



May 2nd, 2018

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

RE: Notice of Exempt Modification – Antenna Swap & Additional Ground Based Equipment for wireless facility located at 6 MAIN STREET, ESSEX, CONNECTICUT - CT03XC162 (41° 21' 4.608" N, -72° 24' 22.284" W)

Dear Ms. Bachman:

Sprint Spectrum, LP ("Sprint") currently maintains wireless telecommunications antennas at the (118-foot level) on an existing (124.5-foot tower) at the above-referenced address. Sprint intends to remove six (6) antennas from the tower and replace them with a total of three (3) antennas. Sprint also intends on adding Nine (9) new RRHs and relocating three (3) RRHs from the ground to the tower. All the proposed work is contained within the existing fenced area. Please refer to the attached drawings for site plans prepared by Infinigy Engineering.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to NORMAN NEEDLEMAN, FIRST SELECTMAN, and JOHN GUSZKOWSKI, TOWN PLANNER of the Town of ESSEX. A copy of this letter is also being sent to MACBETH VENTURES, LLC the owner of the property and tower.

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

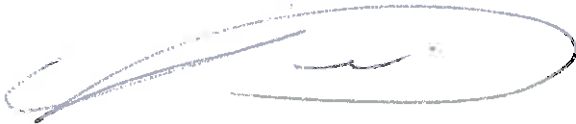
1. The proposed modifications will not result in an increase in the height of the existing tower.
2. The antennas work is a one-for-one replacement of facility components.
3. The proposed modifications will include the addition of ground base equipment as depicted on the attached drawings; however, the proposed equipment will not require an extension of the site boundaries.

4. The proposed modifications will not increase noise levels at the facility by six decibels or more.
5. The additional ground based equipment will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard.

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

If you have any questions or require any additional information regarding this request, please do not hesitate to give me a call at (518) 871-3707 or email me to aperkowski@airosmithdevelopment.com

Kind Regards,



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

Attachment

CC: MACBETH VENTURES, LLC.
NORMAN NEEDLEMAN
JOHN GUSZKOWSKI

7017 3040 0000 7660 0942

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City, State, ZIP+4®
Essex CT 06426

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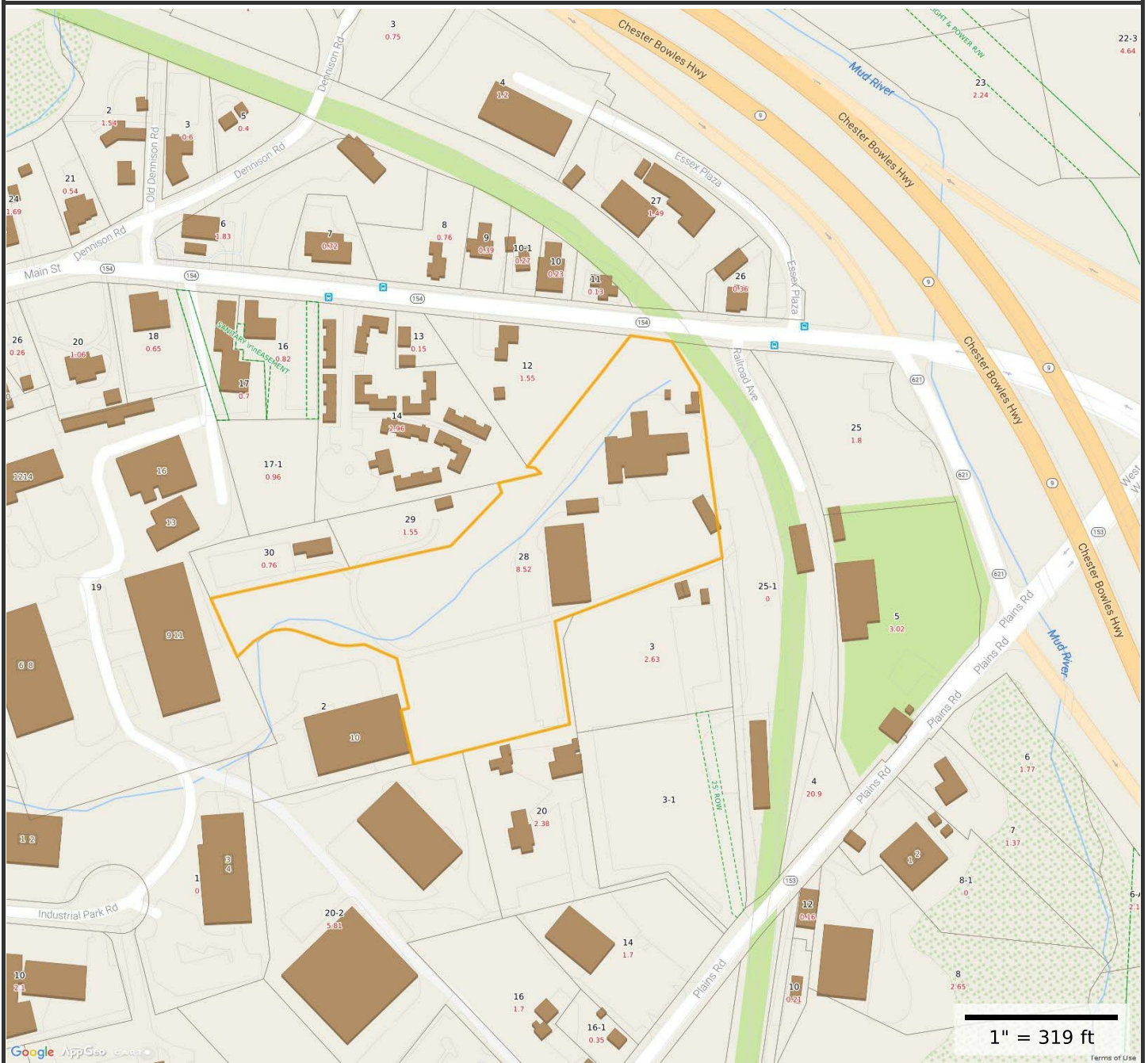
Postmark Here
MAY 02 2018

