



July 20, 2018

Dear Customer:

The following is the proof-of-delivery for tracking number **772714020326**.

Delivery Information:

Status:	Delivered	Delivered to:	Receptionist/Front Desk
Signed for by:	M.CLARK	Delivery location:	12 NEW CANAAN AVE NORWALK, CT 06852
Service type:	FedEx Express Saver	Delivery date:	Jul 19, 2018 11:23
Special Handling:	Deliver Weekday Direct Signature Required		



Shipping Information:

Tracking number:	772714020326	Ship date:	Jul 16, 2018
		Weight:	1.0 lbs/0.5 kg

Recipient:
Lauren Mappa
First Taxing District, City of Norw
12 New Canaan Ave.
NORWALK, CT 06852 US

Shipper:
Steve Sofman
Charles Cherundolo Consulting
1280 Route 46 West
Suite 9
PARSIPPANY, NJ 07054 US
CT03XC334 CSC

Reference

Thank you for choosing FedEx.



July 20, 2018

Dear Customer:

The following is the proof-of-delivery for tracking number **772713966315**.

Delivery Information:

Status:	Delivered	Delivered to:	Mailroom
Signed for by:	S.SALMON	Delivery location:	125 EAST AVENUE 3RD FLOOR NORWALK, CT 06851
Service type:	FedEx Express Saver	Delivery date:	Jul 18, 2018 12:53
Special Handling:	Deliver Weekday Direct Signature Required		



Shipping Information:

Tracking number:	772713966315	Ship date:	Jul 16, 2018
		Weight:	1.0 lbs/0.5 kg

Recipient:
Steve Kleppin - Zoning Director
City of Norwalk
125 East Ave.
Room 223
NORWALK, CT 06851 US

Reference

Shipper:
Paul Sagristano
CCC
4 Davis Road West
Suite 5
OLD LYME, CT 06371 US
CT03XC334 CSC Submission

Thank you for choosing FedEx.



July 20, 2018

Dear Customer:

The following is the proof-of-delivery for tracking number **772713743400**.

Delivery Information:

Status:	Delivered	Delivered to:	Receptionist/Front Desk
Signed for by:	K.KOVACS	Delivery location:	125 EAST AVE. NORWALK, CT 06851
Service type:	FedEx Express Saver	Delivery date:	Jul 19, 2018 13:18
Special Handling:	Deliver Weekday Direct Signature Required		



Shipping Information:

Tracking number:	772713743400	Ship date:	Jul 16, 2018
		Weight:	1.0 lbs/0.5 kg

Recipient:
Hon. Harry Rilling, Mayor
City of Norwalk
125 East Ave.
NORWALK, CT 06851 US

Shipper:
Paul Sagristano
CCC
4 Davis Road West
Suite 5
OLD LYME, CT 06371 US
CT03XC334 CSC Submission

Reference

Thank you for choosing FedEx.



4 Davis Road West, Suite 5 – Old Lyme, CT 06371

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

Re: Notice of Exempt Modification Application
173 ½ West Rocks Road, Norwalk, CT 06851

July 2, 2018

Dear Ms. Bachman:

Sprint Spectrum Realty Company, L.P. (“Sprint”), is submitting to the Connecticut Siting Council for a Notice of Exempt Modification for Proposed Modifications to an Existing Telecommunications Facility located at the above-referenced site. Sprint currently maintains 3 panel antenna at the 106.4’ level of the Tower. Sprint proposes to maintain those panel antennas (1 per sector) and add 3 new antennas (1 per sector). Sprint further proposes to add 3 hybrid cables and 27 Antenna-RRH jumper cables. Any ground based modifications will be added to existing equipment cabinets.

The Sprint installation was originally granted zoning approval on June 26, 1997. Any documents enclosed reflect the reality of the current installations on the Tower.

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

Thank you,

By: *Paul F. Sagristano*

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



4 Davis Road West, Suite 5 – Old Lyme, CT 06371

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

Re: Notice of Exempt Modification Application
173 ½ West Rocks Road, Norwalk, CT 06851

Latitude : N41.14381
Longitude: W73.41873

July 02, 2018

Dear Ms. Bachman:

Sprint Spectrum Realty Company, L.P. (“Sprint”), is submitting to the Connecticut Siting Council for a Notice of Exempt Modification for Proposed Modifications to an Existing Telecommunications Facility located at the above-referenced site. . Sprint currently maintains 3 panel antenna at the 106.4’ level of the Water Tower. Sprint proposes to maintain those panel antennas (1 per sector) and add 3 new antennas (1 per sector). Sprint further proposes to add 3 hybrid cables and 27 Antenna-RRH jumper cables. Any ground based modifications will be added to existing equipment cabinets. Sprint is performing a new high-performance upgrade for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

The Sprint installation originally received a Norwalk zoning approval on June 26, 2007 there is no commensurate building permit on file.

Please accept this letter as notification to the Council, pursuant to R.C.S.A. Section 16-50j-73, for construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter is being sent to and to Hon. Harry Rilling, Mayor of Norwalk as well as Steven Kleppin, Planning & Zoning director for the City of Norwalk, and to Ms. Lauren Mappa the representative for The First Taxing District of Norwalk, 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 with proposed modifications to accommodate the revised antenna configuration.

Existing Facility

The Norwalk Facility is located at 173 ½ West Rocks Road in the City of Norwalk and is owned by The First Taxing District, the Site coordinates are: N41.14381, W73.18739.

The existing facility consists of a 116' Water tower. Sprint currently operates wireless communications equipment on a platform on a concrete slab at the facility and has 3 antennas mounted at a centerline of 106.4'

Statutory Considerations

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

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

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

Respectfully submitted,

Paul F. Sagristano

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

PFS/mtf

Additional Recipients:

Hon. Harry Rilling, Mayor – City of Norwalk CT – Via Fed Ex
Steven Klepper, P&Z Director City of Norwalk - Via Fed Ex
Lauren Mappa, First Taxing District – Via Fed Ex

Google Maps 173 1/2 W Rocks Rd



Imagery ©2018 Google, Map data ©2018 Google 100 ft



173 1/2 W Rocks Rd
Norwalk, CT 06851



173 1/2 WEST ROCKS RD

Location 173 1/2 WEST ROCKS RD

Mblu 5/ 22A/ 18/ 0/

Acct# 13222

Owner FIRST TAXING DISTRICT

Assessment \$758,840

Appraisal \$1,084,050

PID 13222

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2015	\$426,680	\$657,370	\$1,084,050

Assessment			
Valuation Year	Improvements	Land	Total
2015	\$298,680	\$460,160	\$758,840

Owner of Record

Owner FIRST TAXING DISTRICT
Co-Owner (WATER DEPT - WATER TANK)
Address 3 BELDEN AVE
NORWALK, CT 06850-3303

Sale Price \$0
Certificate
Book & Page 365/140
Sale Date 12/31/1940

Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
FIRST TAXING DISTRICT	\$0		365/140	12/31/1940

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: \$0
Building Percent
Good:
Replacement Cost
Less Depreciation: \$0

Building Attributes	
Field	Description


Style	Outbuildings
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Floor 1	
Interior Floor 2	
Heat Fuel	
Heat Type	
AC Type	
Bedrooms	
Full Baths	
Half Baths	
Extra Fixtures	
Total Rooms	
Extra Kitchens	
Frame	
Insulation	
Bsmt Garage	
Foundation	
FBM Area	
Fireplaces	
# of Heat Systems	
Solar HW	
Electrical	

Building Photo



(<http://images.vgsi.com/photos/NorwalkCTPhotos//00\00\37\60>).

Building Layout

 Building Layout (ParcelSketch.ashx? pid=13222&bid=13222)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 920V
Description Mun Land Comm
Zone A1

Land Line Valuation

Size (Acres) 1.85
Frontage
Depth

Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
TWR	Water Tower			250000.00 GAL	\$187,500	1
FN6	Fence 6'			290.00 L.F.	\$2,030	1
SHD4	Cell Equip	FR	Frame	220.00 S.F.	\$16,500	1
SHD4	Cell Equip	FR	Frame	574.00 S.F.	\$43,050	1
SHD4	Cell Equip	FR	Frame	168.00 S.F.	\$12,600	1
SHD4	Cell Equip	FR	Frame	200.00 S.F.	\$15,000	1
CEL2	Cell Rooftop			4.00 UNITS	\$150,000	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2016	\$426,680	\$657,370	\$1,084,050
2015	\$426,680	\$657,370	\$1,084,050
2014	\$426,680	\$657,370	\$1,084,050

Assessment			
Valuation Year	Improvements	Land	Total
2016	\$298,680	\$460,160	\$758,840
2015	\$298,680	\$460,160	\$758,840
2014	\$298,680	\$460,160	\$758,840

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NORWALK ZONING COMMISSIONCITY HALL - 125 EAST AVENUE
NORWALK, CONNECTICUT**CERTIFICATE OF SPECIAL PERMIT**

Special Permit No. 6-97

Town Clerk's No. _____

I, Joseph Santo, Chairman, Norwalk Zoning Commission, do hereby certify that a regular meeting of the Zoning Commission was held on June 18, 1997 on the following application:

#6-97SP - Sprint Spectrum, L.P. - 173 West Rocks Road
Nine (9) communication antennae on existing water tower

PROPERTY OWNER: First Taxing District, City of Norwalk

PROPERTY ADDRESS: 173 West Rocks Road (District-5, Block-22A, Lot-18)

In determination of the above matter, the Zoning commission adopted the following resolution:

RESOLVED that Special Permit application #6-97SP, Sprint Spectrum, L.P., 173 West Rocks Road, Nine (9) communication antennae on existing water tower, as shown on a set of plans entitled "Sprint Spectrum, LP - West Rocks Road - Site Plan and Notes," by Goodkind & O'Dea, Inc. Scale 1"=30', and dated 11/1/96 and revised to 5/13/97, and as shown on various other supporting plans and documentation, be approved subject to the following conditions:

1. That a surety, in an amount to be determined by the staff, be submitted to guarantee the installation of the required improvements; and
2. That all soil erosion and sedimentation controls be in place prior to any construction activity or site work; and
3. That any additional soil erosion and sedimentation controls, deemed necessary by the staff, be installed at the direction of the staff; and
4. That any graffiti on the site, now or in the future, be immediately removed; and
5. That 2 - 3 evergreens, at least 8ft. in height, be planted in the landscaped island as additional screening.

CERTIFICATE OF SPECIAL PERMIT

Special Permit No. 6-97

- Continued -

BE IT FURTHER RESOLVED that the proposal complies with the applicable sections of the Building Zone Regulations of the City of Norwalk, CT.

BE IT FURTHER RESOLVED that the effective date of this approval shall be June 27, 1997.

EXECUTED AT NORWALK, CONNECTICUT THIS TWENTY-SIXTH DAY OF JUNE, 1997.


Joseph Santo, Chairman

AFFIDAVIT

STATE OF CONNECTICUT:

:

ss. Milford

September 17, 1997

COUNTY OF NEW HAVEN:

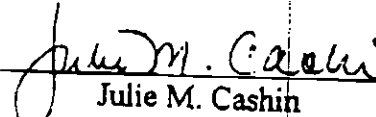
Personally appeared, JULIE M. CASHIN, who, upon being duly sworn hereby deposes and says as follows:

1. On June 18, 1997, the Norwalk Zoning Commission resolved that the Special Permit Application No. 6-97SP of Sprint Spectrum L.P., 173 West Rocks Road, be approved subject to several conditions, one of which being that the graffiti on the water tower at that location be removed.


2. The undersigned was at the above site at approximately 3:40 p.m. on Tuesday, September 16, 1997, and witnessed the painting of the exterior of the water tower.

3. The undersigned went back at approximately 5:30 p.m. on September 16, 1997, and witnessed that all of the graffiti on the water tower had been painted over with white paint. At that date and time, no graffiti was observed on the water tower at 173 West Rocks Road.

4. The undersigned affirms that this requirement of our Special Permit approval has been satisfied.


Julie M. Cashin

Subscribed and sworn to before me this 17th day of September, 1997.


Commissioner of the Superior Court



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

SPRINT Existing Facility

Site ID: CT03XC334

West Rocks Road
173 West Rocks Road
Norwalk, CT 06851

July 3, 2018

EBI Project Number: 6218004753

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	22.39 %



July 3, 2018

SPRINT

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

Emissions Analysis for Site: **CT03XC334 – West Rocks Road**

EBI Consulting was directed to analyze the proposed SPRINT facility located at **173 West Rocks Road, Norwalk, 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.

General 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 **173 West Rocks Road, Norwalk, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since SPRINT is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

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

- 1) 1 CDMA channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.
- 2) 2 LTE channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 50 Watts per Channel.
- 3) 5 CDMA channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 16 Watts per Channel.
- 4) 2 LTE channels (1900 MHz (PCS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 5) 8 LTE channels (2500 MHz (BRS)) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.



