-5.35	0.00	-409.83	0.00	409.83	3,371.32	1,685.66	5,340.15	2,674.05	1.98	-0.38	0.103
55.00	-34.05	-5.28	0.00	-383.09	0.00	383.09	3,307.92	1,653.96	5,106.10	2,556.85	2.40	-0.42	0.100
60.00	-32.32	-5.20	0.00	-356.72	0.00	356.72	3,242.50	1,621.25	4,874.14	2,440.69	2.87	-0.46	0.096
65.00	-30.60	-5.12	0.00	-330.72	0.00	330.72	3,156.24	1,578.12	4,616.98	2,311.92	3.37	-0.50	0.093
70.00	-28.90	-5.05	0.00	-305.10	0.00	305.10	3,069.98	1,534.99	4,366.78	2,186.64	3.92	-0.54	0.089
75.00	-27.23	-4.99	0.00	-279.87	0.00	279.87	2,983.72	1,491.86	4,123.56	2,064.84	4.51	-0.58	0.085
76.00	-26.74	-4.91	0.00	-274.88	0.00	274.88	2,966.47	1,483.23	4,075.75	2,040.91	4.63	-0.59	0.084
80.00	-25.42	-4.86	0.00	-255.25	0.00	255.25	2,897.46	1,448.73	3,887.31	1,946.54	5.14	-0.62	0.081
81.62	-24.89	-4.82	0.00	-247.36	0.00	247.36	2,869.45	1,434.73	3,812.10	1,908.88	5.36	-0.63	0.080
85.00	-23.41	-4.77	0.00	-231.09	0.00	231.09	2,811.20	1,405.60	3,658.02	1,831.73	5.81	-0.66	0.076
86.37	-22.81	-4.73	0.00	-224.54	0.00	224.54	2,342.68	1,171.34	3,095.01	1,549.81	6.00	-0.67	0.082
90.00	-21.71	-4.66	0.00	-207.39	0.00	207.39	2,304.43	1,152.21	2,976.95	1,490.69	6.52	-0.70	0.078
95.00	-20.21	-4.57	0.00	-184.09	0.00	184.09	2,249.56	1,124.78	2,815.20	1,409.69	7.27	-0.73	0.071
100.00	-18.54	-4.40	0.00	-161.08	0.00	161.08	2,177.68	1,088.84	2,637.27	1,320.60	8.06	-0.77	0.065
105.00	-17.07	-4.34	0.00	-139.10	0.00	139.10	2,105.79	1,052.90	2,465.16	1,234.41	8.88	-0.80	0.059
105.13	-17.03	-4.31	0.00	-138.55	0.00	138.55	2,103.99	1,052.00	2,460.93	1,232.29	8.90	-0.80	0.059
105.13	-17.03	-4.31	0.00	-138.55	0.00	138.55	2,103.99	1,052.00	2,460.93	1,232.29	8.90	-0.80	0.121
110.00	-15.64	-4.08	0.00	-117.55	0.00	117.55	2,033.91	1,016.95	2,298.85	1,151.13	9.73	-0.83	0.110
115.00	-14.65	-4.01	0.00	-97.15	0.00	97.15	1,962.02	981.01	2,138.35	1,070.76	10.63	-0.89	0.098
120.00	-11.61	-3.33	0.00	-77.11	0.00	77.11	1,890.14	945.07	1,983.66	993.30	11.59	-0.94	0.084
125.00	-10.90	-3.29	0.00	-60.45	0.00	60.45	1,818.26	909.13	1,834.77	918.75	12.60	-0.99	0.072
125.12	-10.89	-3.26	0.00	-60.05	0.00	60.05	1,816.48	908.24	1,831.17	916.95	12.63	-0.99	0.071
128.87	-10.12	-3.22	0.00	-47.81	0.00	47.81	1,443.09	721.55	1,448.31	725.23	13.42	-1.02	0.073
130.00	-9.98	-3.20	0.00	-44.18	0.00	44.18	1,430.26	715.13	1,422.41	712.26	13.66	-1.03	0.069
132.00	-8.03	-2.60	0.00	-37.79	0.00	37.79	1,407.26	703.63	1,376.79	689.42	14.09	-1.04	0.061
135.00	-7.71	-2.56	0.00	-29.99	0.00	29.99	1,372.75	686.38	1,309.76	655.86	14.75	-1.06	0.051
138.00	-6.58	-2.23	0.00	-22.33	0.00	22.33	1,338.25	669.12	1,244.41	623.13	15.43	-1.08	0.041
140.00	-6.37	-2.21	0.00	-17.86	0.00	17.86	1,315.24	657.62	1,201.77	601.78	15.88	-1.09	0.035
141.00	-4.39	-1.42	0.00	-15.20	0.00	15.20	1,303.74	651.87	1,180.73	591.24	16.11	-1.10	0.029
145.00	-4.03	-1.37	0.00	-9.53	0.00	9.53	1,257.74	628.87	1,098.42	550.03	17.04	-1.11	0.021
148.00	0.00	-1.29	0.00	-5.43	0.00	5.43	1,223.23	611.62	1,038.64	520.09	17.73	-1.12	0.010

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

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Customer: SPRINT NEXTEL

Equivalent Lateral Forces Method Analysis

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

Spectral Response Acceleration for Short Period (S_s):	0.25
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.07
Long-Period Transition Period (T_L):	6
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}):	0.27
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.11
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):	2.42
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.96
Total Unfactored Dead Load:	55.96 k
Seismic Base Shear (E):	2.22 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)
41	146.50	271	4,717	0.013	29	339
40	143.00	368	6,121	0.017	38	461
39	140.50	104	1,678	0.005	10	131
38	139.00	211	3,312	0.009	20	264
37	136.50	321	4,875	0.014	30	402
36	133.50	326	4,736	0.013	29	408
35	131.00	241	3,376	0.009	21	302
34	129.44	137	1,870	0.005	12	171
33	127.00	767	10,112	0.028	63	961
32	125.06	17	219	0.001	1	21
31	122.50	702	8,626	0.024	53	880
30	117.50	751	8,496	0.024	53	941
29	112.50	984	10,230	0.029	63	1,233
28	107.56	1,091	10,385	0.029	64	1,367
27	105.06	37	332	0.001	2	46
26	102.50	1,469	12,730	0.036	79	1,841
25	97.50	1,488	11,685	0.033	72	1,864
24	92.50	1,504	10,657	0.030	66	1,885
23	88.19	1,101	7,106	0.020	44	1,380
22	85.69	595	3,631	0.010	22	746
21	83.31	1,475	8,517	0.024	53	1,849
20	80.81	533	2,897	0.008	18	668
19	78.00	1,322	6,706	0.019	41	1,656

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

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Customer: SPRINT NEXTEL

18	75.50	333	1,583	0.004	10	417
17	72.50	1,675	7,363	0.021	46	2,098
16	67.50	1,694	6,477	0.018	40	2,123
15	62.50	1,714	5,636	0.016	35	2,148
14	57.50	1,734	4,842	0.014	30	2,173
13	52.50	1,754	4,098	0.011	25	2,197
12	48.42	1,122	2,237	0.006	14	1,406
11	45.92	985	1,771	0.005	11	1,234
10	43.08	2,084	3,307	0.009	20	2,611
9	40.58	446	630	0.002	4	559
8	37.50	1,932	2,336	0.007	14	2,421
7	32.50	1,955	1,786	0.005	11	2,450
6	27.50	1,978	1,303	0.004	8	2,479
5	22.50	2,001	890	0.002	6	2,508
4	17.50	2,024	550	0.002	3	2,537
3	12.50	2,047	288	0.001	2	2,566
2	7.50	1,757	91	0.000	1	2,202
1	2.50	1,780	11	0.000	0	2,231
Commscope ATSBT-TOP-	159.00	5	111	0.000	1	7
Andrew E15S09P94	159.00	44	896	0.003	6	55
RFS ATMAP1412D-1A20	159.00	39	798	0.002	5	49
Andrew SBNHH-1D65B	159.00	152	3,113	0.009	19	191
Powerwave Allgon LGP	151.00	169	3,130	0.009	19	212
Raycap DC6-48-60-18-	151.00	40	740	0.002	5	50
Ericsson RRUS 11 (Ba	151.00	165	3,052	0.009	19	207
Ericsson RRUS 32	151.00	152	2,819	0.008	17	191
Ericsson RRUS 32 B2	151.00	159	2,941	0.008	18	199
Powerwave Allgon 777	151.00	105	1,942	0.005	12	132
Quintel QS66512-2	151.00	333	6,160	0.017	38	417
CCI OPA-65R-LCUU-H6	151.00	219	4,051	0.011	25	274
Flat Platform w/ Han	151.00	2,000	36,999	0.103	229	2,506
Pipe Mount	148.00	200	3,557	0.010	22	251
RFS FD9R6004	141.00	19	301	0.001	2	23
Alcatel-Lucent RRH2x	141.00	132	2,135	0.006	13	165
Antel BXA-171063/8CF	141.00	32	510	0.001	3	39
Ryma MGD3-800T0	141.00	59	961	0.003	6	74
RFS DB-T1-6Z-8AB-0Z	141.00	44	712	0.002	4	55
Antel BXA-80063-6BF-	141.00	19	311	0.001	2	24
Antel BXA-70063/6CF	141.00	17	275	0.001	2	21
Antel BXA-70063/6CF	141.00	45	723	0.002	4	56
Antel BXA-80080/6CF	141.00	22	356	0.001	2	28
Flat Low Profile Pla	141.00	1,500	24,265	0.068	150	1,880
DragonWave Horizon C	138.00	11	164	0.000	1	13
NextNet BTS-2500	138.00	105	1,628	0.005	10	132
Argus LLPX310R	138.00	86	1,331	0.004	8	108
DragonWave A-ANT-18G	138.00	48	738	0.002	5	60
Side Arms	138.00	560	8,685	0.024	54	702
KMW KMDAPS2040000 (E	132.00	48	678	0.002	4	60
KMW AM-X-WM-17-65-00	132.00	43	606	0.002	4	53
Decibel DB844H90E-XY	132.00	126	1,791	0.005	11	158
Flat Low Profile Pla	132.00	1,500	21,325	0.060	132	1,880
Box Enclosures BEN-9	120.00	4	52	0.000	0	6
Nokia FWHR	120.00	79	938	0.003	6	100
Alcatel-Lucent 800 M	120.00	192	2,265	0.006	14	241
Alcatel-Lucent 4x40W	120.00	273	3,220	0.009	20	342
Commscope LLPX310R-V	120.00	83	977	0.003	6	104
RFS APXVSP18-C-A20	120.00	171	2,017	0.006	12	214
Flat Low Profile Pla	120.00	1,500	17,694	0.049	109	1,880
Diamond X50A	110.00	5	46	0.000	0	6
Flat Side Arm	110.00	300	2,984	0.008	18	376
Antel BCD-87010 ____	100.00	26	219	0.001	1	33
Flat Side Arm	100.00	150	1,238	0.003	8	188
PCTEL GPS-TMG-HR-26N	76.00	1	3	0.000	0	1
Round Side Arm	76.00	150	723	0.002	4	188

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

2/15/2017 1:49:44 PM

Customer: SPRINT NEXTEL

55,962

358,396

1.000

2,216

70,127

Load Case (0.9 - 0.2Sds) * DL + E ELFMSeismic (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)
41	146.50	271	4,717	0.013	29	229
40	143.00	368	6,121	0.017	38	312
39	140.50	104	1,678	0.005	10	88
38	139.00	211	3,312	0.009	20	178
37	136.50	321	4,875	0.014	30	272
36	133.50	326	4,736	0.013	29	276
35	131.00	241	3,376	0.009	21	204
34	129.44	137	1,870	0.005	12	116
33	127.00	767	10,112	0.028	63	650
32	125.06	17	219	0.001	1	14
31	122.50	702	8,626	0.024	53	595
30	117.50	751	8,496	0.024	53	636
29	112.50	984	10,230	0.029	63	833
28	107.56	1,091	10,385	0.029	64	924
27	105.06	37	332	0.001	2	31
26	102.50	1,469	12,730	0.036	79	1,244
25	97.50	1,488	11,685	0.033	72	1,260
24	92.50	1,504	10,657	0.030	66	1,274
23	88.19	1,101	7,106	0.020	44	933
22	85.69	595	3,631	0.010	22	504
21	83.31	1,475	8,517	0.024	53	1,250
20	80.81	533	2,897	0.008	18	451
19	78.00	1,322	6,706	0.019	41	1,119
18	75.50	333	1,583	0.004	10	282
17	72.50	1,675	7,363	0.021	46	1,418
16	67.50	1,694	6,477	0.018	40	1,435
15	62.50	1,714	5,636	0.016	35	1,452
14	57.50	1,734	4,842	0.014	30	1,468
13	52.50	1,754	4,098	0.011	25	1,485
12	48.42	1,122	2,237	0.006	14	950
11	45.92	985	1,771	0.005	11	834
10	43.08	2,084	3,307	0.009	20	1,765
9	40.58	446	630	0.002	4	378
8	37.50	1,932	2,336	0.007	14	1,636
7	32.50	1,955	1,786	0.005	11	1,656
6	27.50	1,978	1,303	0.004	8	1,675
5	22.50	2,001	890	0.002	6	1,695
4	17.50	2,024	550	0.002	3	1,714
3	12.50	2,047	288	0.001	2	1,734
2	7.50	1,757	91	0.000	1	1,488
1	2.50	1,780	11	0.000	0	1,508
Commscope ATSBT-TOP-	159.00	5	111	0.000	1	5
Andrew E15S09P94	159.00	44	896	0.003	6	37
RFS ATMAP1412D-1A20	159.00	39	798	0.002	5	33
Andrew SBNHH-1D65B	159.00	152	3,113	0.009	19	129
Powerwave Allgon LGP	151.00	169	3,130	0.009	19	143
Raycap DC6-48-60-18-	151.00	40	740	0.002	5	34
Ericsson RRUS 11 (Ba	151.00	165	3,052	0.009	19	140
Ericsson RRUS 32	151.00	152	2,819	0.008	17	129
Ericsson RRUS 32 B2	151.00	159	2,941	0.008	18	135
Powerwave Allgon 777	151.00	105	1,942	0.005	12	89
Quintel QS66512-2	151.00	333	6,160	0.017	38	282
CCI OPA-65R-LCUU-H6	151.00	219	4,051	0.011	25	185
Flat Platform w/ Han	151.00	2,000	36,999	0.103	229	1,694

Site Number: 302515

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

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Customer: SPRINT NEXTEL

Pipe Mount	148.00	200	3,557	0.010	22	169
RFS FD9R6004	141.00	19	301	0.001	2	16
Alcatel-Lucent RRH2x	141.00	132	2,135	0.006	13	112
Antel BXA-171063/8CF	141.00	32	510	0.001	3	27
Rymsa MGD3-800T0	141.00	59	961	0.003	6	50
RFS DB-T1-6Z-8AB-0Z	141.00	44	712	0.002	4	37
Antel BXA-80063-6BF-	141.00	19	311	0.001	2	16
Antel BXA-70063/6CF	141.00	17	275	0.001	2	14
Antel BXA-70063/6CF	141.00	45	723	0.002	4	38
Antel BXA-80080/6CF	141.00	22	356	0.001	2	19
Flat Low Profile Pla	141.00	1,500	24,265	0.068	150	1,270
DragonWave Horizon C	138.00	11	164	0.000	1	9
NextNet BTS-2500	138.00	105	1,628	0.005	10	89
Argus LLPX310R	138.00	86	1,331	0.004	8	73
DragonWave A-ANT-18G	138.00	48	738	0.002	5	40
Side Arms	138.00	560	8,685	0.024	54	474
KMW KMDAPS2040000 (E	132.00	48	678	0.002	4	40
KMW AM-X-WM-17-65-00	132.00	43	606	0.002	4	36
Decibel DB844H90E-XY	132.00	126	1,791	0.005	11	107
Flat Low Profile Pla	132.00	1,500	21,325	0.060	132	1,270
Box Enclosures BEN-9	120.00	4	52	0.000	0	4
Nokia FWHR	120.00	79	938	0.003	6	67
Alcatel-Lucent 800 M	120.00	192	2,265	0.006	14	163
Alcatel-Lucent 4x40W	120.00	273	3,220	0.009	20	231
Commscope LLPX310R-V	120.00	83	977	0.003	6	70
RFS APXVSP18-C-A20	120.00	171	2,017	0.006	12	145
Flat Low Profile Pla	120.00	1,500	17,694	0.049	109	1,270
Diamond X50A	110.00	5	46	0.000	0	4
Flat Side Arm	110.00	300	2,984	0.008	18	254
Antel BCD-87010 ____	100.00	26	219	0.001	1	22
Flat Side Arm	100.00	150	1,238	0.003	8	127
PCTEL GPS-TMG-HR-26N	76.00	1	3	0.000	0	1
Round Side Arm	76.00	150	723	0.002	4	127
		55,962	358,396	1.000	2,216	47,393