05/02/2018

Sent To
Max Beth Ventures LLC CT03XC162
Street and Apt. No., or PO Box No.
180 Westbrough Rd unit 4
City, State, ZIP+4®
Essex CT 06426

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

Parcel Lot for 6 Main Street, Centerbrook CT



MAP FOR REFERENCE ONLY NOT A LEGAL DOCUMENT

Town of Essex, CT makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 10/1/2015
Properties updated 05/10/2017

6 MAIN ST CTBK

Location 6 MAIN ST CTBK

Mblu 33/ 028/ / /

Acct# 00200100

Owner MACBETH VENTURES LLC

Assessment \$2,396,000

Appraisal \$3,422,700

PID 1860

Building Count 3

Current Value

Appraisal	
Valuation Year	Total
2015	\$3,422,700

Assessment	
Valuation Year	Total
2015	\$2,396,000

Owner of Record

Owner MACBETH VENTURES LLC
Co-Owner C/O HT PARTNER LLC
Address 6 MAIN ST SUITE 112
CENTERBROOK, CT 06409

Sale Price \$1,250,000
Certificate
Book & Page 180/ 285
Sale Date 05/26/1999
Instrument 07

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
MACBETH VENTURES LLC	\$1,250,000		180/ 285	07	05/26/1999

Building Information

Building 1 : Section 1

Year Built: 1910
Living Area: 18,575
Building Percent 46
Good:

Building Attributes	
Field	Description
STYLE	Office
MODEL	Comm/Ind

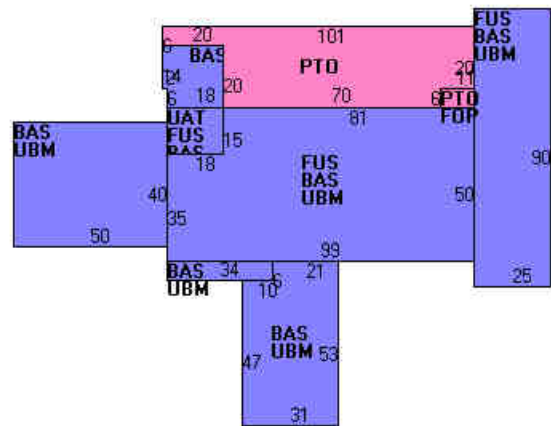
Stories:	2 Stories
Occupancy	2
Ext Wall 1	Brick
Exterior Wall 2	Asbestos
Roof Structure	Flat
Roof Cover	Tar + Gravel
Interior Wall 1	Drywall
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	Hardwood
Heating Fuel	Oil
Heating Type	Hot Water
AC Type	Central
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	
Total Baths	
Heat/AC	Heat/AC Packag
Frame Type	Masonry
Baths/Plumbing	Average
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	Average
Wall Height	10

Building Photo



(<http://images.vgsi.com/photos/EssexCTPhotos//\01\00\28\11>).

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	11,375	11,375
FUS	Full Upper Story	7,200	7,200
FOP	Open Porch	66	0
PTO	Patio	2,226	0
UAT	Unfinished Attic	270	0
UBM	Basement	10,987	0
		32,124	18,575

Building 2 : Section 1

Year Built: 1910
Living Area: 1,742
Building Percent Good: 46

Building Attributes : Bldg 2 of 3	
Field	Description
STYLE	Office

MODEL	Comm/Ind
Stories:	1 Story
Occupancy	1
Ext Wall 1	Brick
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Tar + Gravel
Interior Wall 1	Drywall
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Forced Air
AC Type	None/partial
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	
Total Baths	
Heat/AC	Heat Only
Frame Type	Masonry
Baths/Plumbing	Average
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	Light
Wall Height	12

Building Photo



(<http://images.vgsi.com/photos/EssexCTPhotos//\01\00\28\12>).