- 6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 7) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antennas used in this modeling are the **RFS APXVSP18-C-A20 and the Nokia AAHC** 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 **106.33 feet** above ground level (AGL) for **Sector A**, **106.33 feet** above ground level (AGL) for **Sector B** and **106.33 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):	106.33 feet	Height (AGL):	106.33 feet	Height (AGL):	106.33 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	10	Channel Count	10	Channel Count	10
Total TX Power(W):	280 Watts	Total TX Power(W):	280 Watts	Total TX Power(W):	280 Watts
ERP (W):	8,850.04	ERP (W):	8,850.04	ERP (W):	8,850.04
Antenna A1 MPE%	3.87 %	Antenna B1 MPE%	3.87 %	Antenna C1 MPE%	3.87 %
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Nokia AAHC	Make / Model:	Nokia AAHC	Make / Model:	Nokia AAHC
Gain:	15.05 dBd	Gain:	15.05 dBd	Gain:	15.05 dBd
Height (AGL):	106.33 feet	Height (AGL):	106.33 feet	Height (AGL):	106.33 feet
Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)	Frequency Bands	2500 MHz (BRS)
Channel Count	8	Channel Count	8	Channel Count	8
Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts	Total TX Power(W):	160 Watts
ERP (W):	5,118.23	ERP (W):	5,118.23	ERP (W):	5,118.23
Antenna A2 MPE%	1.83 %	Antenna B2 MPE%	1.83 %	Antenna C2 MPE%	1.83 %

Site Composite MPE%	
Carrier	MPE%
SPRINT – Max per sector	5.70 %
AT&T	6.69 %
Verizon Wireless	5.08 %
Clearwire	0.16 %
Nextel	4.73 %
T-Mobile	0.03 %
Site Total MPE %:	22.39 %

SPRINT Sector A Total:	5.70 %
SPRINT Sector B Total:	5.70 %
SPRINT Sector C Total:	5.70 %
Site Total:	22.39 %

SPRINT _ Frequency Band / Technology Max Power Values (All Sectors)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
Sprint 850 MHz CDMA	1	437.55	106.33	1.56	850 MHz	567	0.28%
Sprint 850 MHz LTE	2	1,093.88	106.33	7.81	850 MHz	567	1.37%
Sprint 1900 MHz (PCS) CDMA	5	622.47	106.33	11.12	1900 MHz (PCS)	1000	1.11%
Sprint 1900 MHz (PCS) LTE	2	1,556.18	106.33	11.12	1900 MHz (PCS)	1000	1.11%
Sprint 2500 MHz (BRS) LTE	8	639.78	106.33	18.28	2500 MHz (BRS)	1000	1.83%
						Total:	5.70%



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:	5.70 %
Sector B:	5.70 %
Sector C:	5.70 %
SPRINT Maximum Total (per sector):	5.70 %
Site Total:	22.39 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **22.39 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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

INFINIGY

FROM ZERO TO INFINIGY
the solutions are endless

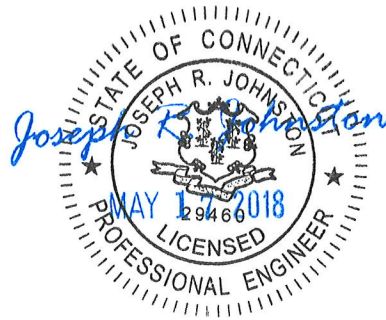
1033 WATERVLIET SHAKER RD, ALBANY, NY 12205

Structural Analysis Report

May 17, 2018

Site Number	CT03XC334
Site Name	West Rocks Road
Client	Cherundolo
Carrier	Sprint
Infinigy Job Number	526-102
Site Location	173 West Rocks Road Norwalk, CT 06851 41° 08' 37.72" N NAD83 73° 25' 07.46" W NAD83
Structure Type	108.5' Water Tank
Overturn Moment Increase	9.72%
Overall Result	Pass

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



Brenden Archer
Structural Engineer I

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

INFINIGY

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Supporting Documentation.....	3
Analysis Code Requirements.....	3
Conclusion.....	3
Final Configuration.....	4
Structure Usages.....	4
Assumptions and Limitations.....	5
Calculations.....	Appended

Introduction

Infinigy Engineering has been requested to perform a structural analysis on the existing 108.5' water tank. All supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The tank was analyzed using structural analysis software.

Supporting Documentation

Construction Drawings	Infinigy Engineering Job #526-102, dated April 12, 2018
Structural Analysis	Infinigy Engineering Job #526-102, dated December 20, 2017
RFDS	Sprint RFDS ID #45763, dated September 22, 2017
Tower Mapping	Infinigy Engineering Job #173131E, dated December 5, 2017

Analysis Code Requirements

Wind Speed	93 mph (3-Second Gust, V_{ASD}) / 120 mph (3-Second Gust, V_{ULT})
Wind Speed w/ ice	50 mph (3-Second Gust, V_{ASD}) w/ 3/4" ice
TIA Revision	ANSI/TIA222-G
Water Tank Code	ANSI/AWWA D103-09
Adopted IBC	2015 IBC / 2016 Connecticut State Building Code
Structure Class	II – Tank is Decommissioned
Exposure Category	C
Topographic Category	1
Calculated Crest Height	0 ft

Conclusion

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

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

Brenden Archer
 Structural Engineer I | Infinigy
 1033 Watervliet Shaker Road, Albany, NY 12205
 (O) (518) 690-0790
barcher@infinigy.com | www.infinigy.com

Final Configuration

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Carrier
111.5	1	Andrew LBX-901205-VTM	Top Frame	--
	1	Kathrein 840 1005413		
	1	Samsung SPI-2213232SWB		
	1	26" Dish		
	2	Quintel Q5665-12		
	4	Powerwave TMA		
	2	Powerwave AXCM-800/1900-90-13.51		
	1	CCI Panel		
	1	3' Dish		
	1	17x18x8.5 Box		
	3	Ericsson RRUS-11		
	6	Ericsson RRUS-32		
	2	Raycap DC6-48-60-18-8F		
	1	Andrew VHLP800		
106.5	3	Nokia AAHC	Tank Wall	Sprint
	3	RFS APXVSP18-C-A20		
	3	Alcatel-Lucent 1900 MHz RRH		
	3	Alcatel-Lucent 800 MHz RRH		
103.0	3	Ericsson AIR21	Tank Wall	--
	3	RFS TMA		
	3	18"x18"x1.5" Panel		
93.5	2	Antel BXA 70063/6CF	Handrail	--
	3	Antel 1270-09-5344		
	3	Andrew LNX-6514DS		
	6	Raycap RRFDC-1064-PF-48		
	3	Andrew HBXX-6516DS-A2M		
	3	Alcatel-Lucent B25 RRH4x30		
	1	Swedcom SWCP2X5514		
	3	Alcatel-Lucent 9442 RRH		

Structure Usages

Overturning Moment Increase: 9.72%

- Overturning Increase is less than 10% and therefore is considered adequate per IEBC section 402.3 & 402.4

Assumptions and Limitations

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

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

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

Site Name: CT03XC334
 Client: Cherundolo
 Carrier: Sprint
 Engineer: BDA
 Date: 5/14/2018



INFINIGY WIND LOAD CALCULATOR 3.0.2

Site Information Inputs:

Adopted Building Code: 2015 IBC
 Structure Load Standard: ASCE 7-10
 Antenna Load Standard: ASCE 7-10
 Structure Risk Category: II Tank is Decommissioned
 Structure Type: Water Tank
 Number of Sectors: 3
 Structure Shape 1: Round

Rooftop Inputs:

Rooftop Wind Speed-Up?: No

Wind Loading Inputs:

Design Wind Velocity: 120 mph (ultimate 3-second gust)
 Wind Centerline 1 (z₁): 116.5 ft
 Side Face Angle (θ): 60 degrees
 Exposure Category: C
 Topographic Category: 1

Wind with No Ice		
q _z (psf)	G _h	F _{ST} (psf)
45.77	0.85	46.69

Ice Loading Inputs:

Is Ice Loading Needed?: No

Input Appurtenance Information and Load Placements:

Appurtenance Name	Elevation (ft)	Total Quantity	K _a	Front Shape	Side Shape	q _z (psf)	EPA (ft ²)	F _z (lbs)	F _x (lbs)	F _z (60) (lbs)	F _x (30) (lbs)
Antel BXA 70063/6CF	93.5	2	0.8	Flat	Flat	43.70	4.56	169.23	125.46	136.40	158.28
Antel 1270-09-5344	93.5	3	0.8	Flat	Flat	43.70	3.51	130.24	91.60	101.26	120.58
Andrew LNX-6514DS	93.5	3	0.8	Flat	Flat	43.70	4.97	184.62	151.10	159.48	176.24
Raycap RRFDC-1064-PF-48	93.5	6	0.8	Flat	Flat	43.70	2.61	96.84	70.03	76.73	90.14
Andrew HBXX-6516DS-A2M	93.5	3	0.8	Flat	Flat	43.70	3.51	130.50	91.81	101.48	120.82
Alcatel-Lucent B25 RRH4x30	93.5	3	0.8	Flat	Flat	39.10	1.46	48.44	32.23	36.28	44.39
Swedcom SWCP2X5514	93.5	1	0.8	Flat	Flat	39.10	4.13	137.36	131.26	132.79	135.84
Alcatel-Lucent 9442 RRH	93.5	3	0.8	Flat	Flat	39.10	1.25	41.49	37.90	38.80	40.59
Ericsson AIR21	103.0	3	0.8	Flat	Flat	39.90	3.90	132.15	110.11	115.62	126.64
RFS TMA	103.0	3	0.8	Flat	Flat	39.90	0.69	23.32	15.26	17.28	21.31
18"x18"x1.5" Panel	103.0	1	0.8	Flat	Flat	39.90	1.86	62.96	7.47	21.35	49.09
Andrew LBX-901205-VTM	111.5	1	0.8	Flat	Flat	40.58	4.89	168.65	185.71	181.44	172.92
Kathrein 840 1005413	111.5	1	0.8	Round	Round	40.58	2.13	73.61	33.46	43.50	63.57
Samsung SPI-2213232SWB	111.5	1	0.8	Flat	Round	45.35	0.69	26.50	7.23	12.05	21.68
26" Dish	111.5	1	0.8	Flat	Round	45.35	3.87	149.29	21.58	53.51	117.36
Quintel Q5665-12	111.5	2	0.8	Flat	Flat	45.35	4.95	190.81	135.88	149.61	177.08
Powerwave TMA	111.5	4	0.8	Flat	Flat	45.35	0.62	23.85	8.50	12.34	20.01
Powerwave AXCM-800/1900-90-13.5	111.5	2	0.8	Flat	Flat	45.35	4.95	190.81	135.88	149.61	177.08
CCI Panel	111.5	1	0.8	Flat	Flat	45.35	4.95	190.81	135.88	149.61	177.08
3' Dish	111.5	1	0.8	Flat	Round	45.35	7.43	286.22	44.33	104.80	225.75
17x18x8.5 Box	111.5	1	0.8	Flat	Flat	45.35	1.75	67.58	34.81	43.00	59.39
Ericsson RRUS-11	111.5	3	0.8	Flat	Flat	45.35	1.91	73.79	34.32	44.19	63.93
Ericsson RRUS-32	111.5	6	0.8	Flat	Flat	45.35	1.89	72.69	48.23	54.34	66.57
Raycap DC6-48-60-18-8F	111.5	2	0.8	Round	Round	45.35	1.97	75.92	35.03	45.25	65.69
Andrew VHLP800	111.5	1	0.8	Flat	Round	45.35	5.58	214.98	37.75	82.06	170.67
Top Mount	106.4	1	0.8	Flat	Flat	44.91	102.85	3925.76	4501.92	4357.88	4069.80
RFS APXVSP18-C-A20	106.4	3	0.8	Flat	Flat	44.91	4.87	185.79	151.25	159.88	177.16
Alcatel Lucent 1900 MHz	106.4	3	0.8	Flat	Flat	44.91	1.78	67.79	72.76	71.52	69.03
Alcatel Lucent RRH 800 MHz 2x50W	106.4	3	0.8	Flat	Flat	44.91	0.91	34.55	37.69	36.91	35.34
Nokia AAHC	106.4	3	0.8	Flat	Flat	44.91	2.89	110.29	59.21	71.98	97.52

Date: 5/14/2018
 Site Name: CT03XC334
 Client: Cherundolo
 Carrier: Sprint
 Infinigy Job #: 526-102
 Analysis/Design: Analysis
 Wind Speed, 3 sec gust: 120 mph