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

2/15/2017 1:49:44 PM

Customer: SPRINT NEXTEL

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	-63.41	-1.81	0.00	-202.13	0.00	202.13	4,773.35	2,386.68	9,316.44	4,665.14	0.00	0.00	0.041
5.00	-61.20	-1.82	0.00	-193.10	0.00	193.10	4,702.37	2,351.19	8,987.95	4,500.66	0.01	-0.01	0.041
10.00	-58.64	-1.83	0.00	-184.00	0.00	184.00	4,630.27	2,315.13	8,663.09	4,337.98	0.02	-0.02	0.040
15.00	-56.10	-1.83	0.00	-174.87	0.00	174.87	4,557.03	2,278.52	8,341.98	4,177.19	0.05	-0.03	0.039
20.00	-53.59	-1.84	0.00	-165.70	0.00	165.70	4,482.67	2,241.34	8,024.78	4,018.36	0.09	-0.04	0.038
25.00	-51.11	-1.84	0.00	-156.52	0.00	156.52	4,403.56	2,201.78	7,705.28	3,858.37	0.14	-0.05	0.037
30.00	-48.66	-1.83	0.00	-147.34	0.00	147.34	4,302.92	2,151.46	7,355.37	3,683.15	0.20	-0.07	0.036
35.00	-46.24	-1.82	0.00	-138.18	0.00	138.18	4,202.28	2,101.14	7,013.59	3,512.01	0.28	-0.08	0.035
40.00	-45.68	-1.82	0.00	-129.07	0.00	129.07	4,101.65	2,050.82	6,679.95	3,344.94	0.36	-0.09	0.034
41.16	-43.07	-1.80	0.00	-126.95	0.00	126.95	4,078.23	2,039.12	6,603.48	3,306.65	0.39	-0.09	0.033
45.00	-41.84	-1.79	0.00	-120.03	0.00	120.03	4,001.01	2,000.51	6,354.43	3,181.94	0.46	-0.10	0.032
46.83	-40.43	-1.78	0.00	-116.75	0.00	116.75	3,410.94	1,705.47	5,490.25	2,749.21	0.50	-0.10	0.035
50.00	-38.23	-1.76	0.00	-111.10	0.00	111.10	3,371.32	1,685.66	5,340.15	2,674.05	0.57	-0.11	0.034
55.00	-36.06	-1.73	0.00	-102.31	0.00	102.31	3,307.92	1,653.96	5,106.10	2,556.85	0.69	-0.12	0.032
60.00	-33.91	-1.70	0.00	-93.65	0.00	93.65	3,242.50	1,621.25	4,874.14	2,440.69	0.82	-0.13	0.031
65.00	-31.79	-1.66	0.00	-85.16	0.00	85.16	3,156.24	1,578.12	4,616.98	2,311.92	0.96	-0.14	0.029
70.00	-29.69	-1.61	0.00	-76.87	0.00	76.87	3,069.98	1,534.99	4,366.78	2,186.64	1.11	-0.15	0.027
75.00	-29.27	-1.61	0.00	-68.80	0.00	68.80	2,983.72	1,491.86	4,123.56	2,064.84	1.28	-0.16	0.026
76.00	-27.43	-1.56	0.00	-67.20	0.00	67.20	2,966.47	1,483.23	4,075.75	2,040.91	1.31	-0.16	0.025
80.00	-26.76	-1.54	0.00	-60.97	0.00	60.97	2,897.46	1,448.73	3,887.31	1,946.54	1.45	-0.17	0.024
81.62	-24.91	-1.48	0.00	-58.47	0.00	58.47	2,869.45	1,434.73	3,812.10	1,908.88	1.51	-0.17	0.023
85.00	-24.16	-1.46	0.00	-53.47	0.00	53.47	2,811.20	1,405.60	3,658.02	1,831.73	1.63	-0.18	0.022
86.37	-22.78	-1.41	0.00	-51.46	0.00	51.46	2,342.68	1,171.34	3,095.01	1,549.81	1.68	-0.18	0.023
90.00	-20.90	-1.34	0.00	-46.34	0.00	46.34	2,304.43	1,152.21	2,976.95	1,490.69	1.82	-0.19	0.022
95.00	-19.04	-1.27	0.00	-39.62	0.00	39.62	2,249.56	1,124.78	2,815.20	1,409.69	2.02	-0.20	0.019
100.00	-16.97	-1.18	0.00	-33.28	0.00	33.28	2,177.68	1,088.84	2,637.27	1,320.60	2.23	-0.20	0.017
105.00	-16.93	-1.17	0.00	-27.41	0.00	27.41	2,105.79	1,052.90	2,465.16	1,234.41	2.45	-0.21	0.015
105.13	-15.56	-1.11	0.00	-27.26	0.00	27.26	2,103.99	1,052.00	2,460.93	1,232.29	2.45	-0.21	0.015
105.13	-15.56	-1.11	0.00	-27.26	0.00	27.26	2,103.99	1,052.00	2,460.93	1,232.29	2.45	-0.21	0.030
110.00	-13.95	-1.02	0.00	-21.87	0.00	21.87	2,033.91	1,016.95	2,298.85	1,151.13	2.67	-0.21	0.026
115.00	-13.01	-0.97	0.00	-16.77	0.00	16.77	1,962.02	981.01	2,138.35	1,070.76	2.90	-0.23	0.022
120.00	-9.24	-0.73	0.00	-11.94	0.00	11.94	1,890.14	945.07	1,983.66	993.30	3.14	-0.23	0.017
125.00	-9.22	-0.73	0.00	-8.29	0.00	8.29	1,818.26	909.13	1,834.77	918.75	3.39	-0.24	0.014
125.12	-8.26	-0.66	0.00	-8.20	0.00	8.20	1,816.48	908.24	1,831.17	916.95	3.40	-0.24	0.013
128.87	-8.09	-0.65	0.00	-5.71	0.00	5.71	1,443.09	721.55	1,448.31	725.23	3.59	-0.24	0.013
130.00	-7.78	-0.63	0.00	-4.98	0.00	4.98	1,430.26	715.13	1,422.41	712.26	3.65	-0.25	0.012
132.00	-5.23	-0.44	0.00	-3.72	0.00	3.72	1,407.26	703.63	1,376.79	689.42	3.75	-0.25	0.009
135.00	-4.82	-0.41	0.00	-2.40	0.00	2.40	1,372.75	686.38	1,309.76	655.86	3.91	-0.25	0.007
138.00	-3.55	-0.30	0.00	-1.18	0.00	1.18	1,338.25	669.12	1,244.41	623.13	4.06	-0.25	0.005
140.00	-3.42	-0.29	0.00	-0.58	0.00	0.58	1,315.24	657.62	1,201.77	601.78	4.17	-0.25	0.004
141.00	-0.59	-0.05	0.00	-0.28	0.00	0.28	1,303.74	651.87	1,180.73	591.24	4.22	-0.25	0.001
145.00	-0.25	-0.02	0.00	-0.07	0.00	0.07	1,257.74	628.87	1,098.42	550.03	4.43	-0.25	0.000
148.00	0.00	-0.02	0.00	0.00	0.00	0.00	1,223.23	611.62	1,038.64	520.09	4.59	-0.25	0.000

Site Number: 302515

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Customer: SPRINT NEXTEL

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	-42.85	-1.81	0.00	-199.52	0.00	199.52	4,773.35	2,386.68	9,316.44	4,665.14	0.00	0.00	0.038
5.00	-41.36	-1.81	0.00	-190.49	0.00	190.49	4,702.37	2,351.19	8,987.95	4,500.66	0.01	-0.01	0.037
10.00	-39.63	-1.82	0.00	-181.42	0.00	181.42	4,630.27	2,315.13	8,663.09	4,337.98	0.02	-0.02	0.036
15.00	-37.91	-1.82	0.00	-172.33	0.00	172.33	4,557.03	2,278.52	8,341.98	4,177.19	0.05	-0.03	0.035
20.00	-36.22	-1.82	0.00	-163.23	0.00	163.23	4,482.67	2,241.34	8,024.78	4,018.36	0.09	-0.04	0.034
25.00	-34.54	-1.82	0.00	-154.12	0.00	154.12	4,403.56	2,201.78	7,705.28	3,858.37	0.14	-0.05	0.033
30.00	-32.89	-1.81	0.00	-145.03	0.00	145.03	4,302.92	2,151.46	7,355.37	3,683.15	0.20	-0.06	0.033
35.00	-31.25	-1.80	0.00	-135.98	0.00	135.98	4,202.28	2,101.14	7,013.59	3,512.01	0.27	-0.07	0.032
40.00	-30.87	-1.80	0.00	-126.97	0.00	126.97	4,101.65	2,050.82	6,679.95	3,344.94	0.36	-0.09	0.031
41.16	-29.11	-1.78	0.00	-124.88	0.00	124.88	4,078.23	2,039.12	6,603.48	3,306.65	0.38	-0.09	0.030
45.00	-28.27	-1.77	0.00	-118.05	0.00	118.05	4,001.01	2,000.51	6,354.43	3,181.94	0.45	-0.10	0.029
46.83	-27.32	-1.76	0.00	-114.81	0.00	114.81	3,410.94	1,705.47	5,490.25	2,749.21	0.49	-0.10	0.032
50.00	-25.84	-1.73	0.00	-109.24	0.00	109.24	3,371.32	1,685.66	5,340.15	2,674.05	0.56	-0.11	0.031
55.00	-24.37	-1.71	0.00	-100.57	0.00	100.57	3,307.92	1,653.96	5,106.10	2,556.85	0.68	-0.12	0.029
60.00	-22.92	-1.67	0.00	-92.05	0.00	92.05	3,242.50	1,621.25	4,874.14	2,440.69	0.81	-0.13	0.028
65.00	-21.48	-1.63	0.00	-83.69	0.00	83.69	3,156.24	1,578.12	4,616.98	2,311.92	0.95	-0.14	0.026
70.00	-20.06	-1.59	0.00	-75.53	0.00	75.53	3,069.98	1,534.99	4,366.78	2,186.64	1.10	-0.15	0.025
75.00	-19.78	-1.58	0.00	-67.60	0.00	67.60	2,983.72	1,491.86	4,123.56	2,064.84	1.26	-0.16	0.024
76.00	-18.53	-1.53	0.00	-66.03	0.00	66.03	2,966.47	1,483.23	4,075.75	2,040.91	1.29	-0.16	0.023
80.00	-18.08	-1.51	0.00	-59.91	0.00	59.91	2,897.46	1,448.73	3,887.31	1,946.54	1.43	-0.17	0.022
81.62	-16.83	-1.46	0.00	-57.45	0.00	57.45	2,869.45	1,434.73	3,812.10	1,908.88	1.49	-0.17	0.021
85.00	-16.33	-1.43	0.00	-52.53	0.00	52.53	2,811.20	1,405.60	3,658.02	1,831.73	1.61	-0.18	0.020
86.37	-15.40	-1.39	0.00	-50.56	0.00	50.56	2,342.68	1,171.34	3,095.01	1,549.81	1.66	-0.18	0.021
90.00	-14.12	-1.32	0.00	-45.53	0.00	45.53	2,304.43	1,152.21	2,976.95	1,490.69	1.80	-0.18	0.020
95.00	-12.86	-1.25	0.00	-38.93	0.00	38.93	2,249.56	1,124.78	2,815.20	1,409.69	1.99	-0.19	0.017
100.00	-11.47	-1.15	0.00	-32.70	0.00	32.70	2,177.68	1,088.84	2,637.27	1,320.60	2.20	-0.20	0.015
105.00	-11.44	-1.15	0.00	-26.92	0.00	26.92	2,105.79	1,052.90	2,465.16	1,234.41	2.41	-0.21	0.014
105.13	-10.51	-1.09	0.00	-26.78	0.00	26.78	2,103.99	1,052.00	2,460.93	1,232.29	2.42	-0.21	0.013
105.13	-10.51	-1.09	0.00	-26.78	0.00	26.78	2,103.99	1,052.00	2,460.93	1,232.29	2.42	-0.21	0.027
110.00	-9.42	-1.00	0.00	-21.48	0.00	21.48	2,033.91	1,016.95	2,298.85	1,151.13	2.63	-0.21	0.023
115.00	-8.79	-0.95	0.00	-16.48	0.00	16.48	1,962.02	981.01	2,138.35	1,070.76	2.86	-0.22	0.020
120.00	-6.24	-0.72	0.00	-11.74	0.00	11.74	1,890.14	945.07	1,983.66	993.30	3.09	-0.23	0.015
125.00	-6.23	-0.72	0.00	-8.15	0.00	8.15	1,818.26	909.13	1,834.77	918.75	3.34	-0.24	0.012
125.12	-5.58	-0.65	0.00	-8.06	0.00	8.06	1,816.48	908.24	1,831.17	916.95	3.34	-0.24	0.012
128.87	-5.46	-0.64	0.00	-5.61	0.00	5.61	1,443.09	721.55	1,448.31	725.23	3.53	-0.24	0.012
130.00	-5.26	-0.62	0.00	-4.89	0.00	4.89	1,430.26	715.13	1,422.41	712.26	3.59	-0.24	0.011
132.00	-3.53	-0.43	0.00	-3.66	0.00	3.66	1,407.26	703.63	1,376.79	689.42	3.69	-0.24	0.008
135.00	-3.26	-0.40	0.00	-2.36	0.00	2.36	1,372.75	686.38	1,309.76	655.86	3.84	-0.25	0.006
138.00	-2.40	-0.30	0.00	-1.16	0.00	1.16	1,338.25	669.12	1,244.41	623.13	4.00	-0.25	0.004
140.00	-2.31	-0.29	0.00	-0.57	0.00	0.57	1,315.24	657.62	1,201.77	601.78	4.10	-0.25	0.003
141.00	-0.40	-0.05	0.00	-0.28	0.00	0.28	1,303.74	651.87	1,180.73	591.24	4.15	-0.25	0.001
145.00	-0.17	-0.02	0.00	-0.07	0.00	0.07	1,257.74	628.87	1,098.42	550.03	4.36	-0.25	0.000
148.00	0.00	-0.02	0.00	0.00	0.00	0.00	1,223.23	611.62	1,038.64	520.09	4.52	-0.25	0.000

Site Number: 302515

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

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Customer: SPRINT NEXTEL

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):	0.25
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.07
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}):	0.27
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.11
Period Based on Rayleigh Method (sec):	2.42
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)
41	146.50	271	1.852	1.785	1.069	0.466	109	339
40	143.00	368	1.764	1.382	0.917	0.391	125	461
39	140.50	104	1.703	1.135	0.820	0.342	31	131
38	139.00	211	1.667	1.002	0.765	0.313	57	264
37	136.50	321	1.608	0.803	0.681	0.268	75	402
36	133.50	326	1.538	0.599	0.589	0.218	61	408
35	131.00	241	1.481	0.455	0.520	0.179	37	302
34	129.44	137	1.446	0.376	0.480	0.156	18	171
33	127.00	767	1.392	0.268	0.423	0.122	81	961
32	125.06	17	1.350	0.195	0.382	0.097	1	21
31	122.50	702	1.295	0.113	0.332	0.067	41	880
30	117.50	751	1.191	-0.003	0.248	0.016	10	941
29	112.50	984	1.092	-0.074	0.182	-0.024	-21	1,233
28	107.56	1,091	0.998	-0.110	0.131	-0.054	-51	1,367
27	105.06	37	0.952	-0.119	0.109	-0.065	-2	46
26	102.50	1,469	0.907	-0.122	0.090	-0.073	-93	1,841
25	97.50	1,488	0.820	-0.115	0.060	-0.081	-104	1,864
24	92.50	1,504	0.738	-0.098	0.038	-0.078	-101	1,885
23	88.19	1,101	0.671	-0.078	0.025	-0.066	-63	1,380
22	85.69	595	0.634	-0.065	0.019	-0.056	-29	746
21	83.31	1,475	0.599	-0.053	0.014	-0.044	-56	1,849
20	80.81	533	0.563	-0.040	0.011	-0.030	-14	668
19	78.00	1,322	0.525	-0.025	0.008	-0.013	-15	1,656
18	75.50	333	0.492	-0.013	0.007	0.002	1	417
17	72.50	1,675	0.454	0.000	0.006	0.019	28	2,098
16	67.50	1,694	0.393	0.020	0.007	0.044	65	2,123
15	62.50	1,714	0.337	0.036	0.009	0.062	92	2,148
14	57.50	1,734	0.285	0.048	0.014	0.073	109	2,173
13	52.50	1,754	0.238	0.057	0.018	0.078	119	2,197
12	48.42	1,122	0.202	0.062	0.023	0.079	77	1,406
11	45.92	985	0.182	0.065	0.026	0.079	68	1,234
10	43.08	2,084	0.160	0.067	0.029	0.079	143	2,611
9	40.58	446	0.142	0.069	0.031	0.078	30	559
8	37.50	1,932	0.121	0.070	0.034	0.077	129	2,421