Building Layout



Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	1,742	1,742
		1,742	1,742

Building 3 : Section 1

Year Built: 1910
Living Area: 11,932
Building Percent Good: 46

Building Attributes : Bldg 3 of 3	
Field	Description
STYLE	Office
MODEL	Comm/Ind
Stories:	1 Story
Occupancy	12
Ext Wall 1	Brick
Exterior Wall 2	

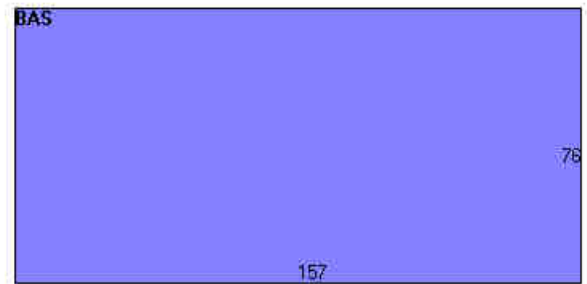
Roof Structure	Flat
Roof Cover	Tar + Gravel
Interior Wall 1	Drywall
Interior Wall 2	
Interior Floor 1	Carpet
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Forced Air
AC Type	Central
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	
Total Baths	
Heat/AC	Heat/AC Packag
Frame Type	Masonry
Baths/Plumbing	Average
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	Average
Wall Height	10

Building Photo



(<http://images.vgsi.com/photos/EssexCTPhotos//\01\00\28\13>).

Building Layout



Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	11,932	11,932
		11,932	11,932

Extra Features

Extra Features				<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size
SPR1	Sprinklers-Wet			11000 S.F.
SPR1	Sprinklers-Wet			20575 S.F.
ELV1	Elevator-Pass			3 STOPS
GEN	Generator			1 UNITS

Land

Land Use

Land Line Valuation

Use Code 200
Description Commercial MDL-94
Zone CML
Neighborhood CI4

Size (Acres) 8.52
Depth
Assessed Value \$965,700
Appraised Value \$1,379,600

Outbuildings

Outbuildings				<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size
CELL	Cell Tower			1 UNITS
SHD1	Shed-utility			180 S.F.
FGR1	Garage-Ave			1350 S.F.
SHD1	Shed-utility			1000 S.F.
PAV1	Paving			10000 S.F.
SHD1	Shed-utility			180 S.F.
SHD1	Shed-utility			48 S.F.

Valuation History

Appraisal	
Valuation Year	Total
2015	\$3,422,700

Assessment	
Valuation Year	Total
2015	\$2,396,000

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

SPRINT Existing Facility

Site ID: CT03XC162

EE Dickenson Witchhazel
6 Main Street
Essex, CT 06426

April 30, 2018

EBC Project Number: 6218003105

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	18.09 %



April 30, 2018

SPRINT

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

Emissions Analysis for Site: **CT03XC162 – EE Dickenson Witchhazel**

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

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

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



- 6) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 7) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 8) The antennas used in this modeling are the **KMW ETCR-654L12H6** 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 **118 feet** above ground level (AGL) for **Sector A**, **118 feet** above ground level (AGL) for **Sector B** and **118 feet** above ground level (AGL) for Sector C.
- 10) Emissions for additional carriers were calculated based upon known configurations for these carriers in this geographic area. The listing of all active carriers on this facility was taken from the Connecticut Siting Council site database.

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:	KMW ETCR-654L12H6	Make / Model:	KMW ETCR-654L12H6	Make / Model:	KMW ETCR-654L12H6
Gain:	13.35 / 15.25 / 15.05 dBd	Gain:	13.35 / 15.25 / 15.05 dBd	Gain:	13.35 / 15.25 / 15.05 dBd
Height (AGL):	118 feet	Height (AGL):	118 feet	Height (AGL):	118 feet
Frequency Bands	850 MHz / 1900 MHz (PCS) / 2500 MHz (BRS)	Frequency Bands	850 MHz / 1900 MHz (PCS) / 2500 MHz (BRS)	Frequency Bands	850 MHz / 1900 MHz (PCS) / 2500 MHz (BRS)
Channel Count	18	Channel Count	18	Channel Count	18
Total TX Power(W):	380 Watts	Total TX Power(W):	380 Watts	Total TX Power(W):	380 Watts
ERP (W):	11,775.31	ERP (W):	11,775.31	ERP (W):	11,775.31
Antenna A1 MPE%	3.66 %	Antenna B1 MPE%	3.66 %	Antenna C1 MPE%	3.66 %

Site Composite MPE%	
Carrier	MPE%
SPRINT – Max per sector	3.66 %
AT&T	6.75 %
Verizon Wireless	7.68 %
Site Total MPE %:	18.09 %

SPRINT Sector A Total:	3.66 %
SPRINT Sector B Total:	3.66 %
SPRINT Sector C Total:	3.66 %
Site Total:	18.09 %

SPRINT _ Frequency Band / Technology Max Power 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	1	432.54	118	1.24	850 MHz	567	0.22%
Sprint 850 MHz LTE	2	432.54	118	2.48	850 MHz	567	0.44%
Sprint 1900 MHz (PCS) CDMA	5	535.94	118	7.68	1900 MHz (PCS)	1000	0.77%
Sprint 1900 MHz (PCS) LTE	2	1,339.86	118	7.68	1900 MHz (PCS)	1000	0.77%
Sprint 2500 MHz (BRS) LTE	8	639.78	118	14.67	2500 MHz (BRS)	1000	1.47%
						Total:	3.66%



Summary

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

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

SPRINT Sector	Power Density Value (%)
Sector A:	3.66 %
Sector B:	3.66 %
Sector C:	3.66 %
SPRINT Maximum Total (per sector):	3.66 %
Site Total:	18.09 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **18.09 %** of the allowable FCC established general population limit sampled at the ground level. Emissions for additional carriers were calculated based upon known configurations for these carriers in this geographic area. The listing of all active carriers on this facility was taken from the Connecticut Siting Council site database.