Tank Overturning Moment - ASCE7-10 (Tank Not Active)										
Zone 1: 0 ft to 30.5 ft										
Name	Qty	Length (ft)	Height (ft)	I	kz (ft)	qz (ft)	pw (psf)	Area (sqft)	Force (lbs)	Overturning Moment (ft*lb)
Tower Leg	4.00	30.50	15.25	1.00	0.85	31.40	62.80	30.50	1915.54	116848.15
Diagonals	8.00	43.13	15.25	1.00	0.85	31.40	37.68	2.86	107.75	13145.42
Center Column	1.00	30.50	15.25	1.00	0.85	31.40	37.68	155.04	5842.41	89096.71
Strut Zone 1-2	1.00	29.00	30.50	1.00	0.99	36.34	72.67	21.15	1536.71	46869.63
Zone 2: 30.5 ft to 60 ft										
Name	Qty	Length (ft)	Height (ft)	I	kz (ft)	qz (ft)	pw (psf)	Area (sqft)	Force (lbs)	Overturning Moment (ft*lb)
Tower Leg	4.00	29.50	45.25	1.00	1.07	39.48	78.96	29.50	2329.46	421633.00
Diagonals	8.00	41.72	45.25	1.00	1.07	39.48	47.38	2.77	131.03	47433.71
Center Column	1.00	29.50	45.25	1.00	1.07	39.48	47.38	149.96	7104.87	321495.16
Top Horizontal	1.00	25.00	60.00	1.00	1.14	41.90	83.80	18.23	1527.56	91653.37
Zone 1: 60 ft to 90.5 ft										
Name	Qty	Length (ft)	Height (ft)	I	kz (ft)	qz (ft)	pw (psf)	Area (sqft)	Force (lbs)	Overturning Moment (ft*lb)
Tower Leg	4.00	30.50	75.25	1.00	1.19	43.94	87.89	30.50	2680.63	201717.26
Diagonals	8.00	43.13	75.25	1.00	1.19	43.94	52.73	2.54	134.03	10085.86
Center Column	1.00	30.50	75.25	1.00	1.19	43.94	52.73	155.04	8175.92	615237.65
Handrail	1.00	30.00	90.50	1.00	1.24	45.69	91.37	30.50	2786.82	252207.01
Zone 3										
Name	Midpoint Height		I	kz (ft)	qz (ft)	pw (psf)	Area (sqft)	Force (lbs)	Overturning Moment (ft*lb)	
Tank Bell	99.50		1.00	1.26	46.61	55.93	544.60	30458.32	3030602.80	

Tank Overturning Moment (ft*lb)	Tank + Antennas/Coax Overturning Moment (ft*lb)
4178777.94	4585045.94
Overturning Moment Percent Increase	
9.72	OK

Sprint



PROJECT: MIMO
 SITE NAME: WEST ROCKS ROAD
 SITE CASCADE: CT03XC334
 SITE ADDRESS: 173 WEST ROCKS RD
 NORWALK, CT 06851
 SITE TYPE: WATER TANK
 MARKET: SOUTHERN CONNECTICUT

PLANS PREPARED FOR:

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

FROM ZERO TO INFINIGY
the solutions are endless

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
JOB NUMBER 528-102

ENGINEERING LICENSE:

DRAWING NOTICE:

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	REVISED & REISSUED FOR PERMIT	05/17/18	SKB	2
	REVISED & REISSUED FOR PERMIT	04/12/18	SKB	1
	ISSUED FOR PERMIT	08/31/17	ASW	0

SITE NAME:
WEST ROCKS ROAD

SITE CASCADE:
CT03XC334

SITE ADDRESS:
**173 WEST ROCKS RD
NORWALK, CT 06851**

SHEET DESCRIPTION:
**TITLE SHEET
& PROJECT DATA**

SHEET NUMBER:
T-1

SITE INFORMATION

PROPERTY OWNER:
THE FIRST TAXING DISTRICT
OF THE CITY OF NORWALK
12 NEW CANAAN AVE
NORWALK, CT 06851

LATITUDE (NAD83):
41° 8' 37.716" N
41.14381° N

LONGITUDE (NAD83):
73° 25' 7.4604" W
-73.418739° W

COUNTY:
FAIRFIELD

ZONING JURISDICTION:
CONNECTICUT SITING COUNCIL

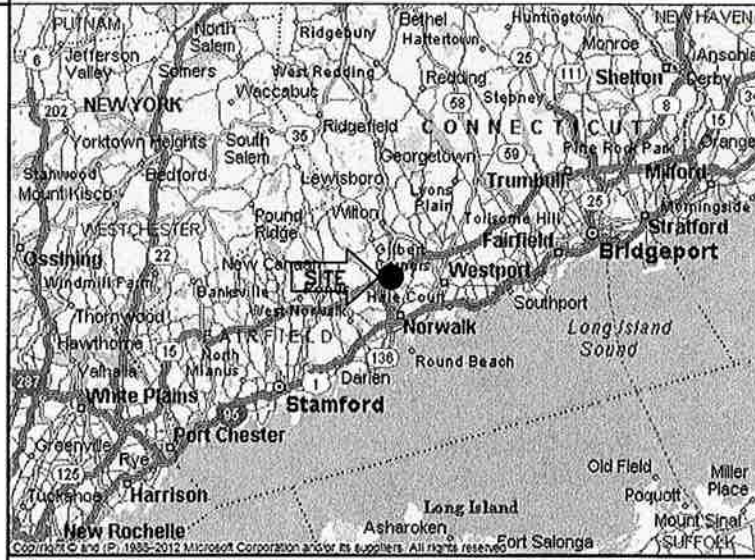
ZONING DISTRICT:
A - RESIDENCE

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

AAV PROVIDER:
AT&T
(800) 246-2020

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

AREA MAP



LOCATION MAP



PROJECT DESCRIPTION

- SPRINT PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY.
- INSTALL EQUIPMENT IN EXISTING N.V. MMBS CABINET
 - INSTALL (3) PANEL ANTENNAS
 - INSTALL (27) JUMPER CABLES
 - INSTALL (3) HYBRID CABLES
 - INSTALL (8) BATTERIES IN EXISTING BATTERY CABINET

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

APPLICABLE CODES

- ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALL IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.
1. INTERNATIONAL BUILDING CODE (2012 IBC)
 2. TIA-EIA-222-G OR LATEST EDITION
 3. NFPA 780 - LIGHTNING PROTECTION CODE
 4. 2011 NATIONAL ELECTRIC CODE OR LATEST EDITION
 5. ANY OTHER NATIONAL OR LOCAL APPLICABLE CODES, MOST RECENT EDITIONS
 6. CT BUILDING CODE
 7. LOCAL BUILDING CODE
 8. CITY/COUNTY ORDINANCES

DRAWING INDEX

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



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

SECTION 01 100 – SCOPE OF WORK

PART 1 – GENERAL

- 1.1 THE WORK: THESE STANDARD CONSTRUCTION SPECIFICATIONS IN CONJUNCTION WITH THE SPRINT CONSTRUCTION STANDARDS FOR WIRELESS SITES, CONTRACT DOCUMENTS AND THE CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE PERFORMED BY THE CONTRACTOR.
- 1.2 RELATED DOCUMENTS:
 - A. THE REQUIREMENTS OF THIS SECTION APPLY TO ALL SECTIONS IN THIS SPECIFICATION.
 - B. SPRINT "STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES" ARE INCLUDED IN AND MADE A PART OF THESE SPECIFICATIONS HERewith.
- 1.3 PRECEDENCE: SHOULD CONFLICTS OCCUR BETWEEN THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES INCLUDING THE STANDARD CONSTRUCTION DETAILS FOR WIRELESS SITES AND THE CONSTRUCTION DRAWINGS, INFORMATION ON THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE. NOTIFY SPRINT CONSTRUCTION MANAGER IF THIS OCCURS.
- 1.4 NATIONALLY RECOGNIZED CODES AND STANDARDS:
 - A. THE WORK SHALL COMPLY WITH APPLICABLE NATIONAL AND LOCAL CODES AND STANDARDS, LATEST EDITION, AND PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
 - 1. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
 - 5. GR-78-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
 - 3. GR-1089 CORE, ELECTROMAGNETIC COMPATIBILITY AND ELECTRICAL SAFETY -GENERIC CRITERIA FOR NETWORK TELECOMMUNICATIONS EQUIPMENT.
 - 4. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE - "NEC") AND NFPA 101 (LIFE SAFETY CODE).
 - 5. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM)
 - 6. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE)
 - 7. AMERICAN CONCRETE INSTITUTE (ACI)
 - 8. AMERICAN WIRE PRODUCERS ASSOCIATION (AWPA)
 - 9. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
 - 10. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
 - 11. PORTLAND CEMENT ASSOCIATION (PCA)
 - 12. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
 - 13. BRICK INDUSTRY ASSOCIATION (BIA)
 - 14. AMERICAN WELDING SOCIETY (AWS)
 - 15. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
 - 16. SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
 - 17. DOOR AND HARDWARE INSTITUTE (DHI)
 - 18. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
 - 19. APPLICABLE BUILDING CODES INCLUDING UNIFORM BUILDING CODE, SOUTHERN BUILDING CODE, BOCA, AND THE INTERNATIONAL BUILDING CODE.

1.5 DEFINITIONS:

- A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS.
- B. COMPANY: SPRINT CORPORATION
- C. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A&E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT.
- D. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK.
- E. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE COMPANY, A&E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK.
- F. OFC: OWNER FURNISHED, CONTRACTOR INSTALLED EQUIPMENT.
- G. CONSTRUCTION MANAGER – ALL PROJECTS RELATED COMMUNICATION TO FLOW THROUGH SPRINT REPRESENTATIVE IN CHARGE OF PROJECT...

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

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

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

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

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

SECTION 01 200 – COMPANY FURNISHED MATERIAL AND EQUIPMENT

PART 1 – GENERAL

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

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

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

SECTION 01 300 – CELL SITE CONSTRUCTION CO.

PART 1 – GENERAL

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

PART 2 – PRODUCTS (NOT USED)

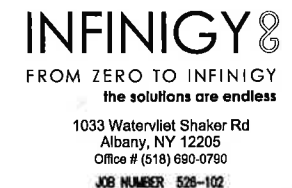
PART 3 – EXECUTION

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

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:



DRAWING NOTICE:

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REVISED & REISSUED FOR PERMIT	04/12/18	SKB	1
ISSUED FOR PERMIT	08/31/17	ASW	0

SITE NAME:

WEST ROCKS ROAD

SITE CASCADE:

CT03XC334

SITE ADDRESS:

**173 WEST ROCKS RD
NORWALK, CT 06851**

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-1

CONTINUE FROM SP-1

1. PERFORM ANY REQUIRED SITE ENVIRONMENTAL MITIGATION.
 2. PREPARE GROUND SITES; PROVIDE DE-GRUBBING; AND ROUGH AND FINAL GRADING, AND COMPOUND SURFACE TREATMENTS.
 3. MANAGE AND CONDUCT ALL ACTIVITIES FOR INSTALLATION OF UTILITIES INCLUDING ELECTRICAL AND TELCO BACKHAUL.
 4. INSTALL UNDERGROUND FACILITIES INCLUDING UNDERGROUND POWER AND COMMUNICATIONS CONDUITS, AND UNDERGROUND GROUNDING SYSTEM.
 5. INSTALL ABOVE GROUND GROUNDING SYSTEMS.
 6. PROVIDE NEW HVAC INSTALLATIONS AND MODIFICATIONS.
 7. INSTALL "H-FRAMES", CABINETS AND SHELTERS AS INDICATED.
 8. INSTALL ROADS, ACCESS WAYS, CURBS AND DRAINS AS INDICATED.
 9. ACCOMPLISH REQUIRED MODIFICATION OF EXISTING FACILITIES.
 10. PROVIDE ANTENNA SUPPORT STRUCTURE FOUNDATIONS.
 11. PROVIDE SLABS AND EQUIPMENT PLATFORMS.
 12. INSTALL COMPOUND FENCING, SIGHT SHIELDING, LANDSCAPING AND ACCESS BARRIERS.
 13. PERFORM INSPECTION AND MATERIAL TESTING AS REQUIRED HEREINAFTER.
 14. CONDUCT SITE RESISTANCE TO EARTH TESTING AS REQUIRED HEREINAFTER.
 15. INSTALL FIXED GENERATOR SETS AND OTHER STANDBY POWER SOLUTIONS.
 16. INSTALL TOWERS, ANTENNA SUPPORT STRUCTURES AND PLATFORMS ON EXISTING TOWERS AS REQUIRED.
 17. INSTALL CELL SITE RADIOS, MICROWAVE, GPS, COAXIAL MAINLINE, ANTENNAS, CROSS BAND COUPLERS, TOWER TOP AMPLIFIERS, LOW NOISE AMPLIFIERS AND RELATED EQUIPMENT.
 18. PERFORM, DOCUMENT, AND CLOSE OUT ANY CONSTRUCTION CONTROL DOCUMENTS THAT MAY BE REQUIRED BY GOVERNMENT AGENCIES AND LANDLORDS.
 19. PERFORM ANTENNA AND COAX SWEEP TESTING AND MAKE ANY AND ALL NECESSARY CORRECTIONS.
 20. REMAIN ON SITE MOBILIZED THROUGHOUT HAND-OFF AND INTEGRATION TO ASSIST AS NEEDED UNTIL SITE IS DEEMED SUBSTANTIALLY COMPLETE AND PLACED "ON AIR."
- 3.2 GENERAL REQUIREMENTS FOR CIVIL CONSTRUCTION:
- A. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH. AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS.
 - B. EQUIPMENT ROOMS SHALL AT ALL TIMES BE MAINTAINED "BROOM CLEAN" AND CLEAR OF DEBRIS.
 - C. CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION.
 1. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY.
 2. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD.
 - D. CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION
 - E. CONDUCT TESTING AS REQUIRED HEREIN.
- 3.3 DELIVERABLES:
- A. CONTRACTOR SHALL REVIEW, APPROVE, AND SUBMIT TO SPRINT SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS AS REQUIRED HEREINAFTER
 - B. PROVIDE DOCUMENTATION INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING. DOCUMENTATION SHALL BE FORWARDED IN ORIGINAL FORMAT AND/OR UPLOADED INTO SMS.
 1. ALL CORRESPONDENCE AND PRELIMINARY CONSTRUCTION REPORTS.
 2. PROJECT PROGRESS REPORTS.
 3. CIVIL CONSTRUCTION START DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).
 4. ELECTRICAL SERVICE COMPLETION DATE (POPULATE FIELD IN SMS AND/OR FORWARD NOTIFICATION).