Site Number: 302515

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

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Customer: SPRINT NEXTEL

7	32.50	1,955	0.091	0.071	0.038	0.075	128	2,450
6	27.50	1,978	0.065	0.072	0.041	0.074	126	2,479
5	22.50	2,001	0.044	0.071	0.042	0.071	124	2,508
4	17.50	2,024	0.026	0.067	0.040	0.068	120	2,537
3	12.50	2,047	0.013	0.059	0.035	0.062	111	2,566
2	7.50	1,757	0.005	0.044	0.025	0.050	77	2,202
1	2.50	1,780	0.001	0.018	0.010	0.025	38	2,231
Commscope ATSBT-	159.00	5	2.181	3.897	1.781	0.782	4	7
Andrew E15S09P94	159.00	44	2.181	3.897	1.781	0.782	30	55
RFS ATMAP1412D-1A20	159.00	39	2.181	3.897	1.781	0.782	26	49
Andrew SBNHH-1D65B	159.00	152	2.181	3.897	1.781	0.782	103	191
Powerwave Allgon LGP	151.00	169	1.967	2.414	1.293	0.571	84	212
Raycap DC6-48-60-18-	151.00	40	1.967	2.414	1.293	0.571	20	50
Ericsson RRUS 11 (Ba	151.00	165	1.967	2.414	1.293	0.571	82	207
Ericsson RRUS 32	151.00	152	1.967	2.414	1.293	0.571	75	191
Ericsson RRUS 32 B2	151.00	159	1.967	2.414	1.293	0.571	79	199
Powerwave Allgon 777	151.00	105	1.967	2.414	1.293	0.571	52	132
Quintel QS66512-2	151.00	333	1.967	2.414	1.293	0.571	165	417
CCI OPA-65R-LCUU-H6	151.00	219	1.967	2.414	1.293	0.571	108	274
Flat Platform w/ Han	151.00	2,000	1.967	2.414	1.293	0.571	990	2,506
Pipe Mount	148.00	200	1.890	1.980	1.140	0.500	87	251
RFS FD9R6004	141.00	19	1.715	1.182	0.838	0.351	6	23
Alcatel-Lucent RRH2x	141.00	132	1.715	1.182	0.838	0.351	40	165
Antel BXA-171063/8CF	141.00	32	1.715	1.182	0.838	0.351	10	39
Ryma MGD3-800T0	141.00	59	1.715	1.182	0.838	0.351	18	74
RFS DB-T1-6Z-8AB-OZ	141.00	44	1.715	1.182	0.838	0.351	13	55
Antel BXA-80063-6BF-	141.00	19	1.715	1.182	0.838	0.351	6	24
Antel BXA-70063/6CF	141.00	17	1.715	1.182	0.838	0.351	5	21
Antel BXA-70063/6CF	141.00	45	1.715	1.182	0.838	0.351	14	56
Antel BXA-80080/6CF	141.00	22	1.715	1.182	0.838	0.351	7	28
Flat Low Profile Pla	141.00	1,500	1.715	1.182	0.838	0.351	457	1,880
DragonWave Horizon C	138.00	11	1.643	0.919	0.730	0.295	3	13
NextNet BTS-2500	138.00	105	1.643	0.919	0.730	0.295	27	132
Argus LLPX310R	138.00	86	1.643	0.919	0.730	0.295	22	108
DragonWave A-ANT-18G	138.00	48	1.643	0.919	0.730	0.295	12	60
Side Arms	138.00	560	1.643	0.919	0.730	0.295	143	702
KMW KMDAPS2040000	132.00	48	1.503	0.510	0.547	0.194	8	60
KMW AM-X-WM-17-65-	132.00	43	1.503	0.510	0.547	0.194	7	53
Decibel DB844H90E-XY	132.00	126	1.503	0.510	0.547	0.194	21	158
Flat Low Profile Pla	132.00	1,500	1.503	0.510	0.547	0.194	252	1,880
Box Enclosures BEN-9	120.00	4	1.243	0.049	0.288	0.040	0	6
Nokia FWHR	120.00	79	1.243	0.049	0.288	0.040	3	100
Alcatel-Lucent 800 M	120.00	192	1.243	0.049	0.288	0.040	7	241
Alcatel-Lucent 4x40W	120.00	273	1.243	0.049	0.288	0.040	10	342
Commscope	120.00	83	1.243	0.049	0.288	0.040	3	104
RFS APXVSP18-C-A20	120.00	171	1.243	0.049	0.288	0.040	6	214
Flat Low Profile Pla	120.00	1,500	1.243	0.049	0.288	0.040	52	1,880
Diamond X50A	110.00	5	1.044	-0.096	0.154	-0.040	0	6
Flat Side Arm	110.00	300	1.044	-0.096	0.154	-0.040	-11	376
Antel BCD-87010 ____	100.00	26	0.863	-0.120	0.074	-0.078	-2	33
Flat Side Arm	100.00	150	0.863	-0.120	0.074	-0.078	-10	188
PCTEL GPS-TMG-HR-	76.00	1	0.498	-0.016	0.007	-0.001	0	1
Round Side Arm	76.00	150	0.498	-0.016	0.007	-0.001	0	188
		55,962	103.252	65.711	44.954	17.720	4,714	70,127

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)
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Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

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Customer: SPRINT NEXTEL

41	146.50	271	1.852	1.785	1.069	0.466	109	229
40	143.00	368	1.764	1.382	0.917	0.391	125	312
39	140.50	104	1.703	1.135	0.820	0.342	31	88
38	139.00	211	1.667	1.002	0.765	0.313	57	178
37	136.50	321	1.608	0.803	0.681	0.268	75	272
36	133.50	326	1.538	0.599	0.589	0.218	61	276
35	131.00	241	1.481	0.455	0.520	0.179	37	204
34	129.44	137	1.446	0.376	0.480	0.156	18	116
33	127.00	767	1.392	0.268	0.423	0.122	81	650
32	125.06	17	1.350	0.195	0.382	0.097	1	14
31	122.50	702	1.295	0.113	0.332	0.067	41	595
30	117.50	751	1.191	-0.003	0.248	0.016	10	636
29	112.50	984	1.092	-0.074	0.182	-0.024	-21	833
28	107.56	1,091	0.998	-0.110	0.131	-0.054	-51	924
27	105.06	37	0.952	-0.119	0.109	-0.065	-2	31
26	102.50	1,469	0.907	-0.122	0.090	-0.073	-93	1,244
25	97.50	1,488	0.820	-0.115	0.060	-0.081	-104	1,260
24	92.50	1,504	0.738	-0.098	0.038	-0.078	-101	1,274
23	88.19	1,101	0.671	-0.078	0.025	-0.066	-63	933
22	85.69	595	0.634	-0.065	0.019	-0.056	-29	504
21	83.31	1,475	0.599	-0.053	0.014	-0.044	-56	1,250
20	80.81	533	0.563	-0.040	0.011	-0.030	-14	451
19	78.00	1,322	0.525	-0.025	0.008	-0.013	-15	1,119
18	75.50	333	0.492	-0.013	0.007	0.002	1	282
17	72.50	1,675	0.454	0.000	0.006	0.019	28	1,418
16	67.50	1,694	0.393	0.020	0.007	0.044	65	1,435
15	62.50	1,714	0.337	0.036	0.009	0.062	92	1,452
14	57.50	1,734	0.285	0.048	0.014	0.073	109	1,468
13	52.50	1,754	0.238	0.057	0.018	0.078	119	1,485
12	48.42	1,122	0.202	0.062	0.023	0.079	77	950
11	45.92	985	0.182	0.065	0.026	0.079	68	834
10	43.08	2,084	0.160	0.067	0.029	0.079	143	1,765
9	40.58	446	0.142	0.069	0.031	0.078	30	378
8	37.50	1,932	0.121	0.070	0.034	0.077	129	1,636
7	32.50	1,955	0.091	0.071	0.038	0.075	128	1,656
6	27.50	1,978	0.065	0.072	0.041	0.074	126	1,675
5	22.50	2,001	0.044	0.071	0.042	0.071	124	1,695
4	17.50	2,024	0.026	0.067	0.040	0.068	120	1,714
3	12.50	2,047	0.013	0.059	0.035	0.062	111	1,734
2	7.50	1,757	0.005	0.044	0.025	0.050	77	1,488
1	2.50	1,780	0.001	0.018	0.010	0.025	38	1,508
Commscope ATSBT-	159.00	5	2.181	3.897	1.781	0.782	4	5
Andrew E15S09P94	159.00	44	2.181	3.897	1.781	0.782	30	37
RFS ATMAP1412D-1A20	159.00	39	2.181	3.897	1.781	0.782	26	33
Andrew SBNHH-1D65B	159.00	152	2.181	3.897	1.781	0.782	103	129
Powerwave Allgon LGP	151.00	169	1.967	2.414	1.293	0.571	84	143
Raycap DC6-48-60-18-	151.00	40	1.967	2.414	1.293	0.571	20	34
Ericsson RRUS 11 (Ba	151.00	165	1.967	2.414	1.293	0.571	82	140
Ericsson RRUS 32	151.00	152	1.967	2.414	1.293	0.571	75	129
Ericsson RRUS 32 B2	151.00	159	1.967	2.414	1.293	0.571	79	135
Powerwave Allgon 777	151.00	105	1.967	2.414	1.293	0.571	52	89
Quintel QS66512-2	151.00	333	1.967	2.414	1.293	0.571	165	282
CCI OPA-65R-LCUU-H6	151.00	219	1.967	2.414	1.293	0.571	108	185
Flat Platform w/ Han	151.00	2,000	1.967	2.414	1.293	0.571	990	1,694
Pipe Mount	148.00	200	1.890	1.980	1.140	0.500	87	169
RFS FD9R6004	141.00	19	1.715	1.182	0.838	0.351	6	16
Alcatel-Lucent RRH2x	141.00	132	1.715	1.182	0.838	0.351	40	112
Antel BXA-171063/8CF	141.00	32	1.715	1.182	0.838	0.351	10	27
Rymsa MGD3-800T0	141.00	59	1.715	1.182	0.838	0.351	18	50
RFS DB-T1-6Z-8AB-0Z	141.00	44	1.715	1.182	0.838	0.351	13	37
Antel BXA-80063-6BF-	141.00	19	1.715	1.182	0.838	0.351	6	16
Antel BXA-70063/6CF	141.00	17	1.715	1.182	0.838	0.351	5	14
Antel BXA-70063/6CF	141.00	45	1.715	1.182	0.838	0.351	14	38
Antel BXA-80080/6CF	141.00	22	1.715	1.182	0.838	0.351	7	19

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Customer: SPRINT NEXTEL

Flat Low Profile Pla	141.00	1,500	1.715	1.182	0.838	0.351	457	1,270
DragonWave Horizon C	138.00	11	1.643	0.919	0.730	0.295	3	9
NextNet BTS-2500	138.00	105	1.643	0.919	0.730	0.295	27	89
Argus LLPX310R	138.00	86	1.643	0.919	0.730	0.295	22	73
DragonWave A-ANT-18G	138.00	48	1.643	0.919	0.730	0.295	12	40
Side Arms	138.00	560	1.643	0.919	0.730	0.295	143	474
KMW KMDAPS2040000	132.00	48	1.503	0.510	0.547	0.194	8	40
KMW AM-X-WM-17-65-	132.00	43	1.503	0.510	0.547	0.194	7	36
Decibel DB844H90E-XY	132.00	126	1.503	0.510	0.547	0.194	21	107
Flat Low Profile Pla	132.00	1,500	1.503	0.510	0.547	0.194	252	1,270
Box Enclosures BEN-9	120.00	4	1.243	0.049	0.288	0.040	0	4
Nokia FWHR	120.00	79	1.243	0.049	0.288	0.040	3	67
Alcatel-Lucent 800 M	120.00	192	1.243	0.049	0.288	0.040	7	163
Alcatel-Lucent 4x40W	120.00	273	1.243	0.049	0.288	0.040	10	231
Commscope	120.00	83	1.243	0.049	0.288	0.040	3	70
RFS APXVSP18-C-A20	120.00	171	1.243	0.049	0.288	0.040	6	145
Flat Low Profile Pla	120.00	1,500	1.243	0.049	0.288	0.040	52	1,270
Diamond X50A	110.00	5	1.044	-0.096	0.154	-0.040	0	4
Flat Side Arm	110.00	300	1.044	-0.096	0.154	-0.040	-11	254
Antel BCD-87010 ____	100.00	26	0.863	-0.120	0.074	-0.078	-2	22
Flat Side Arm	100.00	150	0.863	-0.120	0.074	-0.078	-10	127
PCTEL GPS-TMG-HR-	76.00	1	0.498	-0.016	0.007	-0.001	0	1
Round Side Arm	76.00	150	0.498	-0.016	0.007	-0.001	0	127
		55,962	103.252	65.711	44.954	17.720	4,714	47,393