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.

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1033 WATERVLIET SHAKER RD, ALBANY, NY 12205

Water Tank Analysis Report

January 19, 2018

Sprint Site Number:	CT03XC162
Sprint Site Name:	EE Dickenson Witchhazel
Infinigy Job Number	526-104
Client	Airosmith Development
Proposed Carrier	Sprint
Site Address:	6 Main Street, Essex, CT 06426 41° 21' 4.61" N NAD83 72° 24' 22.28" W NAD83
Structure Type	124.5' Water Tank
Overall Result	Pass

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



Nathaniel R. Ober, E.I.T.
Northeast Structural Region Lead

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

INFINIGY®

Contents

Introduction.....	3
Supporting Documentation.....	3
Analysis Code Requirements.....	3
Conclusion.....	3
Existing Loading.....	4
To be Removed.....	4
Proposed Loading.....	4
Final Configuration.....	4
Results and Conclusion.....	5
Assumptions and Limitations.....	5
Calculations.....	Appended

Introduction

Infinigy Engineering has been requested to perform a structural analysis on the existing 124.5' water tank. All supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site.

Supporting Documentation

Tower Mapping	Infinigy Engineering, dated December 12, 2017
Previous Analysis	Clough, Harbour & Associates LLP, dated November 25, 1996
Proposed Loading	Infinigy Construction Drawings, dated September 27, 2017

Analysis Code Requirements

Wind Speed	101 mph (3-Second Gust)
Wind Speed w/ ice	50 mph (3-Second Gust) w/ 3/4" ice
TIA Revision	ANSI/TIA222-G
Water Tank Code	ANSI/AWWA D103-09
Adopted IBC	2012 IBC / 2016 Connecticut State Building Code
Structure Class	2
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 AWWA 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:

Joe Johnstone, P.E.
Professional Engineer
1033 Waterliet Shaker Road, Albany, NY 12205
(O) (518) 690-0790 | (M) (518) 221-4665
jjohnston@infinigy.com | www.infinigy.com

Water Tank Analysis Report

January 19, 2018

Existing Loading

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax& Lines	Carrier
118.0	3	Allen Telecom DB980H90E-M	Pipe Mount	-	-

To Be Removed Loading

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax& Lines	Carrier
118.0	3	Allen Telecom DB980H90E-M	Pipe Mount	-	Sprint

Proposed Loading

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax& Lines	Carrier
118.0	3	KMW ETCR-654L12H6	Pipe Mount	-	Sprint
	3	Alcatel-Lucent TD-RRH8x20-25			
	6	Alcatel-Lucent RRH-2x50-800			
	3	Alcatel-Lucent 1900 MHz RRH			

Final Configuration

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax& Lines	Carrier
118.0	3	KMW ETCR-654L12H6	Pipe Mount	-	Sprint
	3	Alcatel-Lucent TD-RRH8x20-25			
	6	Alcatel-Lucent RRH-2x50-800			
	3	Alcatel-Lucent 1900 MHz RRH			

January 19, 2018

Results and Conclusion

We have completed the structural analysis of the subject water tank and have found it to be adequate within the scope of this analysis to support the proposed antenna loading. Since the additional projected wind area increases the overturning moment of the water tank by 9.4%, which is less than 10% maximum increase permitted by 2012 IBC section 3403.4 before a complete structural analysis of the existing facility is required.

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.

COMPARISON OF OVERTURNING MOMENTS

Site Name:	EE Dickenson Witchhazel
Job Number:	526-104
Engineer:	DVA
Date:	12/21/2017

WT Members	Quantity	Member Area (ft ²)	Centerline (ft)	Pw (psf)	Fa (lb)	Moment (lb-ft)
WT Bowl	1	556.0	112	20.5	11397.9	1276563.6
Legs	4	171.0	164	22.2	3798.5	2491828.7
Horizontals at 36 ft	2	13.3	36	53.8	717.5	51656.9
Horizontals at 70 ft	2	12.3	70	61.9	763.4	106872.1
Diagonals at 18 ft	4	21.2	18	18.0	381.6	27475.2
Diagonals at 54 ft	4	20.8	54	18.0	373.5	80676.0
Diagonals at 88 ft	4	19.8	88	19.5	384.8	135459.6
Standpipe	1	298.5	49.75	18.0	5373.0	267306.8
Climbing Ladder 1	1	41.8	61.25	60.2	2517.5	154196.8
Climbing Ladder 2	1	11.7	115	68.7	801.7	92191.3
Catwalk	1	73.7	107.8	67.8	4997.1	538688.7