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

SECTION 01 400 - SUBMITTALS & TESTS

PART 1 - GENERAL

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

1.4 TESTS AND INSPECTIONS:

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

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

1.5 COMMISSIONING: PERFORM ALL COMMISSIONING AS REQUIRED BY APPLICABLE MOPs

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

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 REQUIREMENTS FOR TESTING:

A. THIRD PARTY TESTING AGENCY:

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

3.2 REQUIRED TESTS:

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

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

3.3 REQUIRED INSPECTIONS

A. SCHEDULE INSPECTIONS WITH COMPANY REPRESENTATIVE.

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

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

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SITE NAME:

WEST ROCKS ROAD

SITE CASCADE:

CT03XC334

SITE ADDRESS:

173 WEST ROCKS RD
NORWALK, CT 06851

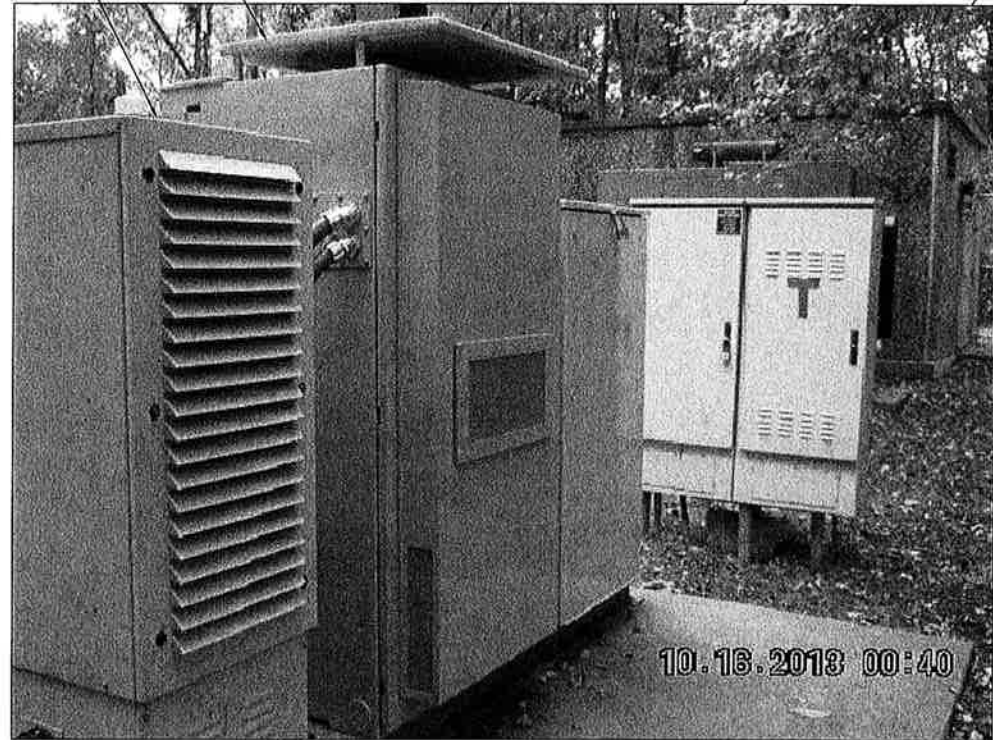
SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-2

EXISTING SPRINT N.V. MMBS CABINET
 EXISTING SPRINT CABINET
 EXISTING SPRINT BATTERY CABINET
 EXISTING SPRINT PPC CABINET



CABINET LINEUP PHOTO

NO SCALE

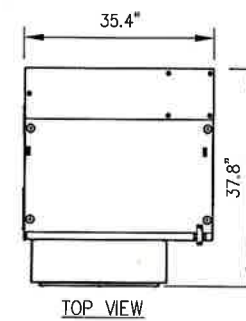
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NO PHOTO OF EXISTING BATTERY CABINET
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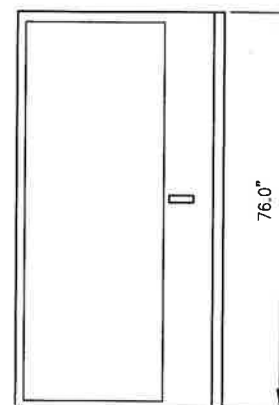
EXISTING BATTERY CABINET PHOTO

NO SCALE

2



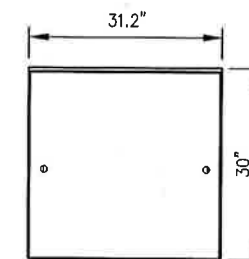
TOP VIEW



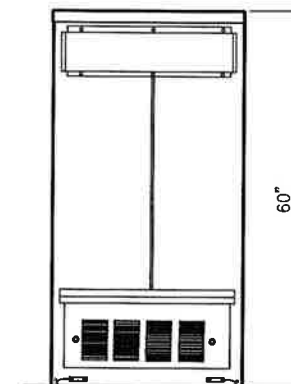
FRONT VIEW

MANUFACTURER: ALU
 MODEL: 9928

N.V. MMBS CABINET



TOP VIEW



REAR VIEW

MANUFACTURER: TBD
 MODEL: 60ECv2

BATTERY CABINET

EXISTING EQUIPMENT DETAIL

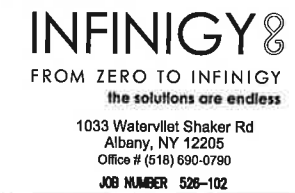
NO SCALE

3

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SITE CASCADE:

CT03XC334

SITE ADDRESS:

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 NORWALK, CT 06851

SHEET DESCRIPTION:

EXISTING EQUIPMENT
 DETAILS

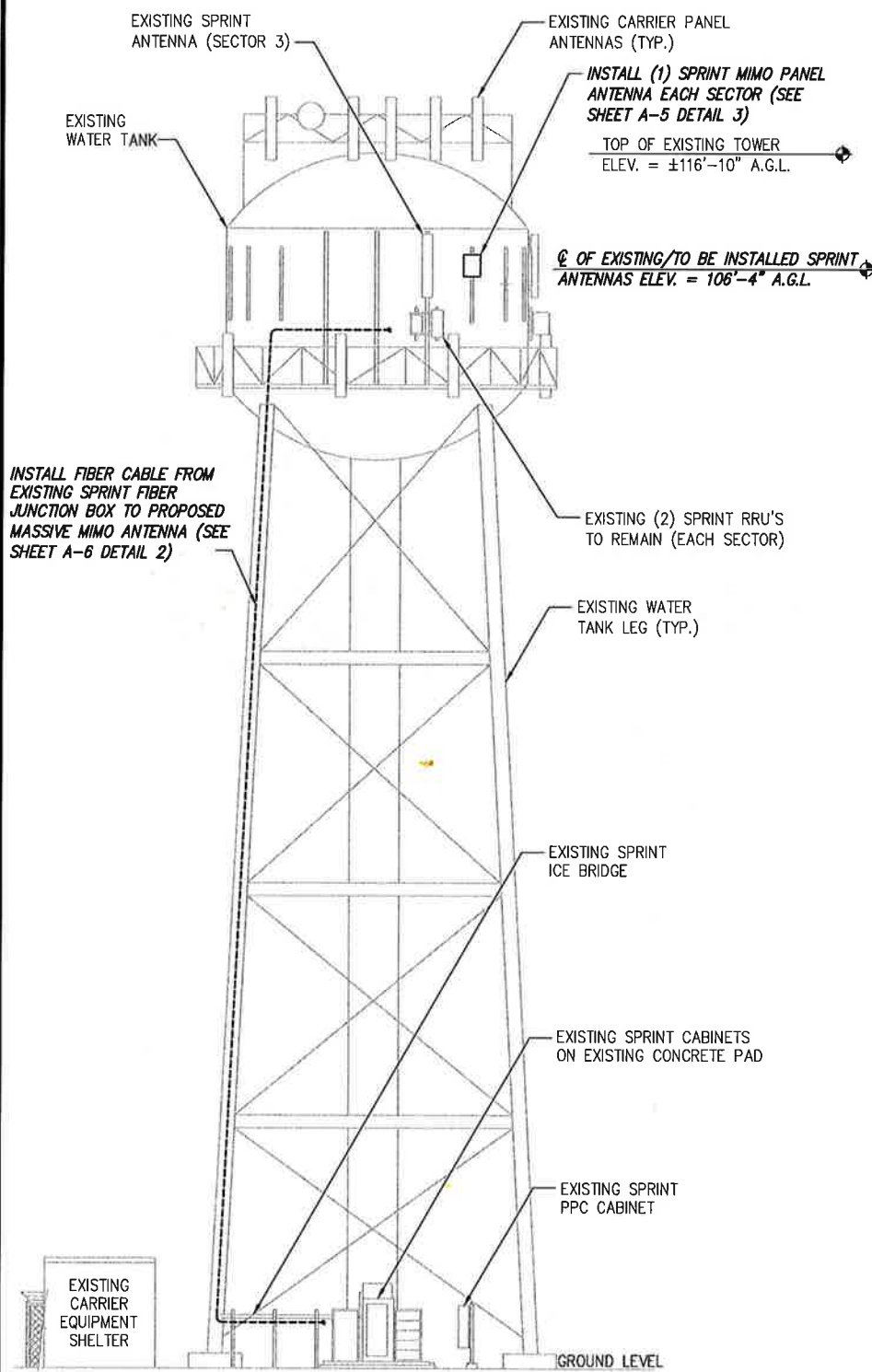
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A-1A

NOTE:

- FOR ADDITIONAL INFORMATION PERTAINING TO THE STRUCTURE, SEE 'STRUCTURAL ANALYSIS REPORT' COMPLETED BY INFINIGY, DATED 5/17/18
- FOR ADDITIONAL INFORMATION PERTAINING TO THE ANTENNA MOUNT, SEE 'MOUNT ANALYSIS REPORT' COMPLETED BY INFINIGY, DATED 5/17/18

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



DETAIL NOT USED NO SCALE 2

STRUCTURE ELEVATION NO SCALE 1

DETAIL NOT USED NO SCALE 3


DETAIL NOT USED NO SCALE 4

PLANS PREPARED FOR:



6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:



FROM ZERO TO INFINIGY
the solutions are endless

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (518) 690-0790
JOB NUMBER 526-102