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

2/15/2017 1:49:44 PM

Customer: SPRINT NEXTEL

Load Case (1.2 + 0.2Sds) * DL + E EMAM Seismic Equivalent Modal Analysis MethodCalculated 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	-63.41	-2.87	0.00	-269.86	0.00	269.86	4,773.35	2,386.68	9,316.44	4,665.14	0.00	0.00	0.052
5.00	-61.20	-2.80	0.00	-255.52	0.00	255.52	4,702.37	2,351.19	8,987.95	4,500.66	0.01	-0.01	0.050
10.00	-58.64	-2.71	0.00	-241.50	0.00	241.50	4,630.27	2,315.13	8,663.09	4,337.98	0.03	-0.03	0.049
15.00	-56.10	-2.60	0.00	-227.97	0.00	227.97	4,557.03	2,278.52	8,341.98	4,177.19	0.07	-0.04	0.048
20.00	-53.59	-2.49	0.00	-214.97	0.00	214.97	4,482.67	2,241.34	8,024.78	4,018.36	0.12	-0.06	0.046
25.00	-51.11	-2.37	0.00	-202.54	0.00	202.54	4,403.56	2,201.78	7,705.28	3,858.37	0.19	-0.07	0.045
30.00	-48.66	-2.25	0.00	-190.68	0.00	190.68	4,302.92	2,151.46	7,355.37	3,683.15	0.27	-0.09	0.044
35.00	-46.24	-2.13	0.00	-179.43	0.00	179.43	4,202.28	2,101.14	7,013.59	3,512.01	0.37	-0.10	0.043
40.00	-45.68	-2.10	0.00	-168.78	0.00	168.78	4,101.65	2,050.82	6,679.95	3,344.94	0.48	-0.11	0.042
41.16	-43.07	-1.96	0.00	-166.33	0.00	166.33	4,078.23	2,039.12	6,603.48	3,306.65	0.51	-0.12	0.041
45.00	-41.83	-1.90	0.00	-158.80	0.00	158.80	4,001.01	2,000.51	6,354.43	3,181.94	0.60	-0.13	0.040
46.83	-40.43	-1.82	0.00	-155.33	0.00	155.33	3,410.94	1,705.47	5,490.25	2,749.21	0.65	-0.13	0.044
50.00	-38.23	-1.71	0.00	-149.55	0.00	149.55	3,371.32	1,685.66	5,340.15	2,674.05	0.74	-0.14	0.043
55.00	-36.06	-1.60	0.00	-141.02	0.00	141.02	3,307.92	1,653.96	5,106.10	2,556.85	0.90	-0.16	0.042
60.00	-33.91	-1.51	0.00	-133.02	0.00	133.02	3,242.50	1,621.25	4,874.14	2,440.69	1.07	-0.17	0.040
65.00	-31.79	-1.45	0.00	-125.46	0.00	125.46	3,156.24	1,578.12	4,616.98	2,311.92	1.26	-0.19	0.040
70.00	-29.69	-1.42	0.00	-118.22	0.00	118.22	3,069.98	1,534.99	4,366.78	2,186.64	1.47	-0.20	0.039
75.00	-29.27	-1.42	0.00	-111.11	0.00	111.11	2,983.72	1,491.86	4,123.56	2,064.84	1.69	-0.22	0.038
76.00	-27.43	-1.44	0.00	-109.69	0.00	109.69	2,966.47	1,483.23	4,075.75	2,040.91	1.73	-0.22	0.037
80.00	-26.76	-1.45	0.00	-103.95	0.00	103.95	2,897.46	1,448.73	3,887.31	1,946.54	1.92	-0.23	0.037
81.62	-24.91	-1.50	0.00	-101.59	0.00	101.59	2,869.45	1,434.73	3,812.10	1,908.88	2.00	-0.24	0.036
85.00	-24.16	-1.53	0.00	-96.52	0.00	96.52	2,811.20	1,405.60	3,658.02	1,831.73	2.17	-0.25	0.035
86.37	-22.78	-1.59	0.00	-94.41	0.00	94.41	2,342.68	1,171.34	3,095.01	1,549.81	2.25	-0.25	0.038
90.00	-20.90	-1.69	0.00	-88.64	0.00	88.64	2,304.43	1,152.21	2,976.95	1,490.69	2.44	-0.26	0.036
95.00	-19.03	-1.79	0.00	-80.19	0.00	80.19	2,249.56	1,124.78	2,815.20	1,409.69	2.73	-0.28	0.034
100.00	-16.97	-1.89	0.00	-71.24	0.00	71.24	2,177.68	1,088.84	2,637.27	1,320.60	3.03	-0.30	0.031
105.00	-16.92	-1.89	0.00	-61.80	0.00	61.80	2,105.79	1,052.90	2,465.16	1,234.41	3.35	-0.31	0.029
105.13	-15.55	-1.94	0.00	-61.56	0.00	61.56	2,103.99	1,052.00	2,460.93	1,232.29	3.36	-0.31	0.028
105.13	-15.55	-1.94	0.00	-61.56	0.00	61.56	2,103.99	1,052.00	2,460.93	1,232.29	3.36	-0.31	0.057
110.00	-13.94	-1.97	0.00	-52.11	0.00	52.11	2,033.91	1,016.95	2,298.85	1,151.13	3.68	-0.32	0.052
115.00	-13.00	-1.96	0.00	-42.28	0.00	42.28	1,962.02	981.01	2,138.35	1,070.76	4.03	-0.35	0.046
120.00	-9.23	-1.81	0.00	-32.51	0.00	32.51	1,890.14	945.07	1,983.66	993.30	4.41	-0.37	0.038
125.00	-9.21	-1.81	0.00	-23.44	0.00	23.44	1,818.26	909.13	1,834.77	918.75	4.81	-0.39	0.031
125.12	-8.25	-1.73	0.00	-23.21	0.00	23.21	1,816.48	908.24	1,831.17	916.95	4.82	-0.39	0.030
128.87	-8.08	-1.71	0.00	-16.74	0.00	16.74	1,443.09	721.55	1,448.31	725.23	5.13	-0.40	0.029
130.00	-7.78	-1.67	0.00	-14.81	0.00	14.81	1,430.26	715.13	1,422.41	712.26	5.22	-0.40	0.026
132.00	-5.22	-1.30	0.00	-11.47	0.00	11.47	1,407.26	703.63	1,376.79	689.42	5.40	-0.41	0.020
135.00	-4.82	-1.23	0.00	-7.57	0.00	7.57	1,372.75	686.38	1,309.76	655.86	5.66	-0.42	0.015
138.00	-3.54	-0.95	0.00	-3.89	0.00	3.89	1,338.25	669.12	1,244.41	623.13	5.92	-0.42	0.009
140.00	-3.41	-0.92	0.00	-1.99	0.00	1.99	1,315.24	657.62	1,201.77	601.78	6.09	-0.42	0.006
141.00	-0.59	-0.20	0.00	-1.07	0.00	1.07	1,303.74	651.87	1,180.73	591.24	6.18	-0.42	0.002
145.00	-0.25	-0.09	0.00	-0.27	0.00	0.27	1,257.74	628.87	1,098.42	550.03	6.54	-0.42	0.001
148.00	0.00	-0.09	0.00	0.00	0.00	0.00	1,223.23	611.62	1,038.64	520.09	6.80	-0.42	0.000

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

2/15/2017 1:49:44 PM

Customer: SPRINT NEXTEL

Load Case (0.9 - 0.2Sds) * DL + E EMAM Seismic (Reduced DL) Equivalent Modal Analysis MethodCalculated 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	-42.85	-2.86	0.00	-266.21	0.00	266.21	4,773.35	2,386.68	9,316.44	4,665.14	0.00	0.00	0.048
5.00	-41.36	-2.80	0.00	-251.89	0.00	251.89	4,702.37	2,351.19	8,987.95	4,500.66	0.01	-0.01	0.047
10.00	-39.63	-2.70	0.00	-237.91	0.00	237.91	4,630.27	2,315.13	8,663.09	4,337.98	0.03	-0.03	0.045
15.00	-37.91	-2.58	0.00	-224.43	0.00	224.43	4,557.03	2,278.52	8,341.98	4,177.19	0.07	-0.04	0.044
20.00	-36.22	-2.47	0.00	-211.52	0.00	211.52	4,482.67	2,241.34	8,024.78	4,018.36	0.12	-0.06	0.043
25.00	-34.54	-2.35	0.00	-199.18	0.00	199.18	4,403.56	2,201.78	7,705.28	3,858.37	0.18	-0.07	0.041
30.00	-32.89	-2.23	0.00	-187.45	0.00	187.45	4,302.92	2,151.46	7,355.37	3,683.15	0.27	-0.08	0.040
35.00	-31.25	-2.10	0.00	-176.32	0.00	176.32	4,202.28	2,101.14	7,013.59	3,512.01	0.36	-0.10	0.039
40.00	-30.87	-2.07	0.00	-165.82	0.00	165.82	4,101.65	2,050.82	6,679.95	3,344.94	0.47	-0.11	0.039
41.16	-29.11	-1.93	0.00	-163.41	0.00	163.41	4,078.23	2,039.12	6,603.48	3,306.65	0.50	-0.11	0.038
45.00	-28.27	-1.87	0.00	-156.00	0.00	156.00	4,001.01	2,000.51	6,354.43	3,181.94	0.59	-0.13	0.037
46.83	-27.32	-1.79	0.00	-152.58	0.00	152.58	3,410.94	1,705.47	5,490.25	2,749.21	0.64	-0.13	0.041
50.00	-25.84	-1.67	0.00	-146.91	0.00	146.91	3,371.32	1,685.66	5,340.15	2,674.05	0.73	-0.14	0.040
55.00	-24.37	-1.57	0.00	-138.54	0.00	138.54	3,307.92	1,653.96	5,106.10	2,556.85	0.89	-0.15	0.039
60.00	-22.92	-1.48	0.00	-130.71	0.00	130.71	3,242.50	1,621.25	4,874.14	2,440.69	1.06	-0.17	0.038
65.00	-21.48	-1.41	0.00	-123.33	0.00	123.33	3,156.24	1,578.12	4,616.98	2,311.92	1.24	-0.18	0.037
70.00	-20.06	-1.38	0.00	-116.27	0.00	116.27	3,069.98	1,534.99	4,366.78	2,186.64	1.44	-0.20	0.036
75.00	-19.78	-1.39	0.00	-109.35	0.00	109.35	2,983.72	1,491.86	4,123.56	2,064.84	1.66	-0.21	0.035
76.00	-18.53	-1.40	0.00	-107.96	0.00	107.96	2,966.47	1,483.23	4,075.75	2,040.91	1.70	-0.22	0.035
80.00	-18.08	-1.41	0.00	-102.36	0.00	102.36	2,897.46	1,448.73	3,887.31	1,946.54	1.89	-0.23	0.034
81.62	-16.83	-1.47	0.00	-100.07	0.00	100.07	2,869.45	1,434.73	3,812.10	1,908.88	1.97	-0.23	0.034
85.00	-16.33	-1.50	0.00	-95.11	0.00	95.11	2,811.20	1,405.60	3,658.02	1,831.73	2.14	-0.24	0.033
86.37	-15.39	-1.56	0.00	-93.06	0.00	93.06	2,342.68	1,171.34	3,095.01	1,549.81	2.21	-0.25	0.035
90.00	-14.12	-1.66	0.00	-87.41	0.00	87.41	2,304.43	1,152.21	2,976.95	1,490.69	2.40	-0.26	0.034
95.00	-12.86	-1.76	0.00	-79.13	0.00	79.13	2,249.56	1,124.78	2,815.20	1,409.69	2.68	-0.28	0.032
100.00	-11.46	-1.86	0.00	-70.33	0.00	70.33	2,177.68	1,088.84	2,637.27	1,320.60	2.98	-0.29	0.029
105.00	-11.43	-1.86	0.00	-61.04	0.00	61.04	2,105.79	1,052.90	2,465.16	1,234.41	3.29	-0.30	0.027
105.13	-10.51	-1.91	0.00	-60.81	0.00	60.81	2,103.99	1,052.00	2,460.93	1,232.29	3.30	-0.31	0.027
105.13	-10.51	-1.91	0.00	-60.81	0.00	60.81	2,103.99	1,052.00	2,460.93	1,232.29	3.30	-0.31	0.054
110.00	-9.42	-1.94	0.00	-51.50	0.00	51.50	2,033.91	1,016.95	2,298.85	1,151.13	3.62	-0.32	0.049
115.00	-8.78	-1.93	0.00	-41.80	0.00	41.80	1,962.02	981.01	2,138.35	1,070.76	3.97	-0.34	0.044
120.00	-6.24	-1.79	0.00	-32.16	0.00	32.16	1,890.14	945.07	1,983.66	993.30	4.34	-0.37	0.036
125.00	-6.22	-1.79	0.00	-23.20	0.00	23.20	1,818.26	909.13	1,834.77	918.75	4.73	-0.38	0.029
125.12	-5.57	-1.71	0.00	-22.98	0.00	22.98	1,816.48	908.24	1,831.17	916.95	4.74	-0.38	0.028
128.87	-5.46	-1.69	0.00	-16.57	0.00	16.57	1,443.09	721.55	1,448.31	725.23	5.05	-0.40	0.027
130.00	-5.25	-1.65	0.00	-14.67	0.00	14.67	1,430.26	715.13	1,422.41	712.26	5.14	-0.40	0.024
132.00	-3.52	-1.29	0.00	-11.37	0.00	11.37	1,407.26	703.63	1,376.79	689.42	5.31	-0.40	0.019
135.00	-3.25	-1.21	0.00	-7.50	0.00	7.50	1,372.75	686.38	1,309.76	655.86	5.57	-0.41	0.014
138.00	-2.39	-0.94	0.00	-3.86	0.00	3.86	1,338.25	669.12	1,244.41	623.13	5.83	-0.41	0.008
140.00	-2.30	-0.91	0.00	-1.97	0.00	1.97	1,315.24	657.62	1,201.77	601.78	6.00	-0.41	0.005
141.00	-0.40	-0.20	0.00	-1.06	0.00	1.06	1,303.74	651.87	1,180.73	591.24	6.09	-0.42	0.002
145.00	-0.17	-0.09	0.00	-0.26	0.00	0.26	1,257.74	628.87	1,098.42	550.03	6.43	-0.42	0.001
148.00	0.00	-0.09	0.00	0.00	0.00	0.00	1,223.23	611.62	1,038.64	520.09	6.70	-0.42	0.000

Site Number: 302515

Code: ANSI/TIA-222-G

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Site Name: SMFR - North, CT

Engineering Number: OAA695961_C3_01

2/15/2017 1:49:44 PM

Customer: SPRINT NEXTEL

Analysis Summary

Load Case	Reactions						Max Usage	
	Shear	Shear	Axial	Moment	Moment	Moment	Elev	Interaction
	FX (kips)	FZ (kips)	FY (kips)	MX (ft-kips)	MY (ft-kips)	MZ (ft-kips)		
1.2D + 1.6W	24.23	0.00	67.12	0.00	0.00	2818.30	105.13	0.45
0.9D + 1.6W	22.82	0.00	50.34	0.00	0.00	2655.49	105.13	0.44
1.2D + 1.0Di + 1.0Wi	6.79	0.00	100.66	0.00	0.00	788.56	105.13	0.14
(1.2 + 0.2Sds) * DL + E ELFM	1.81	0.00	63.41	0.00	0.00	202.13	0.00	0.04
(1.2 + 0.2Sds) * DL + E EMAM	2.87	0.00	63.41	0.00	0.00	269.86	105.13	0.06
(0.9 - 0.2Sds) * DL + E ELFM	1.81	0.00	42.85	0.00	0.00	199.52	0.00	0.04
(0.9 - 0.2Sds) * DL + E EMAM	2.86	0.00	42.85	0.00	0.00	266.21	105.13	0.05
1.0D + 1.0W	5.94	0.00	55.96	0.00	0.00	694.33	105.13	0.12

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors			Upper Termination Connectors				Lower Termination Connectors				Max Member		
			VQ/I	Shear	Shear	MQ/I	phiVn	Num	Num	MQ/I	phiVn	Num	Num	Pu	phiPn	Ratio
			(lb/in)	(kips)	(kips)	(kips)	(kips)	Reqd	Actual	(kips)	(kips)	Reqd	Actual	(kip)	(kip)	
0.00	105.	(4) SOL-#20 All Thre	251.3	7.5	16.8	95.3	12.0	8	24	0.0	12.0	0	0	177.2	330.5	0.536

Base/Flange Plate	Plate Type	Baseplate
	Pole Diameter	48 in
	Pole Thickness	0.4375 in
	Plate Diameter	63 in
	Plate Thickness	2 in
	Plate Fy	60 ksi
	Weld Length	0.3125 in
	ϕ_s Resistance	1480.94 k-in
	Applied	316.43 k-in
Stiffeners	#	16 <i>Show</i>
	Thickness	0.75 in
	Length	6 in
	Height	12 in
	Chamfer	1 in
	Offset Angle	22.5 °
	Fy	36 ksi

Bolts	#	16
	Bolt Circle (R)adial / (S)quare	57 in R
	Diameter	2.25 in
	Hole Diameter	2.625 in
	Type	A615-75
	Fy	75 ksi
	Fu	100 ksi
	ϕ_s Resistance	259.82 k
	Applied	110.06 k
Reinforcement	#	4
	DYW. Circle	54.875 in
	Offset Angle	15 °
	Type	#20
	Diameter	2.5 in
	Fu	100 ksi
	ϕ_s Resistance	392.70 k
Extra Bolts 0	#	0

Code Rev.