WT Overturning Moment = 5,247,875

Appurtenance Model/Description	Quantity	Effective Area (ft ²)	Centerline (ft)	q _z (psf)	Fa (lb)	Moment (lb-ft)
Powerwave XCM-800/1900-90-12.51	6	5.45	107.75	32.19	105.3	68062.2
Powerwave LPG21401	6	0.55	107.75	32.19	10.7	6902.9
Amphenol LPA80063/6CFEDIN	4	9.88	108.5	32.24	191.0	82912.8
Commscope SBNHH-1D65B	6	8.20	109	32.27	158.8	103845.8
Alcatel Lucent B13 RRH 4x30	3	2.46	109	32.27	47.6	15566.1
Alcatel Lucent B66a RRH 4x45	3	2.54	109	32.27	49.1	16064.2
Andrew SBNH-1D4545A	3	7.24	107.5	32.18	139.9	45108.5
Ericsson RRUS-11	5	2.78	107.5	32.18	53.8	28896.7
Ericsson RRUS-12	1	3.15	107.5	32.18	60.7	6527.6
10"x10"x6.5" Box	2	0.83	110.5	32.37	16.2	3576.4
14.5"x16"x6.5" Box	1	1.87	110.5	32.37	36.2	4005.6
KMW ETCR-654L12H6	3	15.71	118	32.82	103.1	36492.7
Alcatel-Lucent TD-RRH8x20-25	3	3.70	118	32.82	24.3	8606.3
Alcatel-Lucent RRH-2x50-800	6	1.73	118	32.82	11.4	8054.5
Alcatel-Lucent 1900 MHz RRH	3	2.31	118	32.82	15.2	5372.9
Empty Mount Pipe	1	0.95	107.5	32.18	18.3	1971.8

Appurtenances Overturning Moment = 441,967

Feedline Model/Description	Quantity Exposed to Wind	Width (in)	Height (ft)	q _z (psf)	Fa (lb)	Moment (lb-ft)
(30) 1-5/8" Coax	6.0	2.0	106.5	28.3	715.7	41690.9
(1) 3" Coax	1.0	3.0	106.5	28.3	180.7	10528.0

Feedlines Overturning Moment = 52,219

WT Overturning Moment = 5,247,875 lb-ft
Overturning Moment Due to Appurtenances & Feedlines = 494,186 lb-ft
Overturning Moment Percentage Increase = 9.4%

INFINIGY

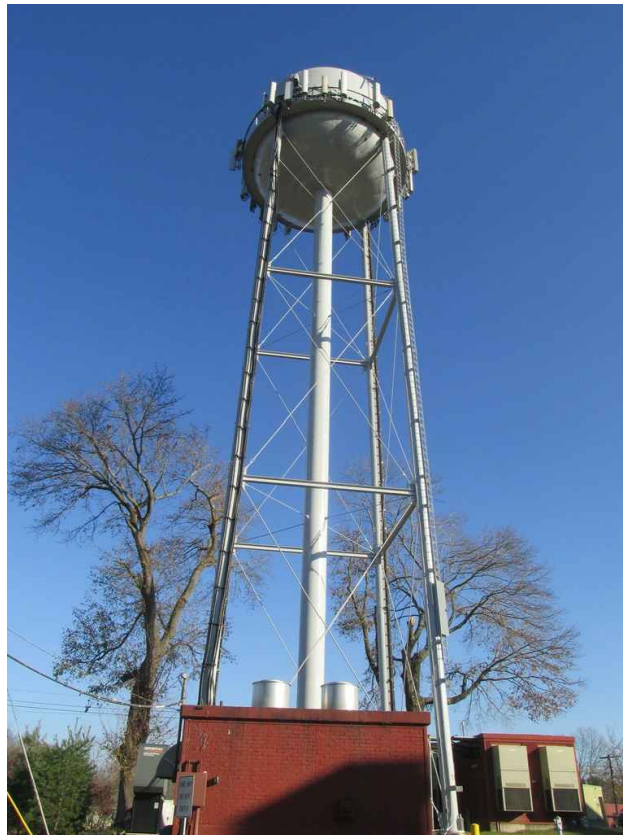
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1033 Watervliet Shaker Road
Albany, NY 12205
Structural@infinigy.com
Office: 518.690.0790

TOWER MAPPING REPORT

EE Dickenson Witchhazel WT
CT03XC162
124'-6" Water Tank

Job #: 173586E
Date: 12/12/2017



TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
 Job # 173586E
 Client # CT03XC162
 Date 12/12/2017
 Page 1 of 15

Page Title	Initials	Page # (s)	Notes
Checklist and Notes	DJN	1	
Ladder & Waveguides	DJN	2-3	
Tower Elevation	DJN	4	
Base & Foundation Details	DJN	5-6	
Plan at Base	DJN	7	
Plan at Horizontals	DJN	8	
Tank Elevation	DJN	9	
Plan at Catwalk	DJN	10	
Plan at Top of Tower	DJN	10	
Catwalk Details	DJN	11	
Transmission Cables	DJN	12	
Antenna and Mount Details	DJN	13-14	
Photo Log	DJN	15	