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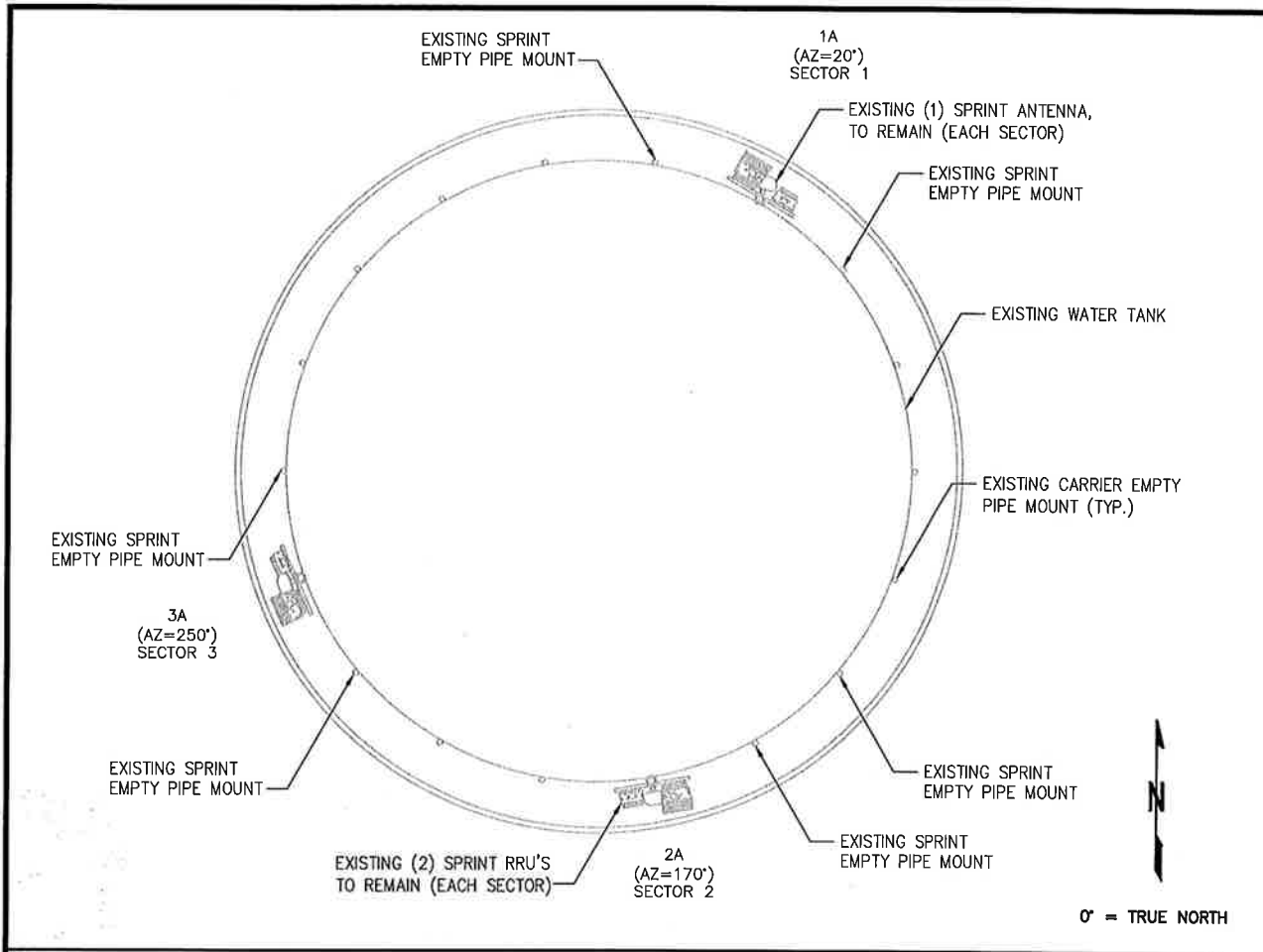
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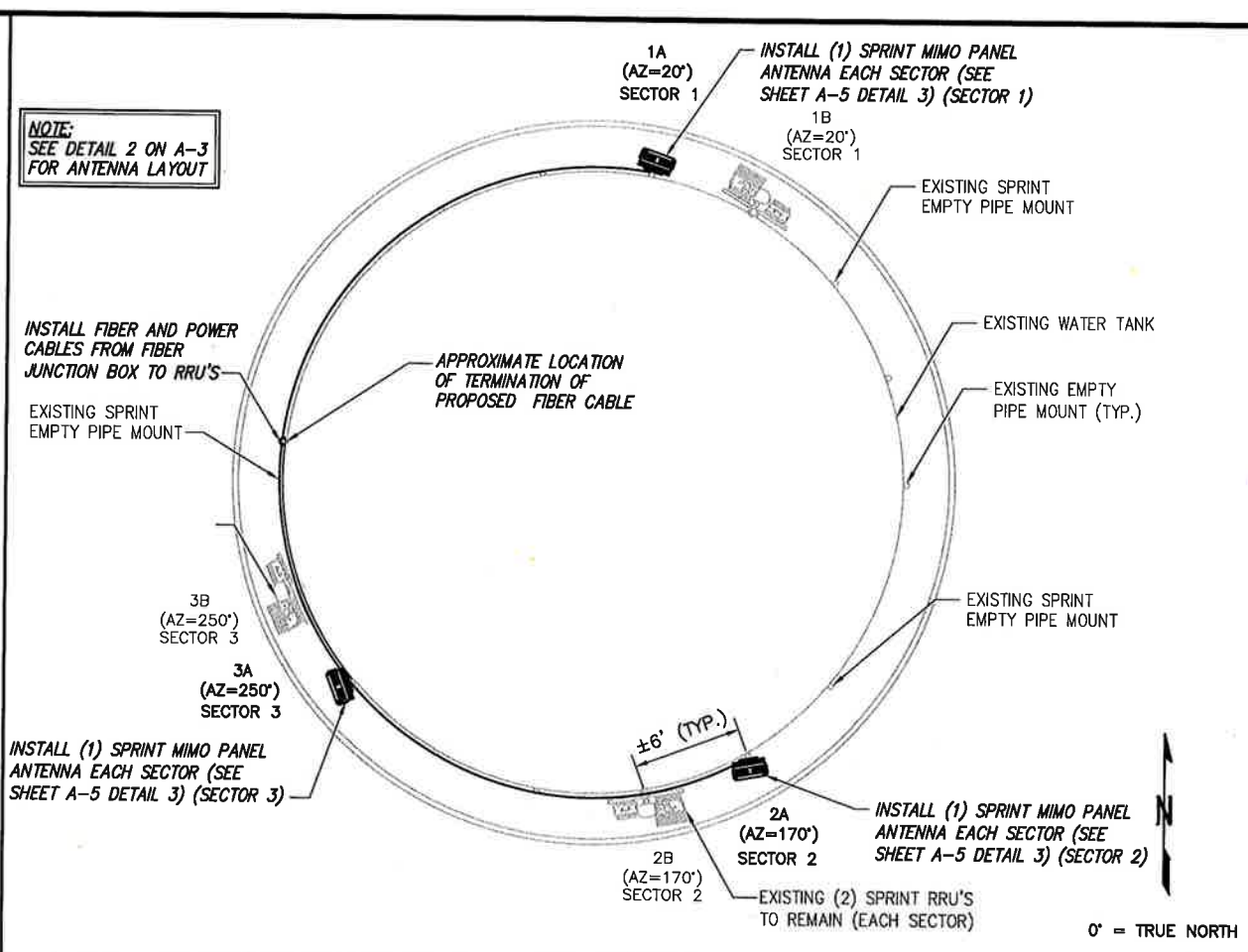
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**STRUCTURE ELEVATION
& CABLE PLAN**

SHEET NUMBER:
A-2



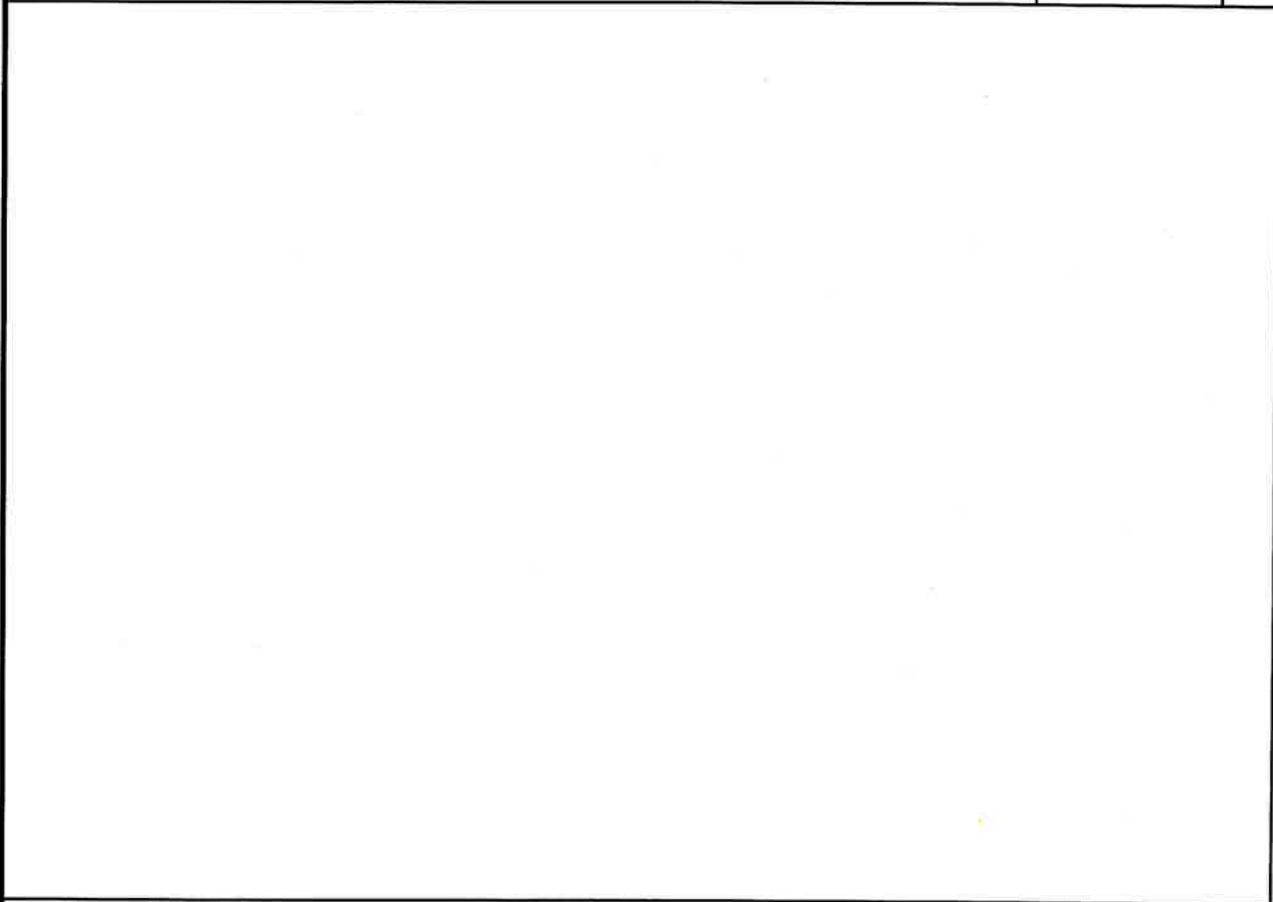
EXISTING ANTENNA & RRU LAYOUT

NO SCALE 1



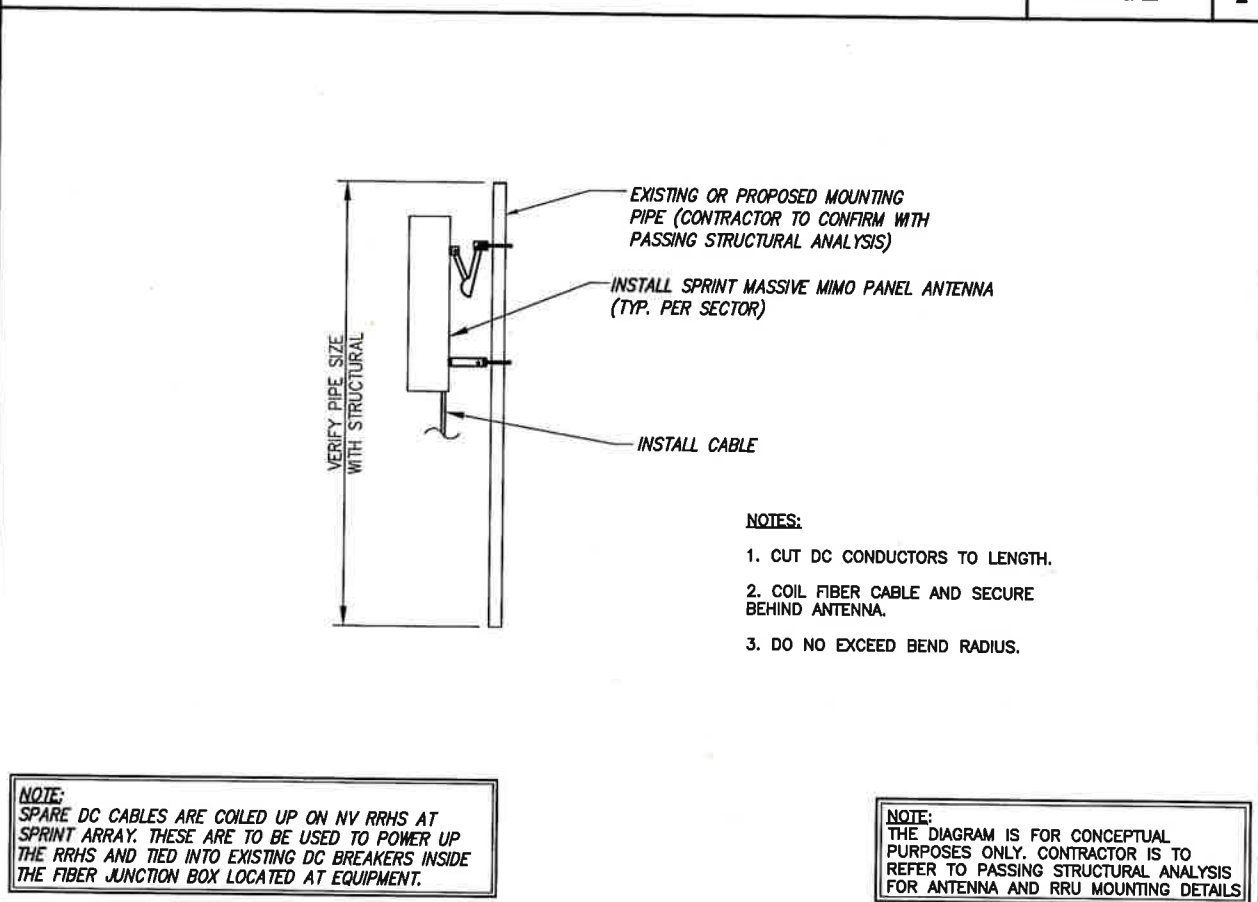
FINAL ANTENNA LAYOUT

NO SCALE 2



DETAIL NOT USED

NO SCALE 3



TYPICAL ANTENNA & RRU MOUNTING DETAILS

NO SCALE 4

PLANS PREPARED FOR:

6580 Sprint Parkway
Overland Park, Kansas 66251

PLANS PREPARED BY:

FROM ZERO TO INFINIGY
the solutions are endless

1033 Watervliet Shaker Rd
Albany, NY 12205
Office # (618) 690-0790
JOB NUMBER 528-102

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SITE CASCADE:
CT03XC334

SITE ADDRESS:
**173 WEST ROCKS RD
NORWALK, CT 06851**

SHEET DESCRIPTION:
**ANTENNA LAYOUT
& MOUNTING DETAILS**

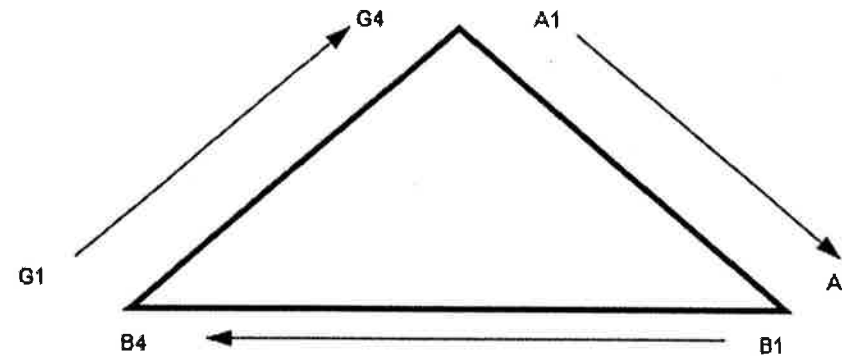
SHEET NUMBER:
A-3

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

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

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

Figure 1: Antenna Orientation



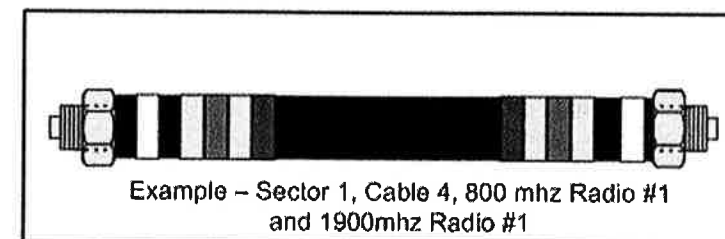
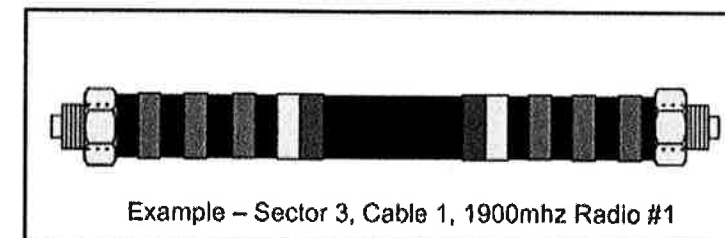
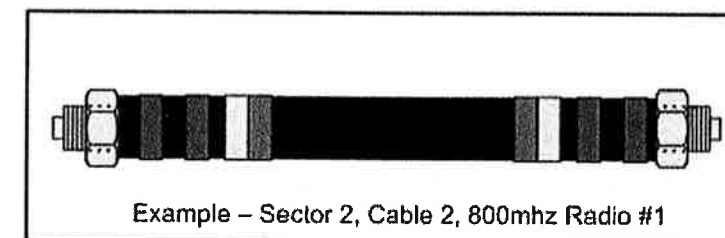
NOTES:

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

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

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

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



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SITE CASCADE:
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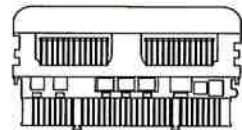
SITE ADDRESS:
173 WEST ROCKS RD
NORWALK, CT 06851

SHEET DESCRIPTION:
COLOR CODING AND NOTES

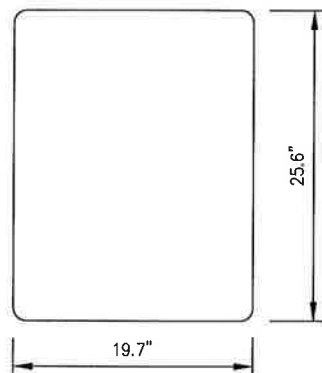
SHEET NUMBER:
A-4

ANTENNA: NOKIA AAHC

RADOME MATERIAL: FIBERGLASS
 RADOME COLOR: LIGHT GREY
 DIMENSIONS, HxWxD.in(mlm): 25.6"x19.7"x9.65" (651x501x245mm)
 WEIGHT: 103.6 lbs



TOP



FRONT

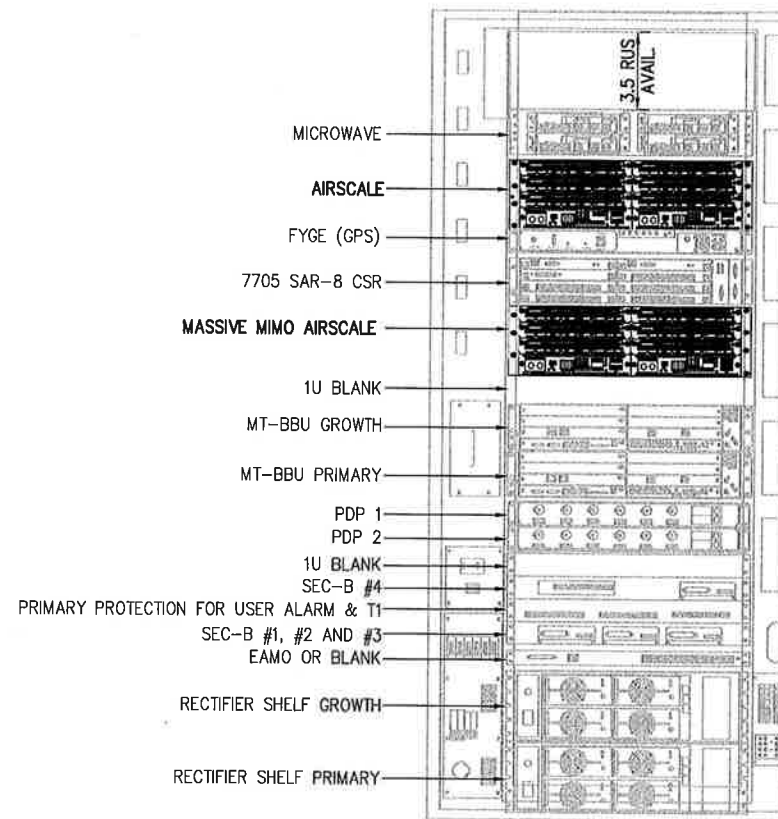


SIDE

NOKIA ANTENNA DETAIL

NO SCALE

1



9927 OUTDOOR DISTRIBUTED BTS ASSET LOCATION (TYPICAL SHOWN)

NO SCALE

2

DETAIL NOT USED

NO SCALE

3

DETAIL NOT USED

NO SCALE

4

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SHEET DESCRIPTION:

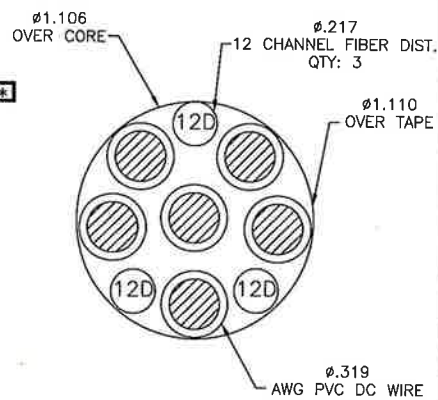
EQUIPMENT &
 MOUNTING DETAILS

SHEET NUMBER:

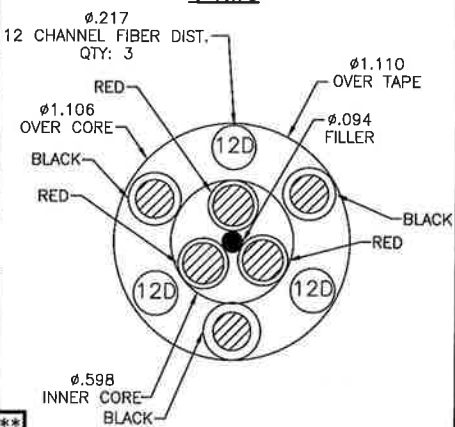
A-5

RFS HYBRIFLEX RISER CABLE SCHEDULE

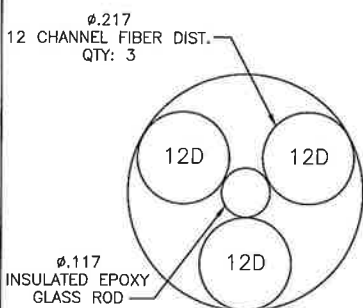
Fiber Only (Existing DC Power)	Hybrid cable MN: HB058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft
	MN: HB058-M12-075F	75 ft
	MN: HB058-M12-100F	100 ft
	MN: HB058-M12-125F	125 ft
	MN: HB058-M12-150F	150 ft
	MN: HB058-M12-175F	175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



4 AWG



8 & 6 AWG



FIBER ONLY

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

CABLE CROSS SECTION DATA

NO SCALE

3

2" LIQUIDTIGHT STRAIGHT CONNECTOR

2" METALLIC THREADED HUB WITH LOCKNUT AND NEOPRENE O-RING SEAL. PROVIDE IMPACT RESISTANT 105° C PLASTIC BUSHINGS

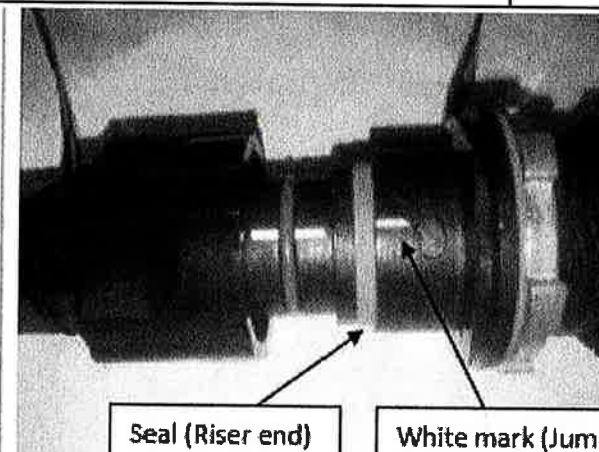
6" MAX LENGTH OF LIQUIDTIGHT CONDUIT

FIBER JUNCTION BOX PENETRATION

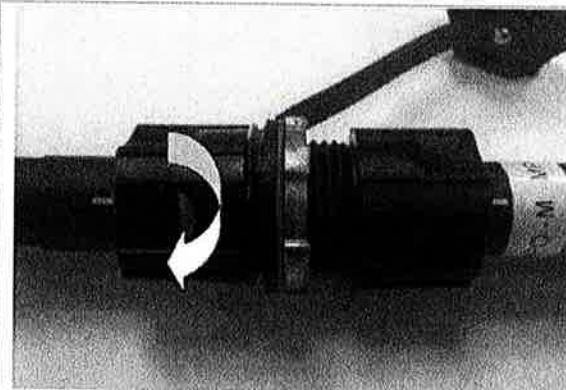
NO SCALE

2

IMPORTANT!! Line up white markings on jumper and riser IP-MPO connectors and slide the riser connector to the jumper connector. Push the white mark on the jumper connector flush again the red seal on the riser connector.



IMPORTANT!! Rotate the bayonet housing clock wise until you hear a click sound (means a good connection is in place).

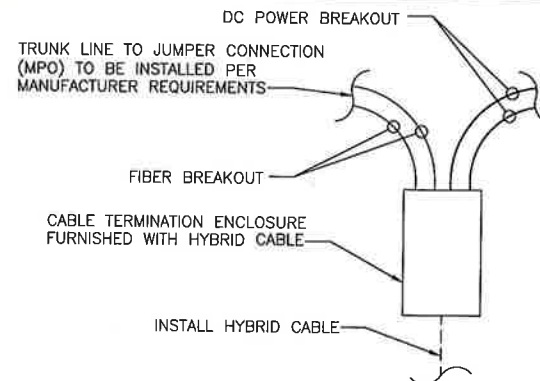


INFORMATION BASED ON PROVIDED INFORMATION FROM ALCATEL-LUCENT 2.5 GHz UPGRADE INSTALLATION GUIDE.