G

Date

8/30/2016

Engineer

TJG

Site #

302515

Carrier

Sprint Nextel

Moment

2818.3 k-ft

Axial

67.1 k

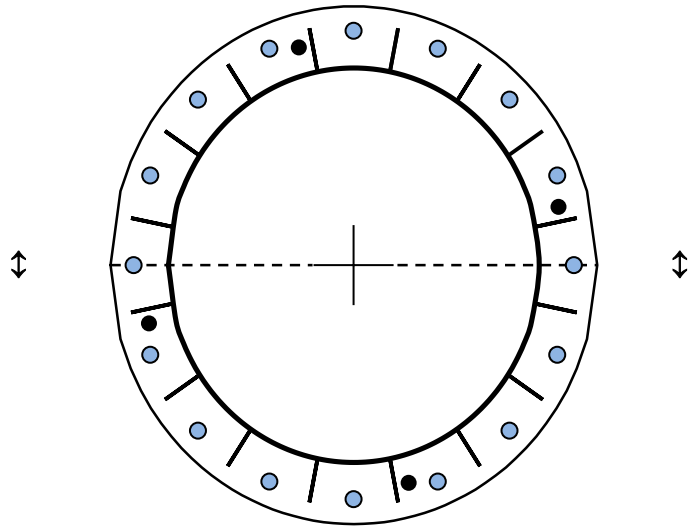


Plate Stress Ratio:

0.21 (Pass)

Bolt Stress Ratio:

0.42 (Pass)

Reinforcement Stress Ratio:

0.43 (Pass)

Site Name: SMFR - North, CT
 Site Number: 302515
 Engineer: TJG
 Engineering Number: OAA695961
 Date: 02/15/17

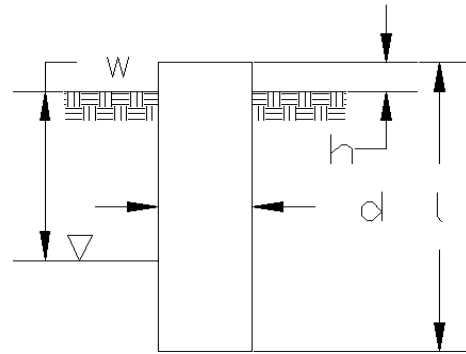
Program Last Updated: 5/13/2014
 American Tower Corporation

Design Base Loads (Factored) - Analysis per TIA-222-G Standards

Analyze or Design a Foundation? Analyze
 Foundation Mapped: N
 Moment (M): 2818.3 k-ft
 Shear/Leg (V): 24.2 k
 Axial Load (P): 67.1 k
 Uplift/Leg (U): 0.0 k

Tower Type (GT / SST / MP): MP

Diameter of Caisson (d): 6.5 ft
 Caisson Embedment (L-h): 24.0 ft
 Caisson Height Above Ground (h): 1.0 ft
 Depth Below Ground Surface to Water Table (w): 22.0 ft
 Unit Weight of Concrete: 150.0 pcf
 Unit Weight of Water: 62.4 pcf
 Tension Skin Friction/Compression Skin Friction: 1.00
 Pullout Angle: 30.0 degrees



Engineer Notes

Soil Mechanical Properties

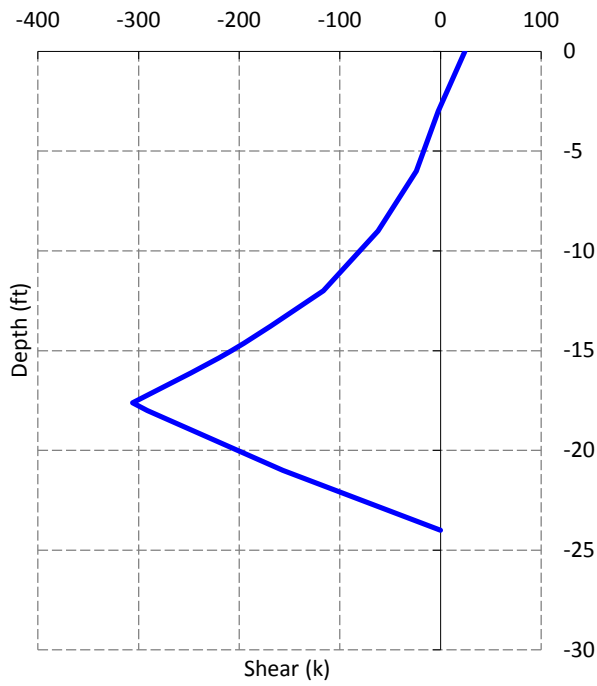
Depth (ft)		γ_{Soil}	Cohesion	ϕ	Ultimate Skin	Ultimate Bearing
Top	Bottom	(pcf)	(psf)	(degree)	Friction (psf)	Pressure (psf)
0.0	2.0	100	0	0	0	0
2.0	10.0	120	0	30	400	0
10.0	25.0	125	0	36	1400	40000

Required Embedment: 19.6 ft - OK, Caisson Embedment Satisfactory
 Volume of Concrete: 829.6 ft³ = 30.7 yd³
 Weight of Concrete (Buoyancy Effect Considered): 120.3 k
 Average Soil Unit Weight: 114.0 pcf
 Skin Friction Resistance: 465.6 k
 Compressive Bearing Resistance: 1327.3 k
 Pullout Weight (Minus Concrete Weight): 936.9 k
 Nominal Uplift Capacity per Leg ($\phi_s T_n$): 439.4 k
 Nominal Compressive Capacity per Leg ($\phi_s P_n$): 1344.7 k
 P_u : 96.6 k
 $T_u / \phi_s T_n$: 0.00 Result: OK
 $P_u / \phi_s P_n$: 0.07 Result: OK
 Total Lateral Resistance: 2023.1 k
 Inflection Point (Below Ground Surface): 17.6 ft
 Design Overturning Moment At Inflection Point (M_D): 3269.3 k-ft
 Nominal Moment Capacity ($\phi_s M_n$): 6494.1 k-ft
 $M_D / \phi_s M_n$: 0.50 Result: OK
 ϕ_s : 0.75

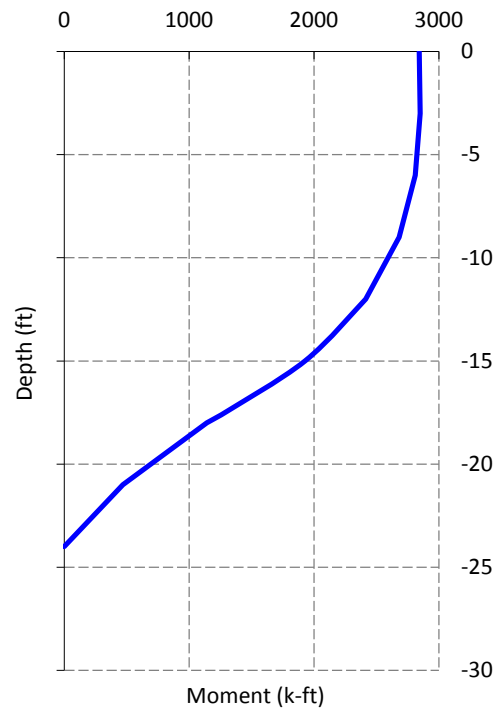
Caisson Strength Capacity

Concrete Compressive Strength (f'_c):	4000 psi
Vertical Steel Rebar Size #:	11
Vertical Steel Rebar Area:	1.56 in ²
# of Vertical Steel Rebars:	21
Vertical Steel Rebar Yield Strength (F_y):	60 ksi
Horizontal Tie / Stirrup Size #:	5
Horizontal Tie / Stirrup Area:	0.31 in ²
Design Horizontal Tie / Stirrup Spacing:	12.0 in
Horizontal Tie / Stirrup Steel Yield Strength (F_y):	60 ksi
Rebar Cage Diameter:	70.0 in
Strength Bending/Tension Reduction Factor (ϕ_B):	0.90 ACI318-05 - 9.3.2.1
Strength Shear Reduction Factor (ϕ_V):	0.75 ACI318-05 - 9.3.2.3
Strength Compression Reduction Factor (ϕ_P):	0.65 ACI318-05 - 9.3.2.2
Steel Elastic Modulus:	29000 ksi
Design Moment (M_u):	2850.1 k-ft
Nominal Moment Capacity ($\phi_B M_n$):	4571.5 k-ft - ACI318-005 - 10.2
$M_u / \phi_B M_n$:	0.62 Result: OK
Design Shear (V_u):	305.9 k
Nominal Shear Capacity ($\phi_V V_n$):	456.5 k - ACI318-05 - 11.3.1.1 or 11.5.7.2
$V_u / \phi_V V_n$:	0.67 Result: OK
Design Tension (T_u):	0.0 k
Nominal Tension Capacity ($\phi_T T_n$):	1769.0 k - ACI318-05 - 10.2
$T_u / \phi_T T_n$:	0.00 Result: OK
Design Compression (P_u):	96.6 k
Nominal Compression Capacity ($\phi_P P_n$):	8390.2 k - ACI318-05 - 10.3.6.2
$P_u / \phi_P P_n$:	0.01 Result: OK
Bending Reinforcement Ratio:	0.007 ACI318-05 - 10.8.4 & 10.9.1
$M_u / \phi_B M_n + T_u / \phi_T T_n$:	0.62 Result: OK

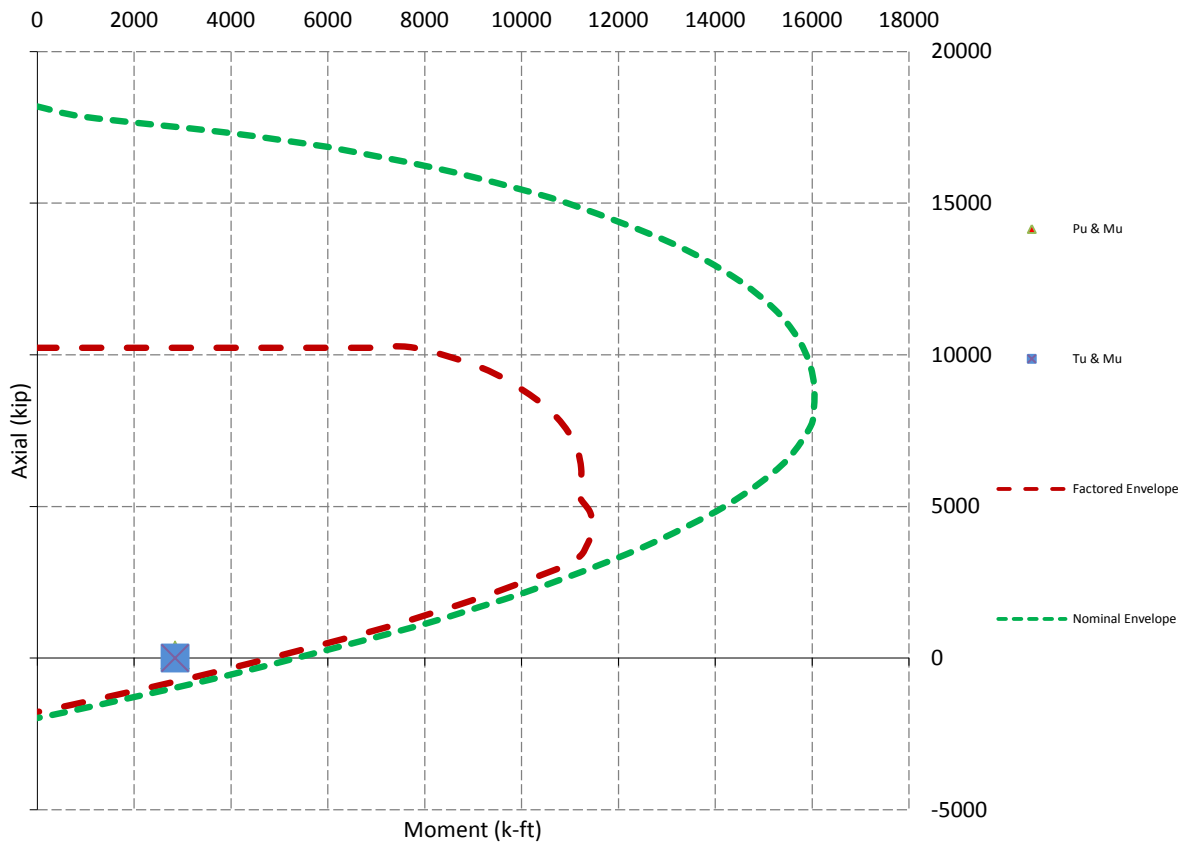
Design Factored Shear / Depth



Design Factored Moment / Depth



Nominal and Factored Moment Capacity and Factored Design Loads



EASTOVER ROAD

Location EASTOVER ROAD

Mblu 004/ 2955/ / /

Acct# 004-2955

Owner CELLCO PARTNERSHIP

Assessment \$653,420

Appraisal \$933,450

PID 183864

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2015	\$394,720	\$538,730	\$933,450
Assessment			
Valuation Year	Improvements	Land	Total
2015	\$276,310	\$377,110	\$653,420

Owner of Record

Owner	CELLCO PARTNERSHIP	Sale Price	\$594,710
Co-Owner	VERIZON WIRELESS	Certificate	
Address	P.O. BOX 2549	Book & Page	4954/ 250
	ADDISON, TX 75001	Sale Date	03/30/1998
		Instrument	00

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
CELLCO PARTNERSHIP	\$594,710		4954/ 250	00	03/30/1998
METRO MOBILE CTS OF FAIRFIELD	\$0		3571/ 172	00	05/23/1990

Building Information

Building 1 : Section 1

Year Built: 1994
Living Area: 415

Building Attributes	
Field	Description
STYLE	Telephone Bldg
Stories:	1

Occupancy	1
Exterior Wall 1	Pre-finish Metl
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	T&G/Rubber
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete Slab
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Radiant
AC Type	None
Bldg Use	Industrial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	300C
Heat/AC	None
Frame Type	Wood Frame
Baths/Plumbing	None
Ceiling/Wall	Ceil & Mn Wall
Rooms/Prtns	Light
Wall Height	9
% Comn Wall	

Building Photo



(<http://images.vgsi.com/photos/StamfordCTPhotos//\00\12\83/>)

Building Layout

BAS[415]

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	415	415
		415	415

Extra Features

Extra Features	<u>Legend</u>
No Data for Extra Features	

Land

Land Use

Use Code	200
Description	Commercial MDL-94
Zone	RA1
Neighborhood	0100

Land Line Valuation

Size (Acres)	3.46
Depth	
Assessed Value	\$377,110
Appraised Value	\$538,730

Outbuildings

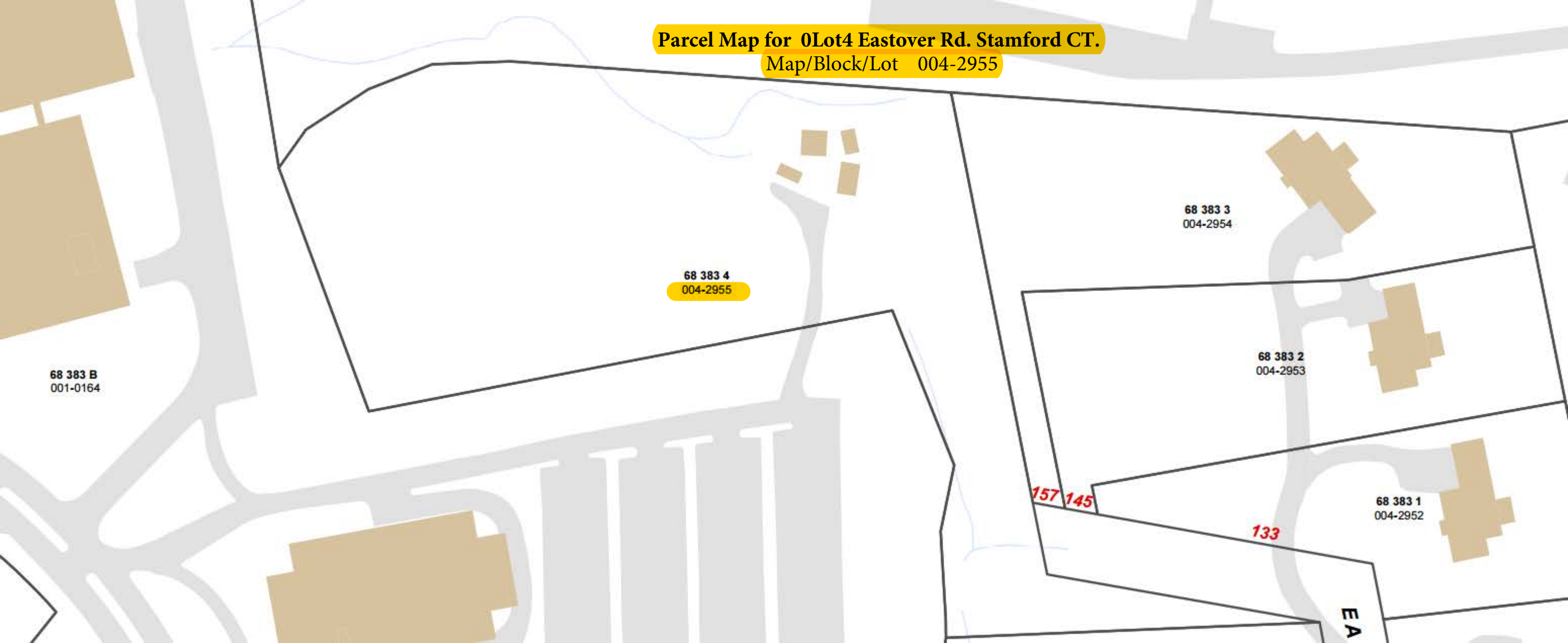
Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
AP1	Fence Chn Lk			1596 L.F.	\$13,170	1
CEL1	Cell Tower			2 SITES	\$354,350	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2015	\$394,720	\$538,730	\$933,450
2014	\$394,720	\$538,730	\$933,450
2013	\$394,720	\$538,730	\$933,450

Assessment			
Valuation Year	Improvements	Land	Total
2015	\$276,310	\$377,110	\$653,420
2014	\$276,310	\$377,110	\$653,420
2013	\$276,310	\$377,110	\$653,420

Parcel Map for 0Lot4 Eastover Rd. Stamford CT.
Map/Block/Lot 004-2955





PLANS PREPARED FOR: 

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY  **Design.
Build.
Deliver.**

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

JOB NUMBER 340-000

SITE ACQUISITION CONSULTANT:

AIR  **SMITH**
DEVELOPMENT

ENGINEERING LICENSE:



STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
PROFESSIONAL ENGINEER

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REVISIONS:			
DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	2/7/17	AJD	0

SITE NAME: TURN OF THE RIVER

SITE CASCADE: _____

CT03XC345

SITE ADDRESS:
0 LOT4 EASTOVER ROAD
STAMFORD, CT 06905

SHEET DESCRIPTION: **TITLE SHEET**

SHEET NUMBER: **T-1**



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

1)BASIC REQUIREMENTS

- a) MEET ALL REQUIREMENTS OF JURISDICTIONS.
- b) IF EQUIPMENT FURNISHED BY COMPANY DOES NOT MATCH THE EQUIPMENT LISTED ON THE RFDS AND SHOWN ON THE PERMITTING DRAWINGS, RESOLVE DISCREPANCY THROUGH INSTALLER'S CONSTRUCTION MANAGER AND COMPANY'S POINT OF CONTACT.
- c) CABLE INSTALLATIONS
- i) ALL CABLES MUST BE OUTDOOR RATED AND HAVE UV RESISTANT OUTER JACKETS.
- ii) CABLE BENDS MUST NOT EXCEED MANUFACTURER'S ALLOWABLE CABLE BEND RADII.
- iii) AT RADIOS INSTALL SERVICE LOOPS FOR POWER, FIBER AND ETHERNET SECURED AT LEAST TWICE AT 180 TO THE STRUCTURE.
- iv) SPARE FIBERS MUST BE ENCASED IN A LOW PROFILE WEATHERTIGHT ASSEMBLY
- d) FIBERS MUST BE FIELD-TERMINATED WITH LC-TYPE CONNECTORS.
- e) CONDUITS IN EARTH: PROVIDE PVC. CONDUITS EXPOSED AND IN FACILITIES: PROVIDE RGS. HAND DIG TRENCHES IN COMPOUNDS.
- f) SECURE AND SUPPORT CONDUITS AND CABLES ON NO MORE THAN 48" INTERVALS.
- g) ON TOWER SITES RGS CONDUITS MAY BE SURFACE MOUNTED AWAY FROM WALKWAYS AND ACCESS/EGRESS PATHS. IF INSTALLATIONS IN WALKWAYS AND ACCESS/EGRESS PATHS CANNOT BE AVOIDED, IDENTIFY THE CONDUIT ENVELOPE / TRIP HAZARD BY ALTERNATING YELLOW AND BLACK STRIPES PAINTED ON CONCRETE AND CONDUIT.

2)SPRINT-FURNISHED EQUIPMENT

- a) INSTALL THE FOLLOWING EQUIPMENT AT LOCATIONS AND AZIMUTHS SHOWN ON THE CONSTRUCTION DRAWINGS.
- i) PANEL ANTENNAS
- ii) RADIOS
- iii) GPS ANTENNAS
- iv) FILTERS
- v) 120 VOLT DIN-RAIL CIRCUIT BREAKER ASSEMBLY

3)TOWER INSTALLATIONS

- a) MEET ALL REQUIREMENTS OF THE TOWER OWNER.
- b) INSTALL CORRUGATED FLEXIBLE CONDUIT UP THE TOWER TO COMPANY'S RAD CENTER.
- c) PROVIDE HANGING GRIPS OR CONDUIT CLAMPS AND ENSURE CONDUITS AS WELL AS INNER CABLES ARE SUPPORTED.
- d) CONDUIT RISERS: AT TOP OF TOWER TURN CONDUIT DOWN AND PROVIDE CABLE TERMINATION FITTINGS. EXTEND CABLES TO RADIOS EXPOSED AND SECURED TO STRUCTURE. AT CONDUIT EXIT FROM TOWER, PROVIDE DRIP LOOPS AND WEEP HOLES.
- e) AT ICE BRIDGE RUN CABLES IN RGS CONDUIT. UTILIZE CONDULETS TO MAKE COMPACT 90 DEGREE TURNS.

4)AC POWER TIE-IN

- a) INSTALL SPRINT'S 120 VOLT DIN-RAIL CIRCUIT BREAKER ASSEMBLY IN THE EXISTING POWER PROTECTION CABINET TELCO SECTION.
- b) INSTALL A 20 AMPERE MOLDED CASE CIRCUIT BREAKER IN AVAILABLE SPACE IN THE ADJACENT PPC POWER SECTION LOAD CENTER.

5)GROUNDING

- a) 120 VOLT CIRCUITS: POWER CABLES MUST BE 3-WIRE WITH EQUIPMENT GROUNDING CONDUCTOR.
- b) SUPPLEMENTAL GROUNDING: ALL GROUNDING HARDWARE MUST BE UL STAMPED AS SUITABLE FOR GROUNDING HARDWARE.
- c) RADIOS: BOND RADIO TO THE TOWER TOP OR SECTOR GROUND BAR WITH #8 BARE TINNED COPPER WIRE (GREEN INSULATED ON ROOFTOPS).
- d) DIN-RAIL CIRCUIT BREAKER ASSEMBLY: BOND SURGE ARRESTOR TO PPC TELCO BOARD GROUND BAR.

6)MINOR MATERIALS

- a) CONDUIT
- i) RIGID GALVANIZED STEEL CONDUIT (RGS): UL LISTED, COMPLIANT WITH ANSI STANDARD C80, HOT-DIP GALVANIZED, WITH THREADED FITTINGS. MANUFACTURERS: ALLIED, REPUBLIC, WHEATLAND, OR EQUAL
- ii) CORRUGATED FLEXIBLE CONDUIT: DURALINE OR EQUAL
- iii) LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LFMC): UL LABELED, UV RESISTANT, FLAME RETARDANT PVC JACKET, HOT-DIP GALVANIZED, GREY. MANUFACTURERS: AFC, ANACONDA, SOUTHWIRE OR EQUAL

- iv) PVC CONDUIT: SCHEDULE 40. CARLON OR EQUAL
- v) CABINET HUBS AND CABLE TERMINATION FITTINGS: OZ GEDNEY OR ROXTEC
- b) COAXIAL CABLE JUMPERS: 1/2" LDF-4. MANUFACTURERS: COMMSCOPE, RFS OR FCT.
- c) FASTENERS AND HARDWARE
- i) TO SECURE RACEWAYS, UTILIZE NON CORRODING NON-MAGNETIC METALLIC FASTENERS AND HARDWARE SUITABLE FOR THE PURPOSE.
- d) POWER CABLES - 3/C #12 SOOW BY SOUTHWIRE OR EQUAL
- e) ETHERNET CABLES AND CONNECTORS: OUTDOOR RATED, CAT 5E, BELDEN OR EQUAL
- f) FIBER CABLES: CORNING 'FREEDOM FAN OUT" OUTDOOR RISER CABLE, 4F, SINGLE MODE, OR EQUAL
- g) RF TRANSPARENT PAINT FOR ANTENNA CONCEALMENT: SELECT NO/LOW CARBON PAINTS, WITH NO/LOW TITANIUM DIOXIDE, AND WITHOUT SUSPENDED METAL PARTICLES (ALUMINUM, ZINC, COPPER, ETC.)

7)COLOR CODING

- a) COLOR CODE CABLES AND CONDUITS AS REQUIRED BY SPRINT STANDARD TS-0200.

8)TESTING AND CONSTRUCTION COMPLETE

- a) SWEEP ALL COAXIAL CABLES ACCORDING TO SPRINT STANDARD TS-0200.
- b) PANEL ANTENNA ALIGNMENT - USING ELECTRONIC ALIGNMENT TOOL. AZIMUTH/DOWNTILT +/- 1 DEGREE.
- c) LEAVE EQUIPMENT DE-ENERGIZED UNTIL INSTRUCTED BY THE COMMISSIONING AND INTEGRATION TEAM TO ENERGIZE.
- d) OTHER REQUIREMENTS AND DELIVERABLES MAY BE REQUIRED BEFORE THE CONSTRUCTION COMPLETE MILESTONE CAN BE ACTUALIZED IN SITERRA (SPRINT'S DATABASE-OF-RECORD).

PLANS PREPARED FOR:



PLANS PREPARED BY:



SITE ACQUISITION CONSULTANT:



ENGINEERING LICENSE:



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REVISIONS:			
DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	2/7/17	AJD	0

SITE NAME:

TURN OF THE RIVER

SITE CASCADE:

CT03XC345

SITE ADDRESS:

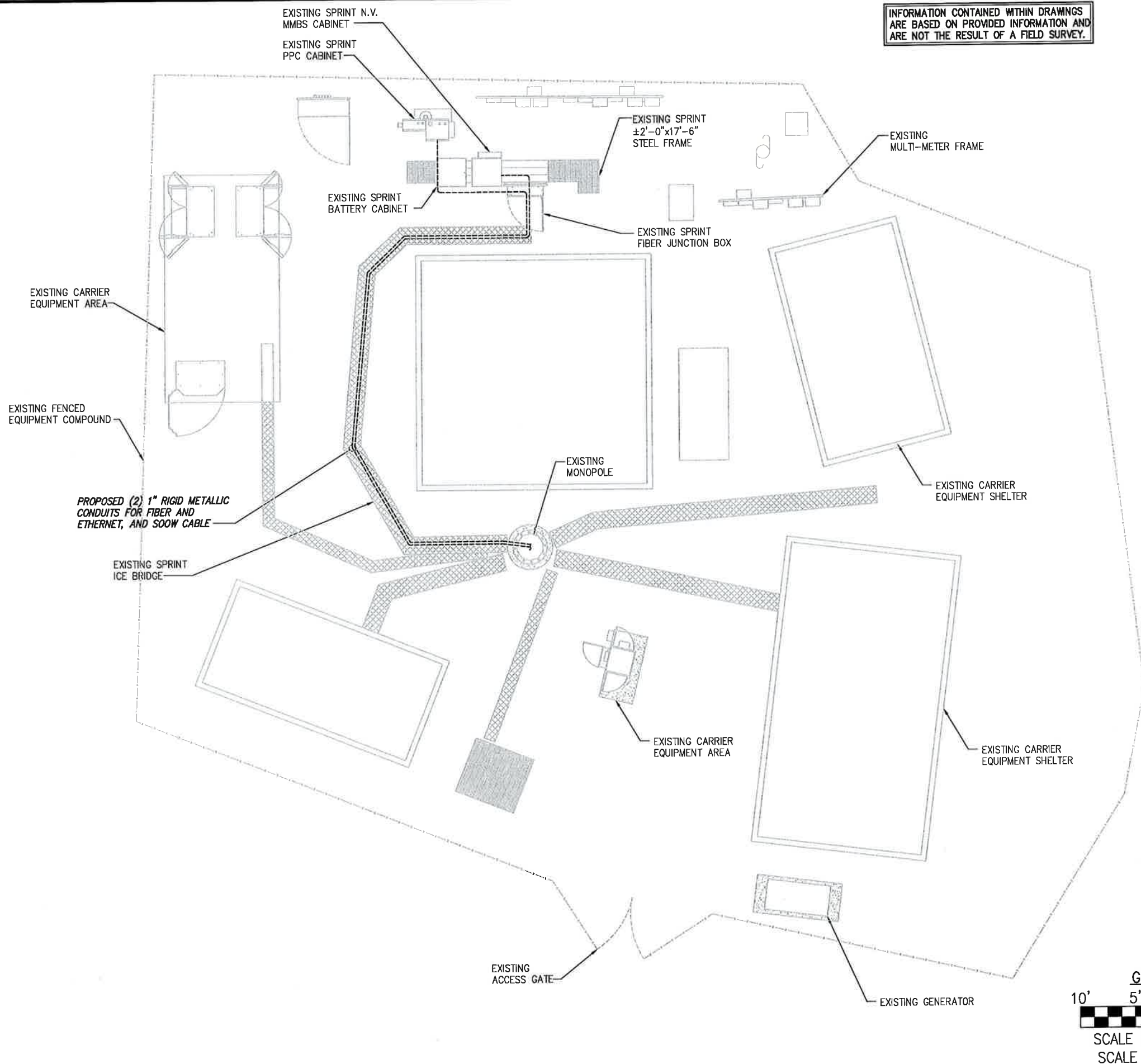
0 LOT4 EASTOVER ROAD
STAMFORD, CT 06905

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-1



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

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY Design, Build, Deliver.

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

JOB NUMBER 340-000

SITE ACQUISITION CONSULTANT:

AIRSMITH DEVELOPMENT

ENGINEERING LICENSE:

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
PROFESSIONAL ENGINEER

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REVISIONS:

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TURN OF THE RIVER

SITE CASCADE:

CT03XC345

SITE ADDRESS:

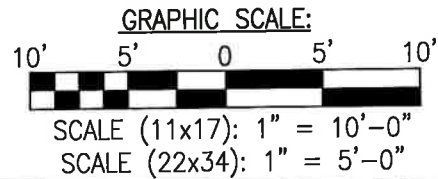
**0 LOT4 EASTOVER ROAD
STAMFORD, CT 06905**

SHEET DESCRIPTION:

SITE PLAN

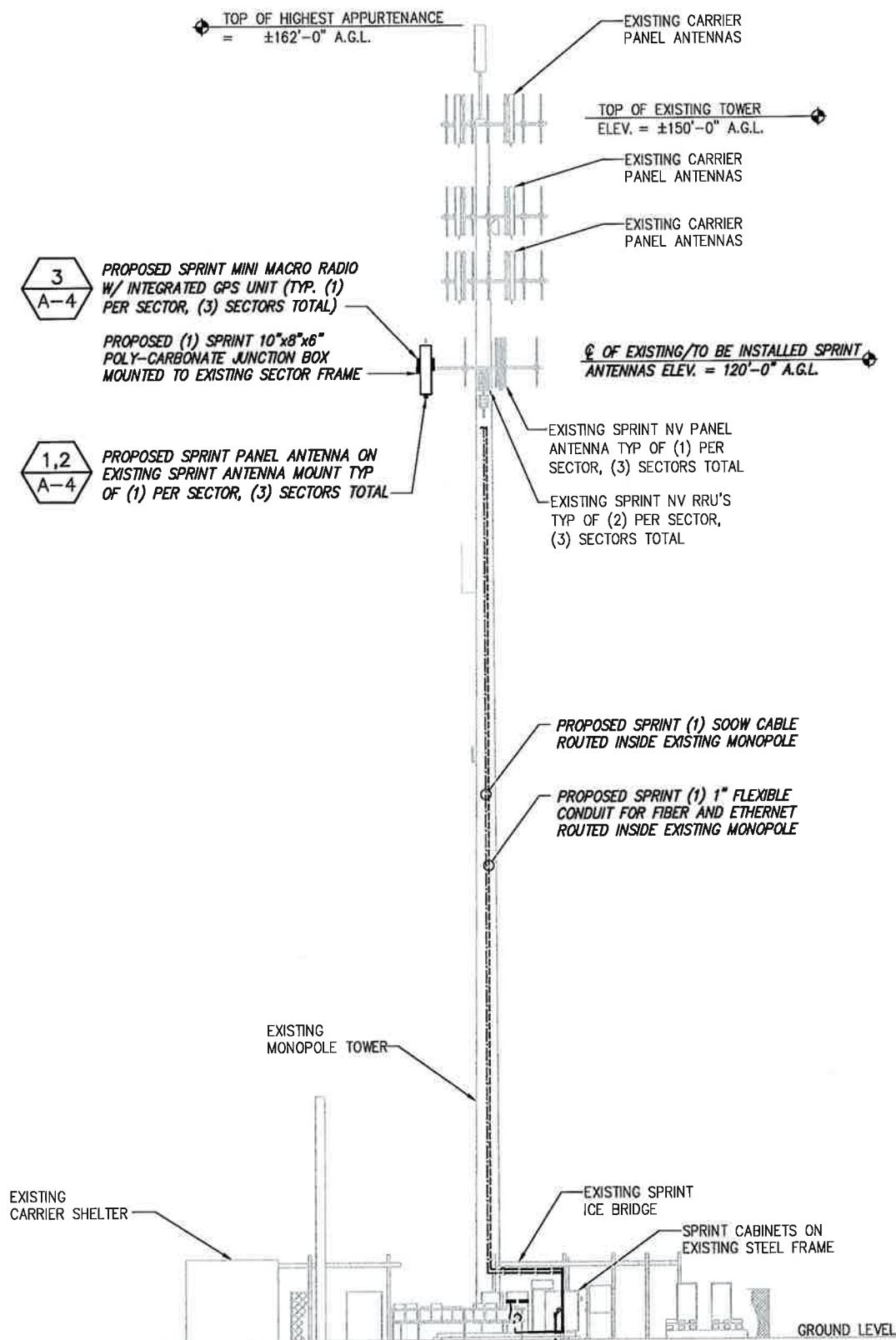
SHEET NUMBER:

A-1



NOTE:
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EXISTING TOWER OR MOUNT FOR THIS SITE, AND
ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL
INTEGRITY. REFER TO STRUCTURAL ANALYSIS BY
OTHERS PRIOR TO ANY CONSTRUCTION.