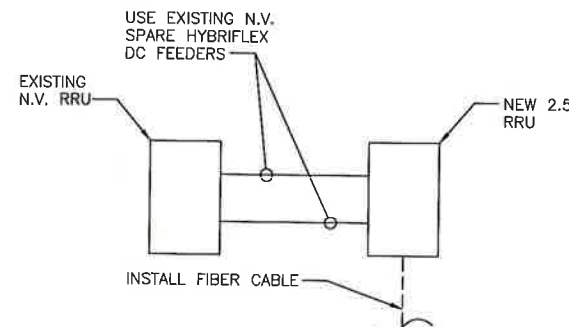
HYBRIFLEX RISER/JUMPER CONNECTION DETAIL

NO SCALE

3



HYBRID RISER CABLE (FIBER AND DC FEEDERS)



FIBER ONLY RISER CABLE

TRUNK LINE DETAIL (TYP.)

NO SCALE

4

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SHEET DESCRIPTION:

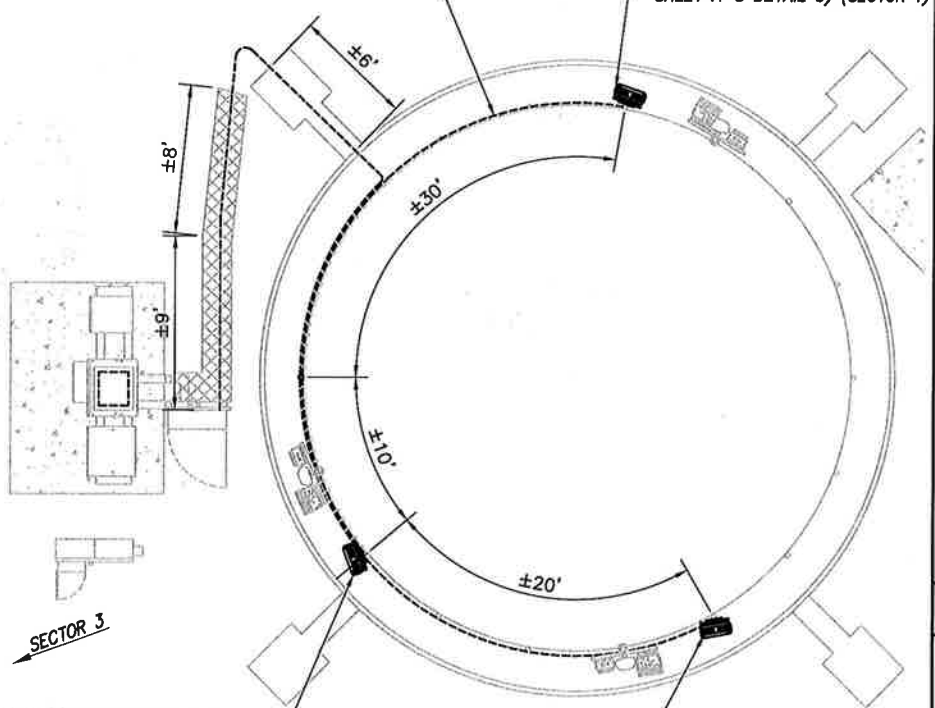
CIVIL DETAILS

SHEET NUMBER:

A-6

INSTALL FIBER CABLE FROM EXISTING SPRINT FIBER JUNCTION BOX TO PROPOSED TANK MOUNTED RRU UNIT (SEE SHEET A-6 DETAIL 2)

INSTALL (1) SPRINT MIMO PANEL ANTENNA EACH SECTOR (SEE SHEET A-5 DETAIL 3) (SECTOR 1)

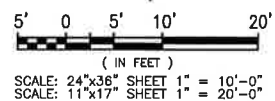


INSTALL (1) SPRINT MIMO PANEL ANTENNA EACH SECTOR (SEE SHEET A-5 DETAIL 3) (SECTOR 3)

INSTALL (1) SPRINT MIMO PANEL ANTENNA EACH SECTOR (SEE SHEET A-5 DETAIL 3) (SECTOR 2)

NOTE:
* & **: REFERENCE SHEET A-6, DETAIL 1 FOR CORRESPONDING PART NUMBERS.

CABLE LENGTH NOTE:
APPROXIMATE LENGTH OF NEW CABLE IS SHOWN IN CHART ON THIS SHEET. CONTRACTOR TO CONFIRM EXACT CABLE LENGTH REQUIRED PRIOR TO ORDERING MATERIALS.



OVERALL SITE PLAN

SCALE: AS NOTED 1

- (1) EXISTING SPRINT MULTIMODE ANTENNA, TO REMAIN (SECTOR 1)
- (1) EXISTING EMPTY PIPE MOUNT (SECTOR 1)
- (2) EXISTING SPRINT RRU'S MOUNTED TO PIPE MOUNT (SECTOR 1)



ALPHA SECTOR

INFINIGY ESTIMATES

* Riser Cable Length Estimate	
Units	
At Grade	23 Feet
Vertical Rise	306 Feet
Sub-Total	329 Feet
15% Buffer	20 Feet
Total	349 Feet

ABOVE LENGTH IS AN ESTIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

** Hybrid/Fiber Jumper Length Estimate	
Units	
From Connector To RRU	30 Feet

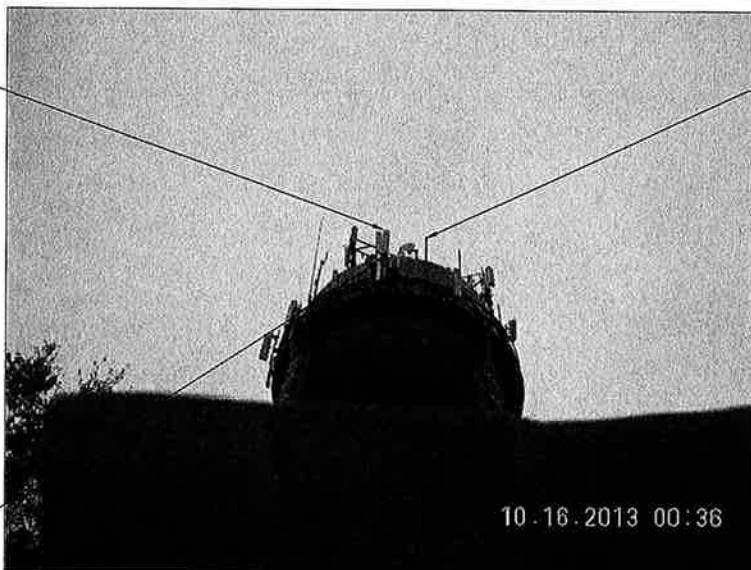
ABOVE LENGTH IS AN ESTIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

Coax Jumper Length Estimate	
Units	
From RRU to Antenna	5 Feet

ABOVE LENGTH IS AN ESTIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

NO SCALE 2

- (1) EXISTING SPRINT MULTIMODE ANTENNA, TO REMAIN (SECTOR 2)
- (2) EXISTING SPRINT RRU'S MOUNTED TO PIPE MOUNT (SECTOR 3)



BETA SECTOR

INFINIGY ESTIMATES

* Riser Cable Length Estimate	
Units	
At Grade	23 Feet
Vertical Rise	306 Feet
Sub-Total	329 Feet
15% Buffer	20 Feet
Total	349 Feet

ABOVE LENGTH IS AN ESTIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

** Hybrid/Fiber Jumper Length Estimate	
Units	
From Connector To RRU	30 Feet

ABOVE LENGTH IS AN ESTIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

Coax Jumper Length Estimate	
Units	
From RRU to Antenna	5 Feet

ABOVE LENGTH IS AN ESTIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

NO SCALE 3

- (2) EXISTING SPRINT RRU'S MOUNTED TO PIPE MOUNT (SECTOR 3)



GAMMA SECTOR

INFINIGY ESTIMATES

* Riser Cable Length Estimate	
Units	
At Grade	23 Feet
Vertical Rise	306 Feet
Sub-Total	329 Feet
15% Buffer	20 Feet
Total	349 Feet

ABOVE LENGTH IS AN ESTIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

** Hybrid/Fiber Jumper Length Estimate	
Units	
From Connector To RRU	30 Feet

ABOVE LENGTH IS AN ESTIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

Coax Jumper Length Estimate	
Units	
From RRU to Antenna	5 Feet

ABOVE LENGTH IS AN ESTIMATE AND SHOULD BE VERIFIED IN FIELD PRIOR TO ORDERING MATERIALS.

NO SCALE 4

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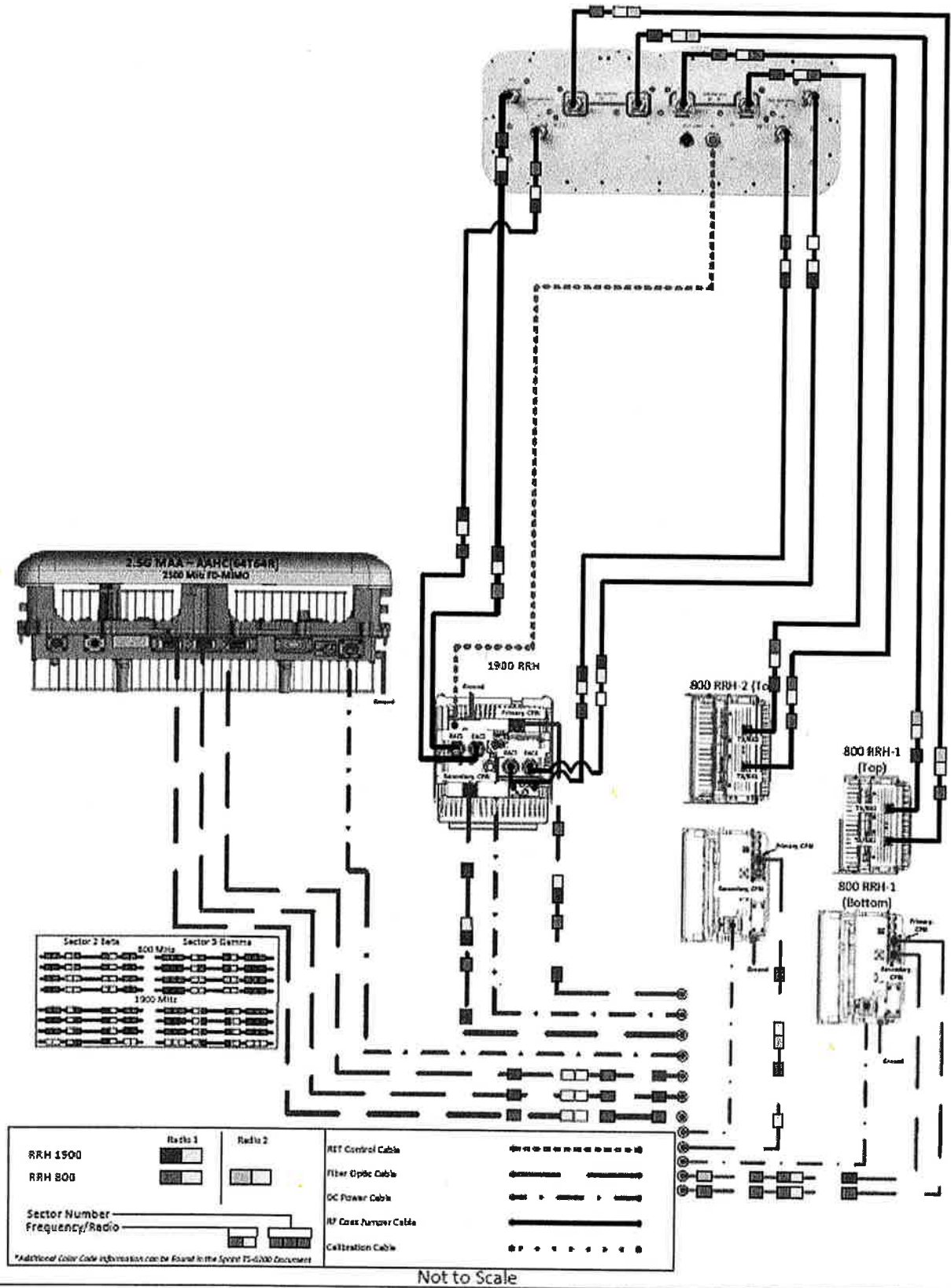
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NORWALK, CT 06851

SHEET DESCRIPTION:
CIVIL DETAILS

SHEET NUMBER:
A-6A

ALU 21-MIMO

wo Filters



Not to Scale

PLUMBING DIAGRAM

NO SCALE

1

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SHEET DESCRIPTION:

PLUMBING DIAGRAM

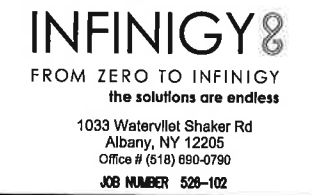
SHEET NUMBER:

A-7

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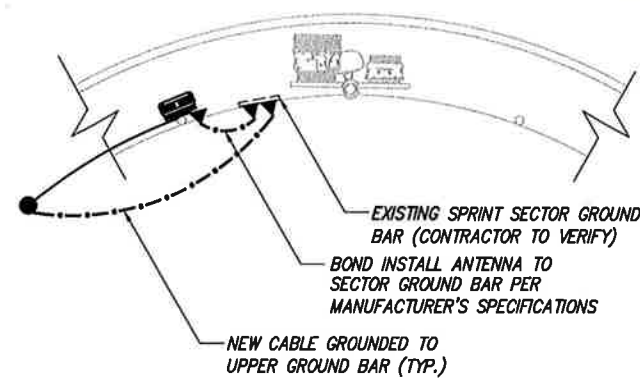
DETAIL NOT USED

NO SCALE

1

LEGEND:

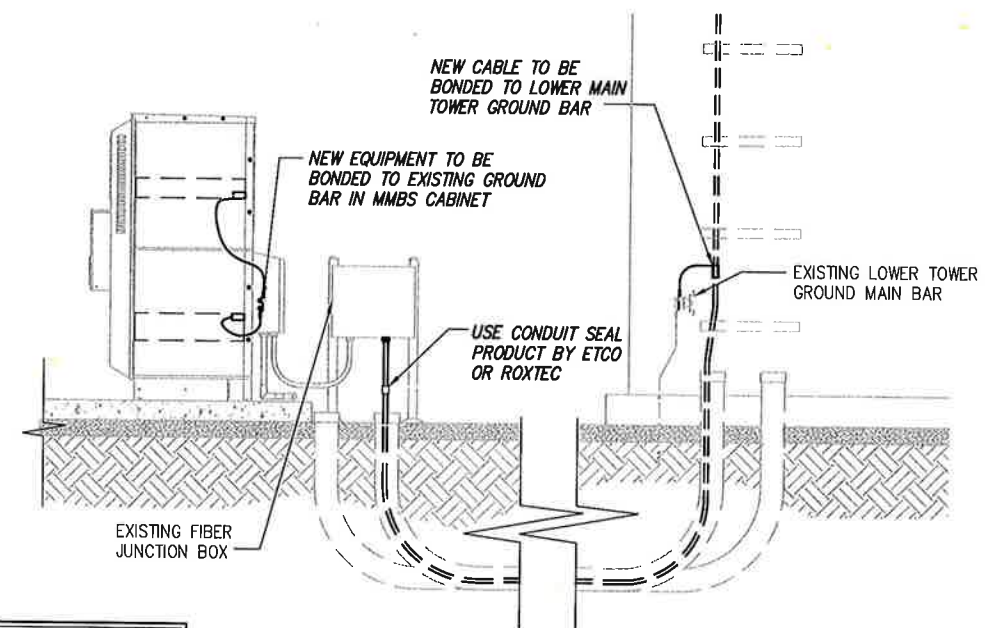
- G --- EXISTING GROUND RING
- CADWELD CONNECTION (EXOTHERMIC WELD)
- ▲ MECHANICAL CONNECTION
- ⊗ GROUND ROD
- CABLE GROUND KIT



ANTENNA GROUNDING PLAN

NO SCALE

2



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

TYPICAL EQUIPMENT GROUNDING PLAN (ELEVATION)

NO SCALE

3

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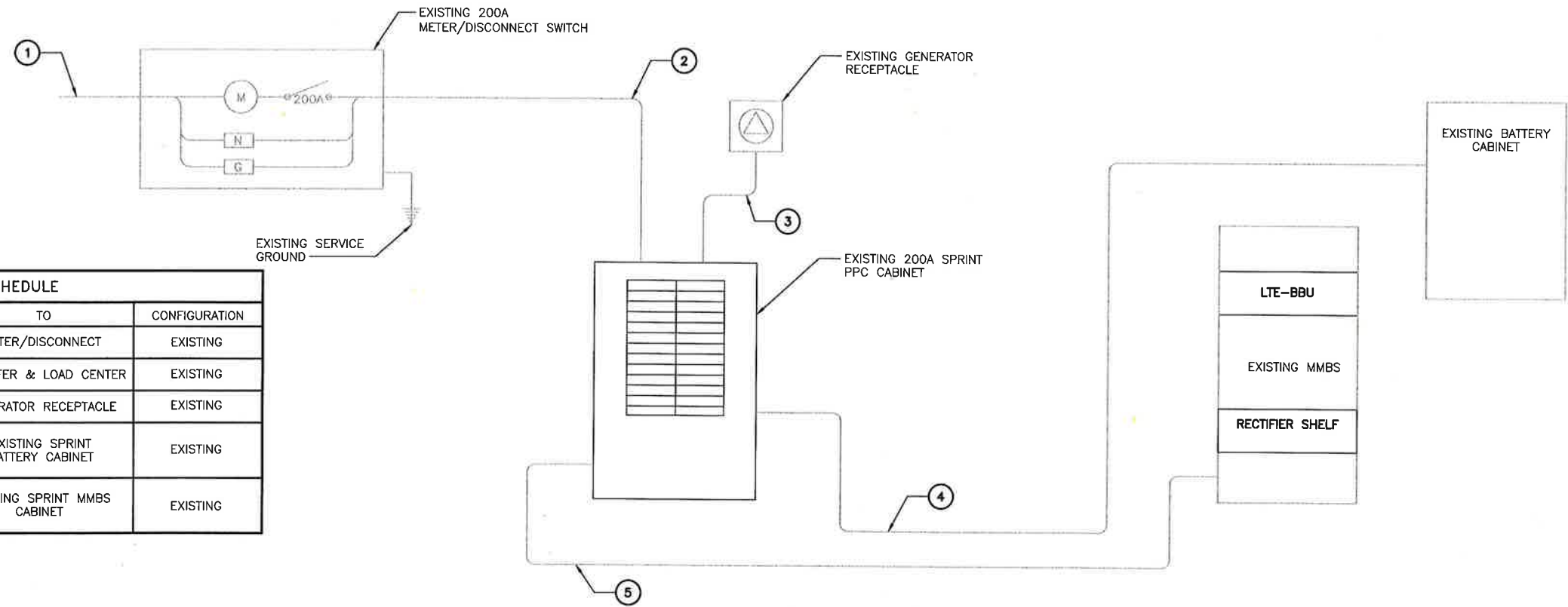
SHEET DESCRIPTION:

ELECTRICAL &
GROUNDING PLAN

SHEET NUMBER:

E-1

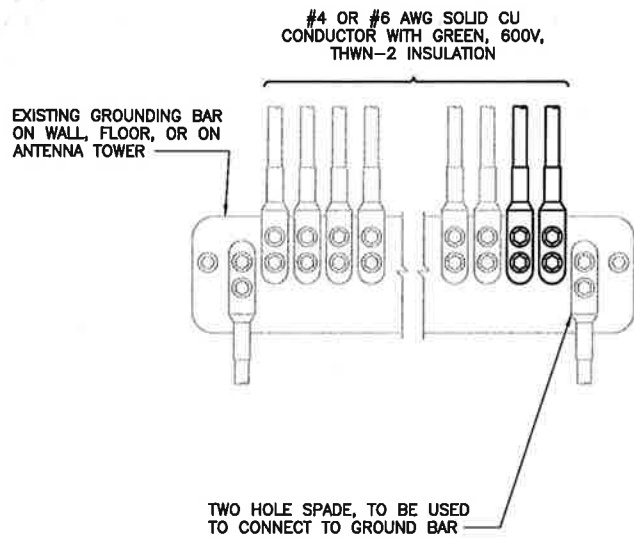
NOTES
 CG SHALL REFERENCE ALL SPECS FOR "CONNECTING THE POWER SUPPLY" OF THE NEW INSTALLATION DOCUMENTS, FOR ALL CONNECTION SPECIFICATIONS.



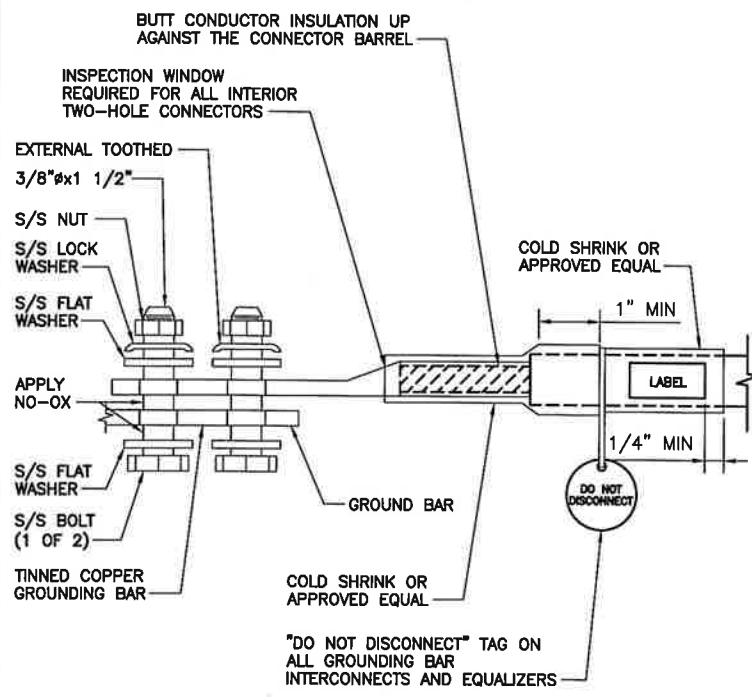
CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
①	UTILITY SOURCE	METER/DISCONNECT	EXISTING
②	METER/DISCONNECT	TRANSFER & LOAD CENTER	EXISTING
③	TRANSFER & LOAD CENTER	GENERATOR RECEPTACLE	EXISTING
④	TRANSFER & LOAD CENTER	EXISTING SPRINT BATTERY CABINET	EXISTING
⑤	TRANSFER & LOAD CENTER	EXISTING SPRINT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

ELECTRICAL ONE-LINE DIAGRAM

NO SCALE 1

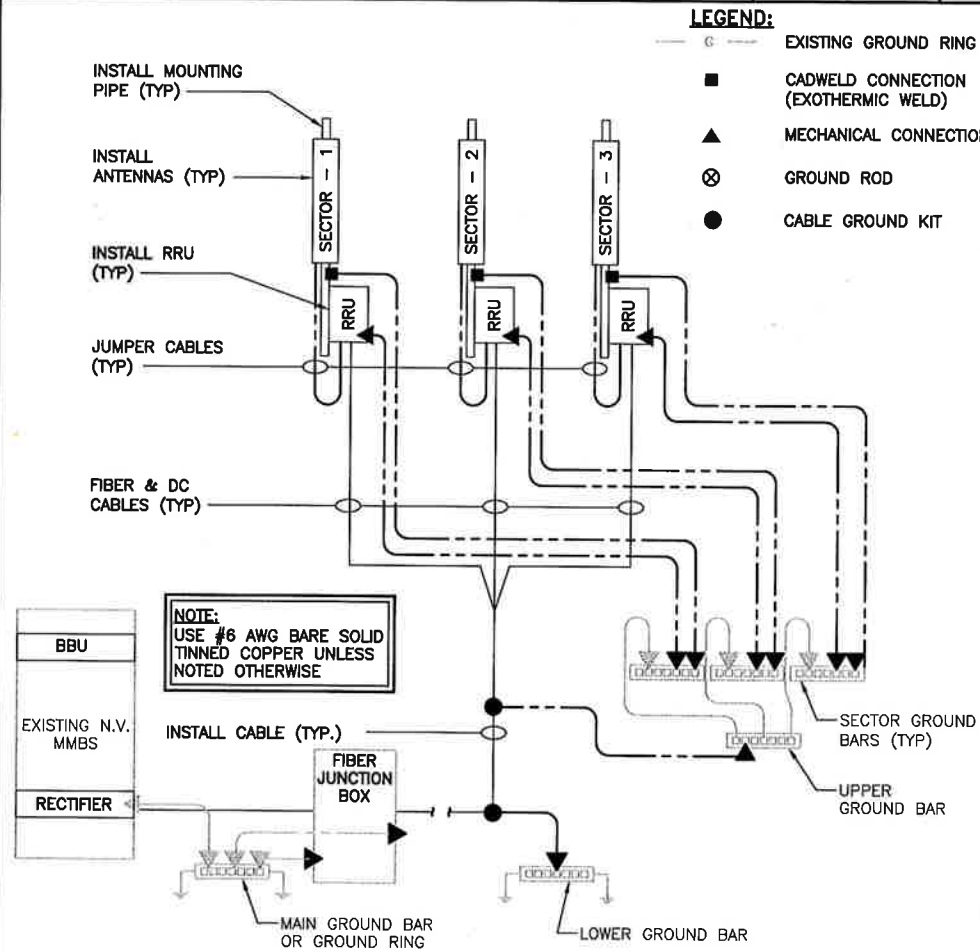


NOTES
 1. APPLY NO-OX TO LUG AND BAR CONTACT SURFACE. DO NOT COAT INLINE LUG.
 2. IF STOLEN GROUND BARS ARE ENCOUNTERED, CONTACT SPRINT CM FOR REPLACEMENT THREADED ROD KIT.



TWO HOLE LUG

NO SCALE 3



GROUNDING RISER DIAGRAM

NO SCALE 4

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PLANS PREPARED BY:
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SHEET DESCRIPTION:
ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:
E-2