NOTE:
SEE DETAIL 1 ON A-3
FOR ANTENNA LAYOUT



TOWER ELEVATION

NO SCALE

1

PLANS PREPARED FOR:

Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY Design. build. Deliver.
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REVISIONS:			
DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	2/7/17	AJD	0

SITE NAME:

TURN OF THE RIVER

SITE CASCADE:

CT03XC345

SITE ADDRESS:

0 LOT4 EASTOVER ROAD
STAMFORD, CT 06905

SHEET DESCRIPTION:

TOWER ELEVATION

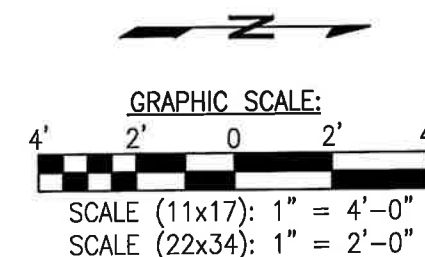
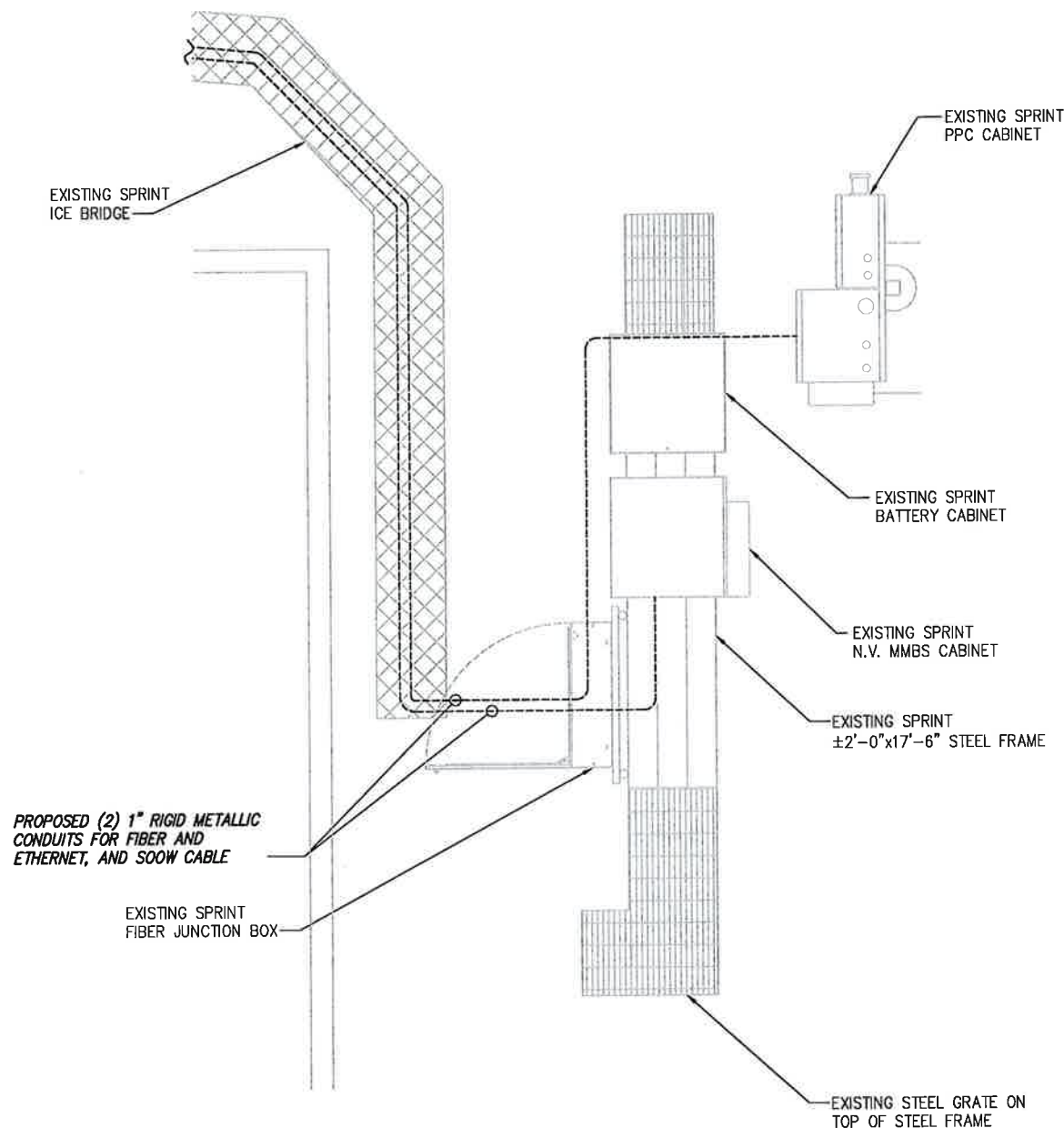
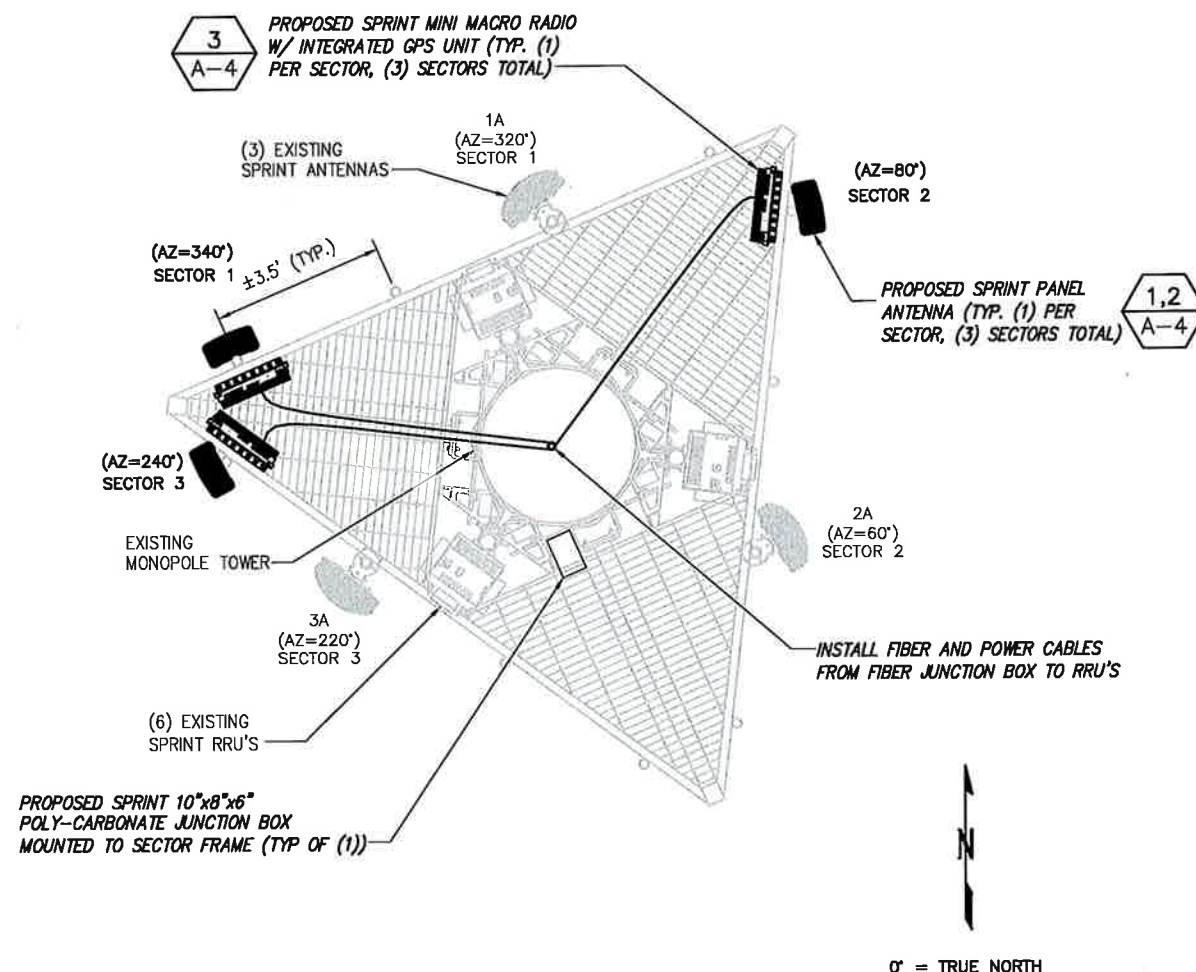
SHEET NUMBER:

A-2

NOTE:
JUMPERS FROM 2.5 RRH TO THE 2.5
ANTENNA CANNOT EXCEED 8 FEET

NOTE:
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EXISTING TOWER OR MOUNT FOR THIS SITE, AND
ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL
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OTHERS PRIOR TO ANY CONSTRUCTION.

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



PLANS PREPARED FOR:
Sprint
6580 Sprint Parkway
Overland Park, Kansas 66251

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AIRSMITH DEVELOPMENT

ENGINEERING LICENSE:

JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER

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REVISIONS:			
DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	2/7/17	AJD	0

SITE NAME:
TURN OF THE RIVER

SITE CASCADE:
CT03XC345

SITE ADDRESS:
**0 LOT4 EASTOVER ROAD
STAMFORD, CT 06905**

SHEET DESCRIPTION:
**ANTENNA LAYOUT
& DETAILED SITE PLAN**

SHEET NUMBER:
A-3

ANTENNA LAYOUT

SCALE: NTS

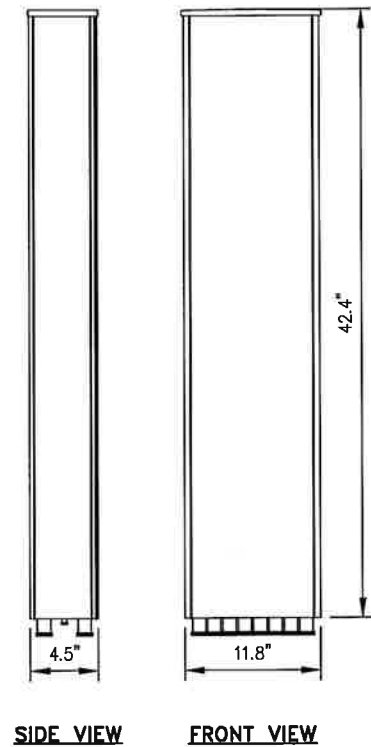
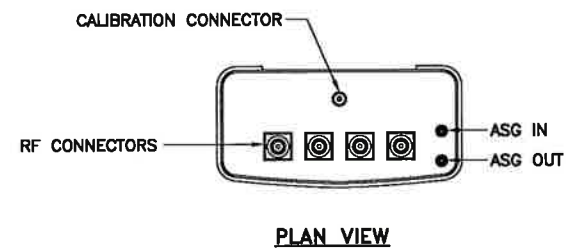
1

SPRINT EQUIPMENT PLAN

SCALE: AS NOTED

2

COMMSCOPE/ARGUS: LLPX310R-V1
RADOME MATERIAL: POLYESTER FIBERGLASS PULTRUSION
DIMENSIONS, HxWxD.: 42.4"x11.8"x4.5"
WEIGHT: 27.6 lbs
CONNECTORS: (8) 7-16 DIN FEMALE



ANTENNA MOUNTING POLE (TYP)

PROPOSED MINI MACRO RADIO

#6 AWG GREEN STRANDED GROUND CONDUCTOR TO EXISTING SECTOR GROUND BAR

#4 AWG SOLID GROUND CONDUCTOR TO EXISTING SECTOR GROUND BAR

PROPOSED MOUNTING BRACKET (TYP)

PROPOSED ANTENNA (TYP)

PROPOSED MOUNTING BRACKET (TYP)

LEGEND:
G — GROUND CONDUCTOR
■ MECHANICAL CONNECTION
● EXOTHERMIC CONNECTION

PLANS PREPARED FOR:

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SITE ACQUISITION CONSULTANT:

AIROSMITH DEVELOPMENT

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SITE NAME:

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SITE CASCADE:

CT03XC345

SITE ADDRESS:

0 LOT4 EASTOVER ROAD
STAMFORD, CT 06905

SHEET DESCRIPTION:

EQUIPMENT DETAILS

SHEET NUMBER:

A-4

PROPOSED ANTENNA DETAIL

NO SCALE

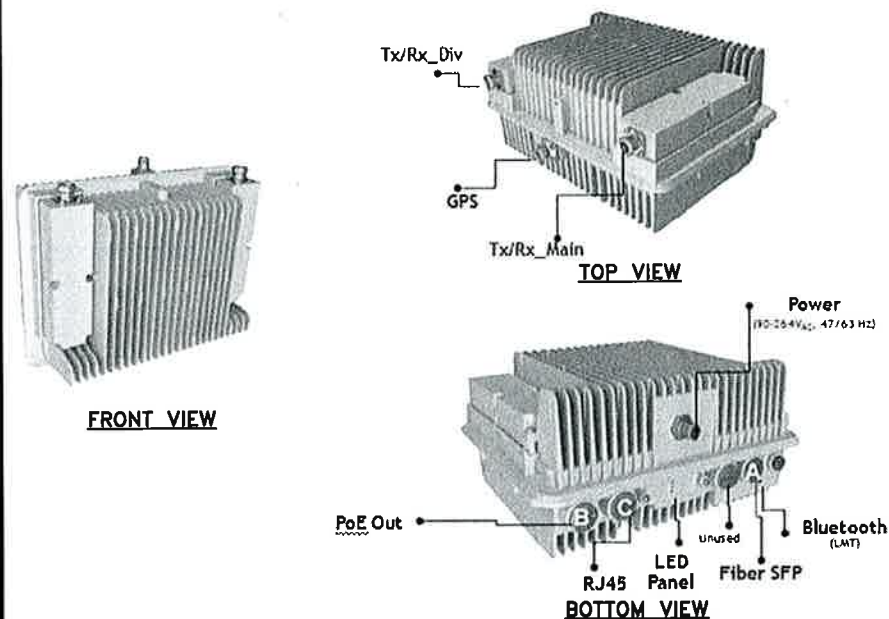
1

ANTENNA & MMBTS MOUNTING DETAIL

NO SCALE

2

NOKIA: FWHR 2500 MHz 2 x 20W Micro BTS
OPERATING AC VOLTAGE: 90-264 VAC
DIMENSION (HxWxD): 9.72"x12.87"x9.30"
WEIGHT: 24.7 LBS.



LEGEND:
① OEM PROPRIETARY POWER CABLE
② SOOW CABLE
③ 1/2" RF JUMPERS
④ ETHERNET/FIBER CABLES
⑤ RET CABLE

NOTE:
1. SECURE CONDUITS TO EXISTING EQUIPMENT PAD WITH CONDUIT CLAMPS AS REQUIRED. CONTRACTOR SHALL INSTALL CONDUITS IN A MANNER TO REDUCE TRIPPING HAZARDS. PAINT ROUTED COMMON ACCESS PATHS YELLOW & BLACK AS REQUIRED.
2. CONDUIT FILL: ① - 9/C #10 OR #12 AWG SOOW CABLE*
② - (4) FIBER CABLES & (3) ETHERNET
* USE #12 AWG FOR RUNS LESS THAN 200 CABLE FEET; USE #10 AWG FOR RUNS GREATER THAN 200 CABLE FEET.

NOTE:
RF JUMPERS FOR 2.5 DEPLOYMENT ARE NOT TO EXCEED 8' IN OVERALL LENGTH

CONTRACTOR SHALL ROUTE & SECURE RET ASIG CABLE AS REQUIRED TO ADJACENT NV 1.9 ANTENNA AT SECTOR

LEGEND:
--- 1" RGS CONDUIT
--- 1" CORRUGATED PVC CONDUIT
--- P --- SOOW CABLE

ANTENNA MOUNTING PIPE TO BE FLUSH WITH TOP OF ANTENNA

PROPOSED SPRINT PANEL ANTENNA

NEW MINI MACRO RADIO W/ INTEGRATED GPS UNIT

NEW (1) 10"x8"x6" POLY-CARBONATE JUNCTION BOX W/ SOOW CABLE TERMINAL BLOCK
NEW ROXTEC CONDUIT SEAL OR APPROVED EQUAL

(1) SOOW CABLE ROUTED IN MONOPOLE

CONDUIT & SOOW CABLE TO BE SUPPORTED AT THE COAX EXIT PORT W/ J-HOOKS & HOISTING GRIPS

(1) 1" CORRUGATED PVC CONDUIT

MINI MACRO RADIO DETAIL

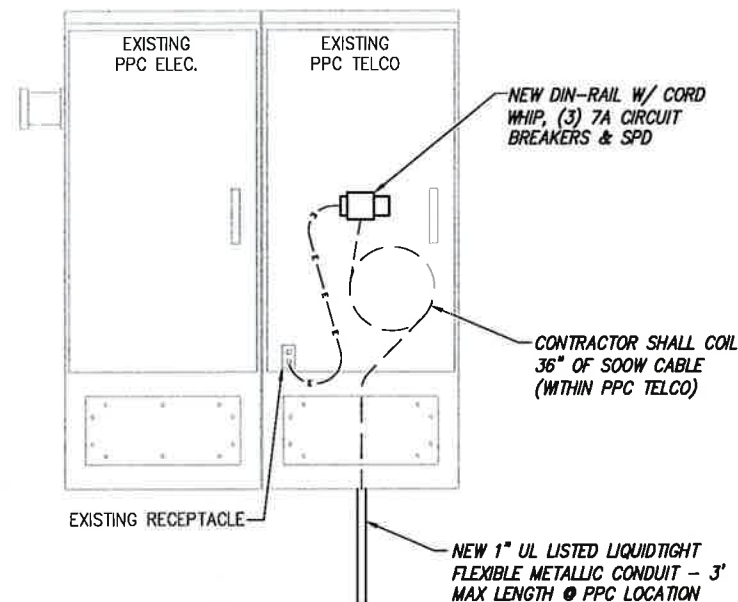
NO SCALE

3

ANTENNA MOUNTING ELEVATION

NO SCALE

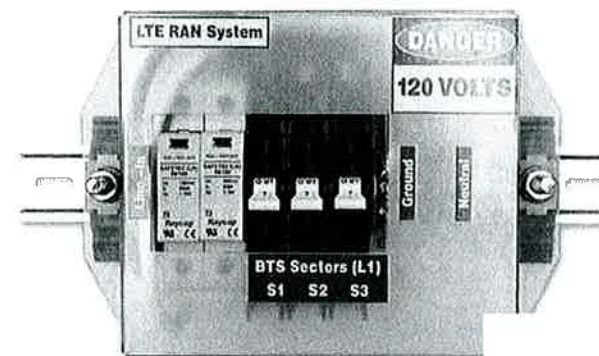
4



POWER DETAIL

NO SCALE

1



RAYCAP: RSTAC-4569-P-120

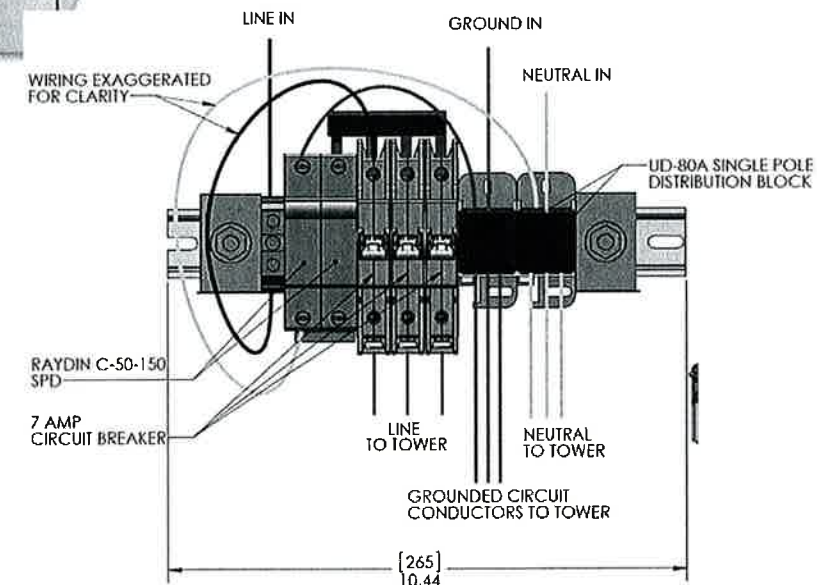
OPERATING AC VOLTAGE: 120 1 PHASE 2 W+G

LOAD CENTER: 3 POSITION

OPERATING TEMPERATURE: (°C) -40° C TO +75° C

DIMENSION (H×W×D): 10.44"x5.18"x2.71"

WEIGHT: 2.5 LBS.



DIN-RAIL W/ CORD WHIP & SPD DETAIL

NO SCALE

2

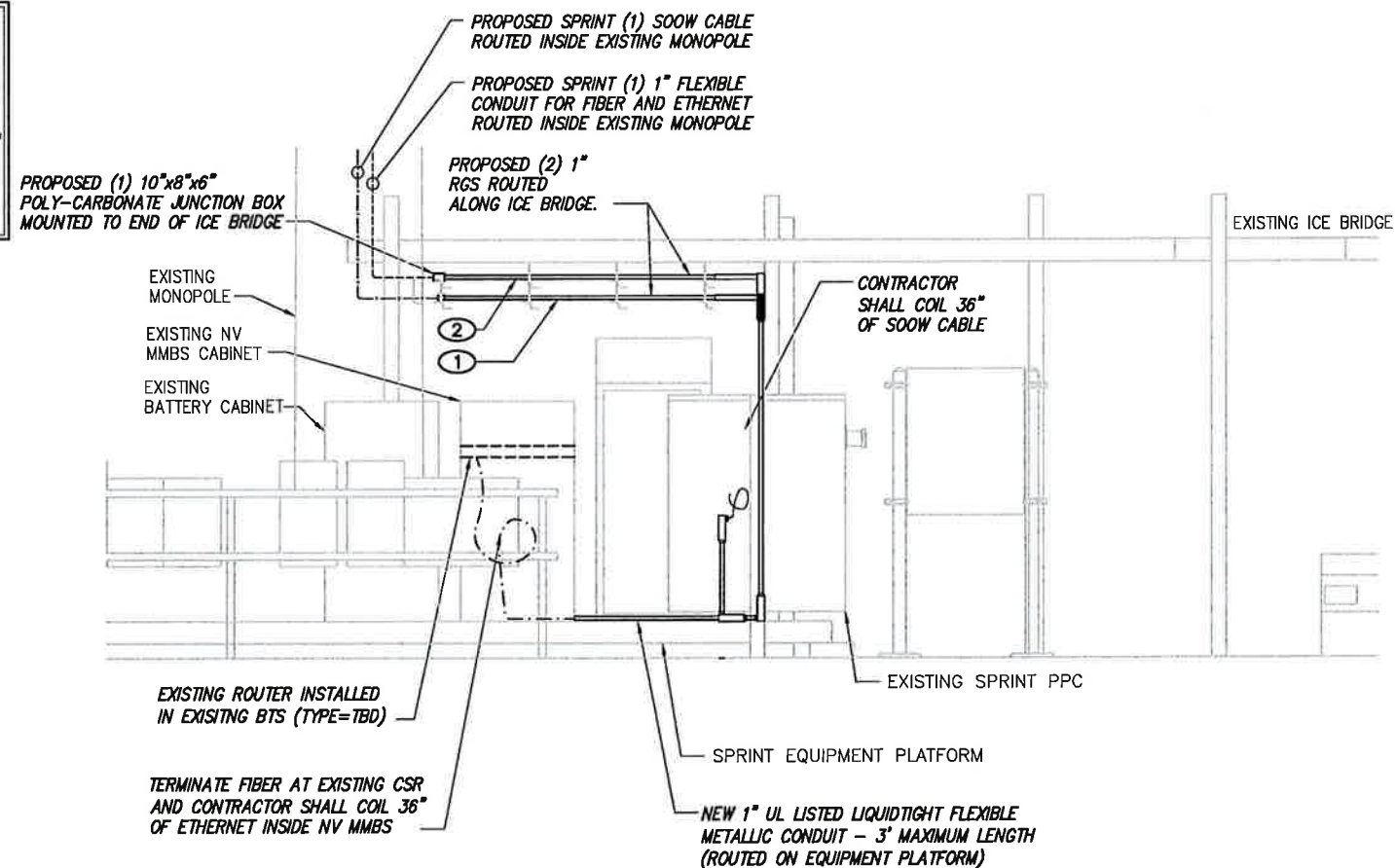
- NOTE:**
1. SECURE CONDUITS TO EXISTING EQUIPMENT PAD WITH CONDUIT CLAMPS AS REQUIRED. CONTRACTOR SHALL INSTALL CONDUITS IN A MANNER TO REDUCE TRIPPING HAZARDS. PAINT ROUTED COMMON ACCESS PATHS YELLOW & BLACK AS REQUIRED.
 2. CONDUIT FILL: (1) - 9/C #10 OR #12 AWG SOOW CABLE*
(2) - (4) FIBER CABLES & (3) ETHERNET
- * USE #12 AWG FOR RUNS LESS THAN 200 CABLE FEET; USE #10 AWG FOR RUNS GREATER THAN 200 CABLE FEET.

LEGEND:

--- 1" RGS CONDUIT

--- 1" CORRUGATED PVC CONDUIT

--- P --- SOOW CABLE



EQUIPMENT ELEVATION DETAIL

NO SCALE

3

PLANS PREPARED FOR:

Sprint

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

INFINIGY Design. Build. Deliver.

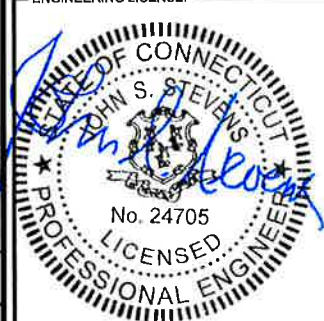
1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
Fax # (518) 690-0793

JOB NUMBER 340-000

SITE ACQUISITION CONSULTANT:

AIRSMITH DEVELOPMENT

ENGINEERING LICENSE:



DRAWING NOTICE:

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REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR CONSTRUCTION	2/7/17	AJD	0

SITE NAME:

TURN OF THE RIVER

SITE CASCADE:

CT03XC345

SITE ADDRESS:

0 LOT4 EASTOVER ROAD
STAMFORD, CT 06905

SHEET DESCRIPTION:

EQUIPMENT
DETAILS

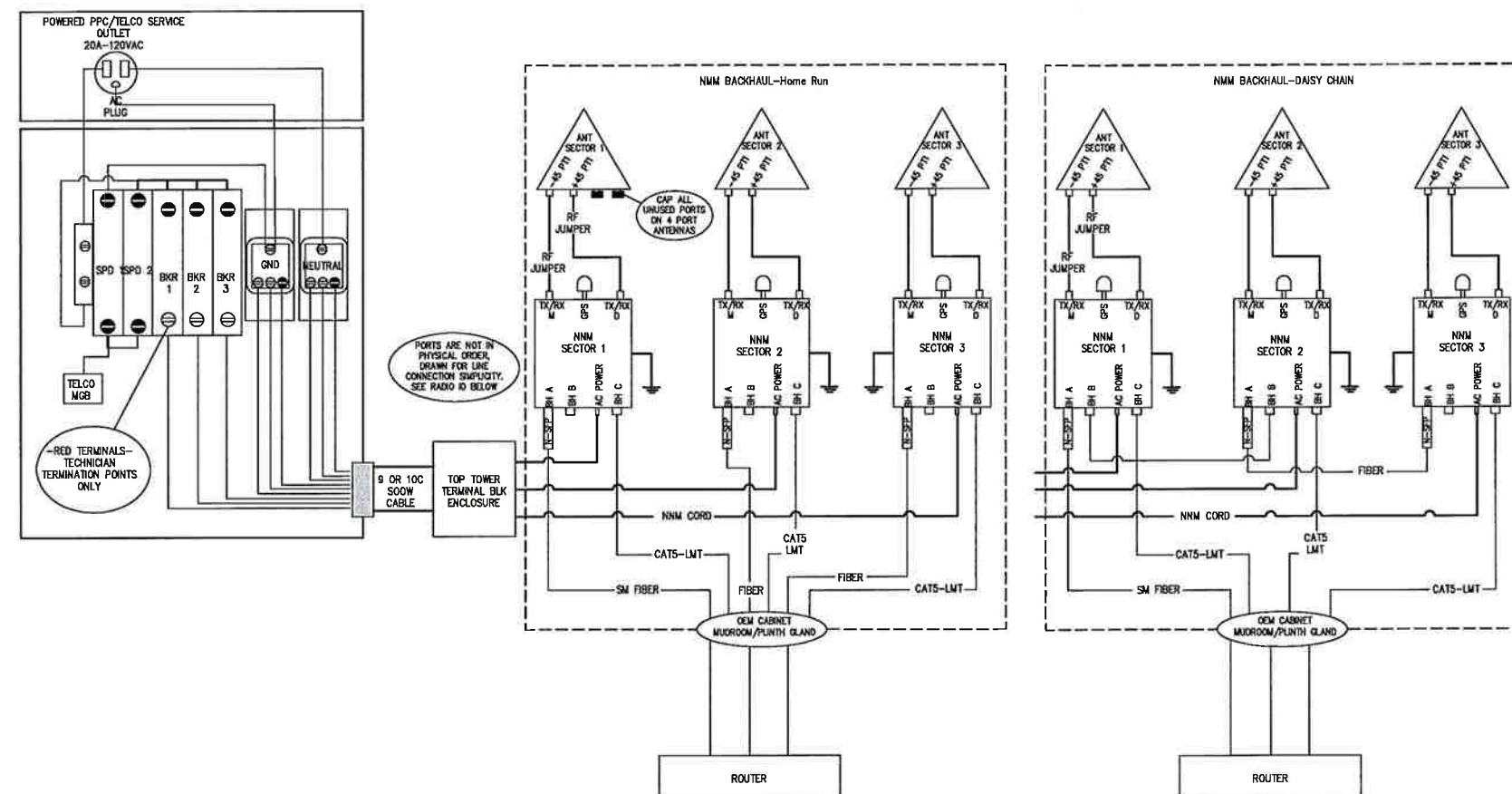
SHEET NUMBER:

A-5

AC POWER GROUND LEVEL:

POWER CIRCUITS/CABLES MUST BE 3 WIRE EQUIPMENT GROUNDING CONDUCTOR. SUPPLEMENTAL GROUNDING HARDWARE MUST BE UL STAMPED AS SUITABLE FOR GROUNDING HARDWARE.

1. THE PREFERRED AC POWER CONNECTION TO THE DIN RAIL ASSEMBLY IS HARD WIRED FROM A DEDICATED 20A PANEL BREAKER TO THE DIN RAIL (DIN RAIL MUST BE IN AN ENCLOSURE) HOWEVER IF THE PROVIDED POWER CORD IS CHOSEN THE DIN RAIL ASSEMBLY RECEPTACLE MUST NOT BE GFCI AS THEY WILL TRIP, REPLACE WITH STANDARD RECEPTACLE AS REQUIRED. WHEN USING THE SUPPLIED POWER PLUG, THE CORD AND OUTLET MUST BE LABELED "DO NOT DISCONNECT" AND "DO NOT UNPLUG"
2. IF PPC TELCO SECTION IS LESS THAN 50' FROM TOWER AND THE CONDUIT RUN IS 100% ABOVEGROUND INSTALL 9 OR 10/C SOOW IN 1.5" RGS (EXPOSED) ON ICE BRIDGE, SOOW EXPOSED UP THROUGH TOWER TO TERMINAL BOX AT THE RAD CENTER.
3. IF PPC TELCO SECTION IS MORE THAN 50' FROM TOWER, OR THE CONDUIT RUN AT ANY POINT IS UNDERGROUND ROUTE 1.5" RGS (EXPOSED) OR PVC (UNDERGROUND) WITH 9 EA. THHN/THWN CONDUCTORS. INSTALL A TERMINAL BOX WITH TERMINAL BLOCK ON ICE BRIDGE NEAREST TOWER AND TRANSITION TO SOOW. AT TELCO SECTION INDIVIDUAL CONDUCTORS ROUTE ACROSS PLYWOOD BACKBOARD TO THE DIN RAIL CIRCUIT BREAKER ASSEMBLY. SOME JURISDICTIONS MAY NOT ALLOW INDIVIDUAL CONDUCTORS TO ROUTE ACROSS BACKBOARD THEREFORE INSTALL ANOTHER TERMINAL BOX INSIDE OR OUTSIDE AND TRANSITION BACK TO SOOW.



NOTE:

1. AC POWER GROUND LEVEL NOTES AND NOKIA MM SYSTEM WIRING DIAGRAM REFERENCED FROM DOCUMENT ENTITLED "MINI-MACRO ON NV MACRO SITE INSTALLATION MOP" DATED NOVEMBER 2, 2016, PAGES 11-12 AND 14, RESPECTIVELY.

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SHEET DESCRIPTION:

EQUIPMENT DETAILS

SHEET NUMBER:

A-6