SITE INFORMATION

SITE NAME:	EE Dickenson Witchhazel WT		
SITE NUMBER:	CT03XC162		
SITE CONTACT:	Cristine Volkman		
GATE COMBO:	DNR		
ADDRESS:	6 Railroad Ave Essex, CT 06429		
LAT/LONG:	N 41.35128°	W 72.40619°	
TOWER TAG:	N/A		
FCC ID:	CNR		
TELCO PROVIDER & METER #:	AT&T F10 ESSXCTSN		
POWER PROVIDER:	CNR		
POWER METER # & CARRIER:	89 251 839 - Sprint		
	89 638 066 - Cingular		
	89 133 578 - AT&T		
	89 252 171 - Verizon		
CARRIERS:	Verizon		
	AT&T		
	Sprint		
	Cingular		
LIGHTING MANUFACTURER AND CONTROLLER:	N/A		
ADDITIONAL NOTES:			

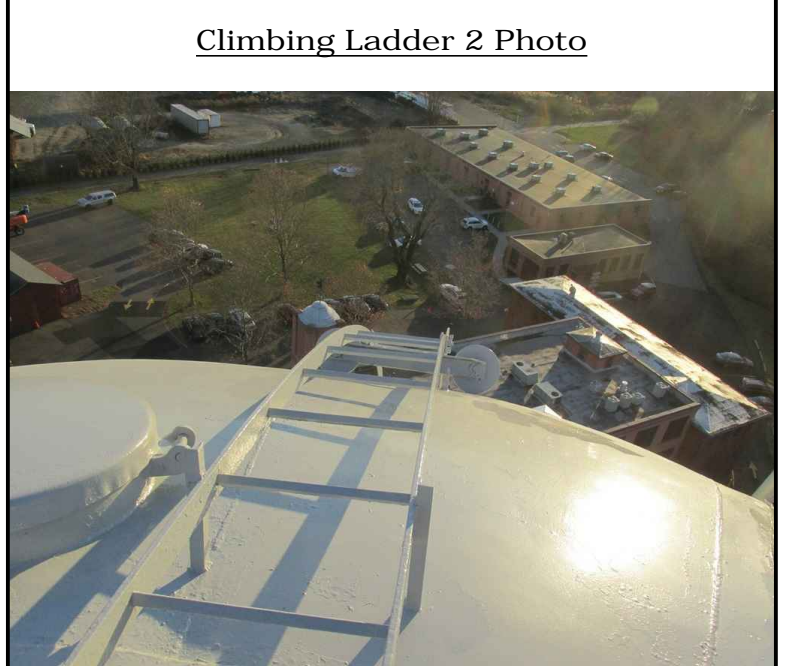
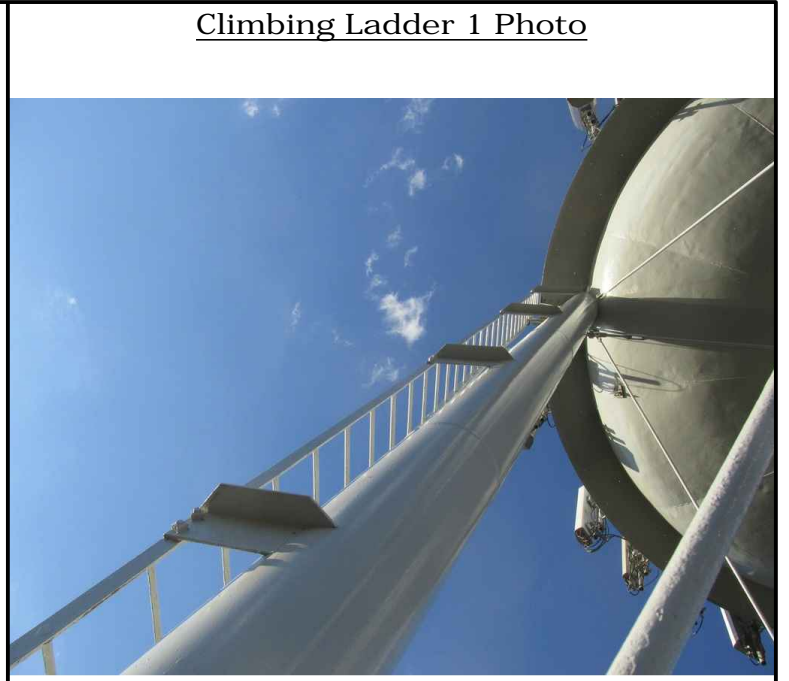
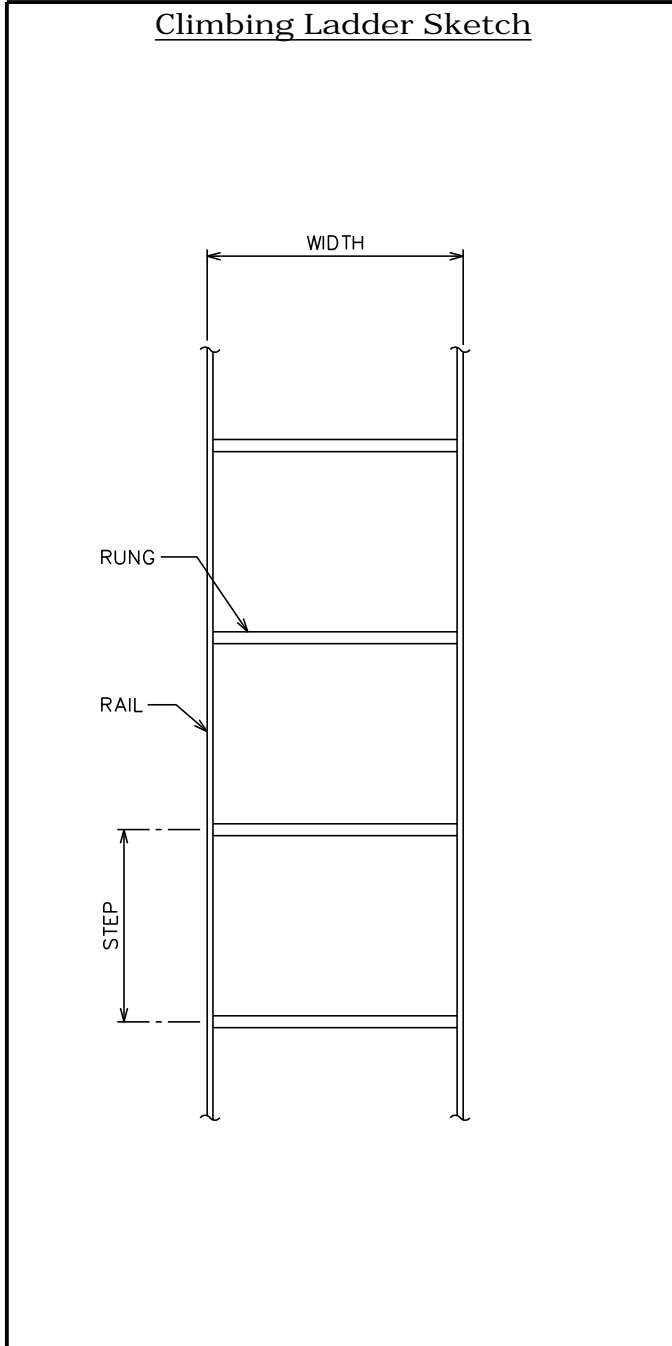
SAFETY:

EQUIPMENT INSPECTION (INITIAL):	DK, TB
TOWER CONDITION FROM GROUND:	OK
SAFETY CABLE CONDITION FROM GROUND:	N/A
NEAREST EMS/FIRE DEPARTMENT OR HOSPITAL:	0.3 miles to Essex Fire Dept.
PRECLIMB INSPECTION PERFORMED (SIGN):	<i>Douglas Kesiba</i>

TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
 Job # 173586E
 Client # CT03XC162
 Date 12/12/2017
 Page 2 of 15

LADDER

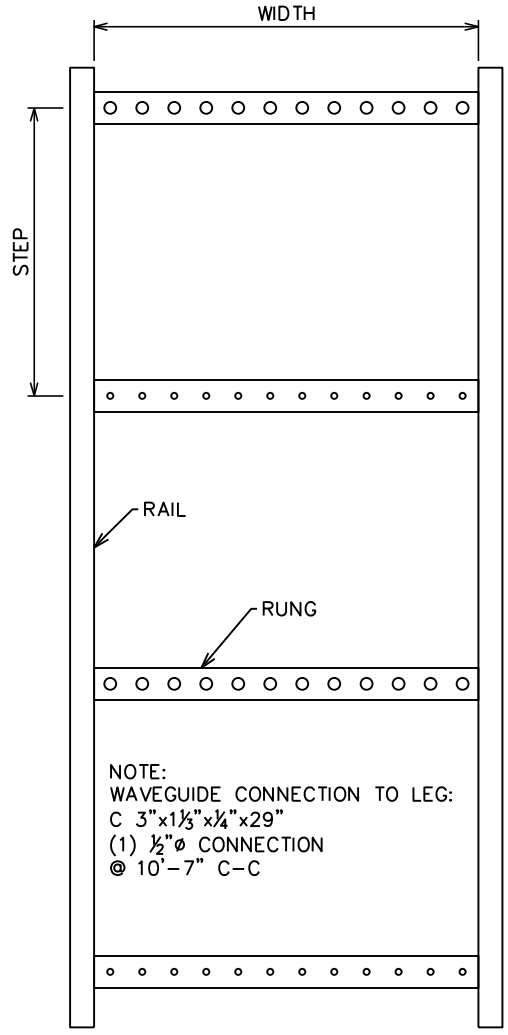




Description	#	Height	Width	Step	Rail <small>(type & size)</small>	Rung <small>(type & size)</small>	Safety <small>(type & size)</small>
Ladder	1	15' - 110'	14"	11"	PL 2"x $\frac{7}{16}$ "	Bar $\frac{5}{8}$ "x $\frac{5}{8}$ "	N/A
Ladder	2	107' - 124'6"	14"	11"	PL 2"x $\frac{7}{16}$ "	Bar $\frac{5}{8}$ "x $\frac{5}{8}$ "	N/A

TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
 Job # 17358GE
 Client # CT03XC162
 Date 12/12/2017
 Page 3 of 15

WAVEGUIDE

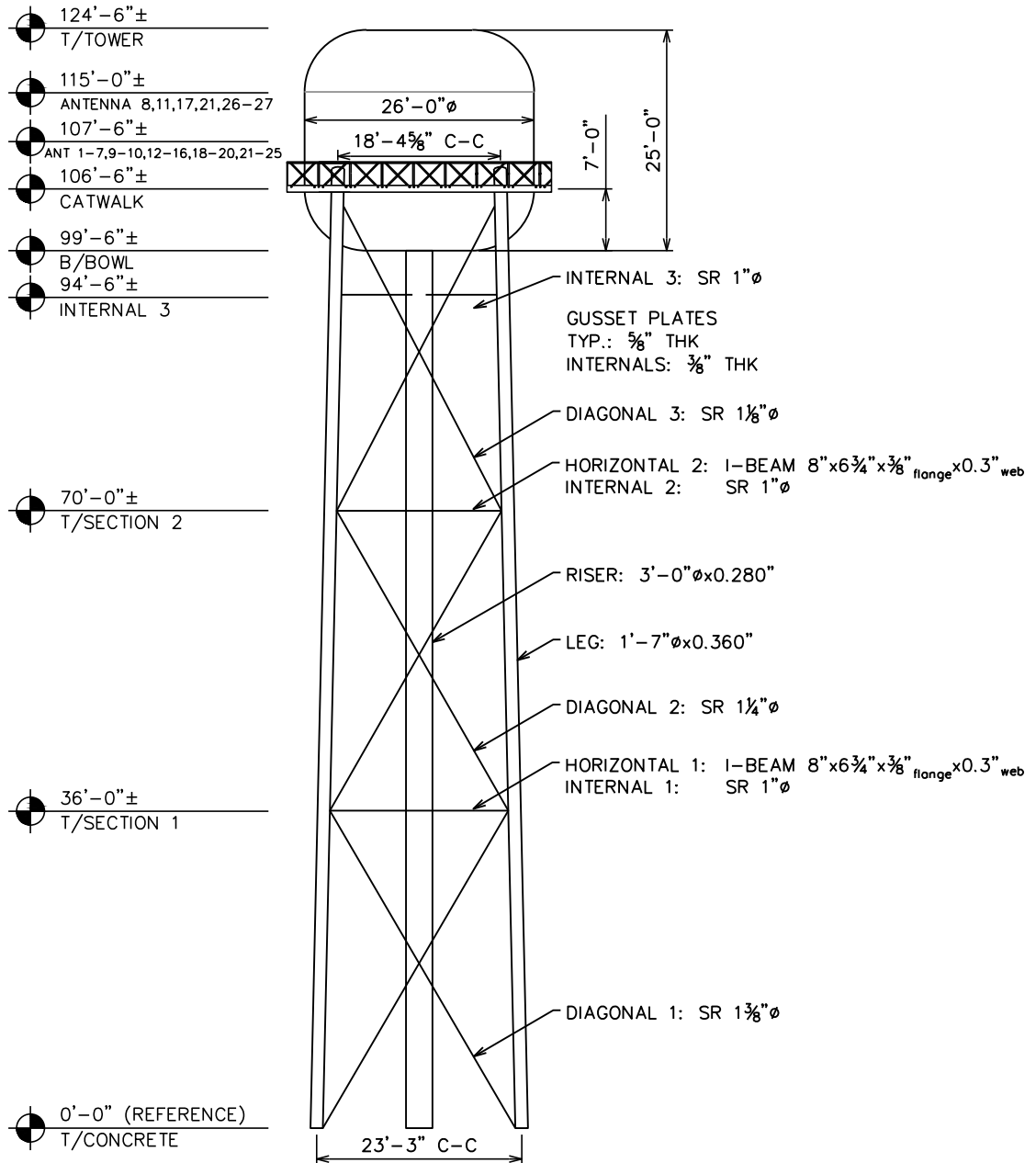
<p style="text-align: center;"><u>Waveguide Ladder 1-5 Sketch</u></p>  <p style="text-align: center;">NOTE: WAVEGUIDE CONNECTION TO LEG: C 3" x 1 1/3" x 1/4" x 29" (1) 1/2" Ø CONNECTION @ 10'-7" C-C</p>	<p style="text-align: center;"><u>Waveguide Ladder 1 Photo</u></p>  <p style="text-align: center;"><u>Waveguide Ladder 2 Photo</u></p> 
--	---

#	Height	Width	Step	Rail (type & size)	Rung (type & size)	Holes (size & spacing)
1	7'8" - 106'6"	24"	18"	(2) Pipe on A leg	C 2"x2"x1/8"	Alternating between rungs (13) 3/4"Ø & 3/8"Ø @ 2" C-C
2	7'8" - 106'6"	24"	18"	(2) Pipe on B leg	C 2"x2"x1/8"	Alternating between rungs (13) 3/4"Ø & 3/8"Ø @ 2" C-C

TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
 Job # 17358GE
 Client # CT03XC162
 Date 12/12/2017
 Page 4 of 15

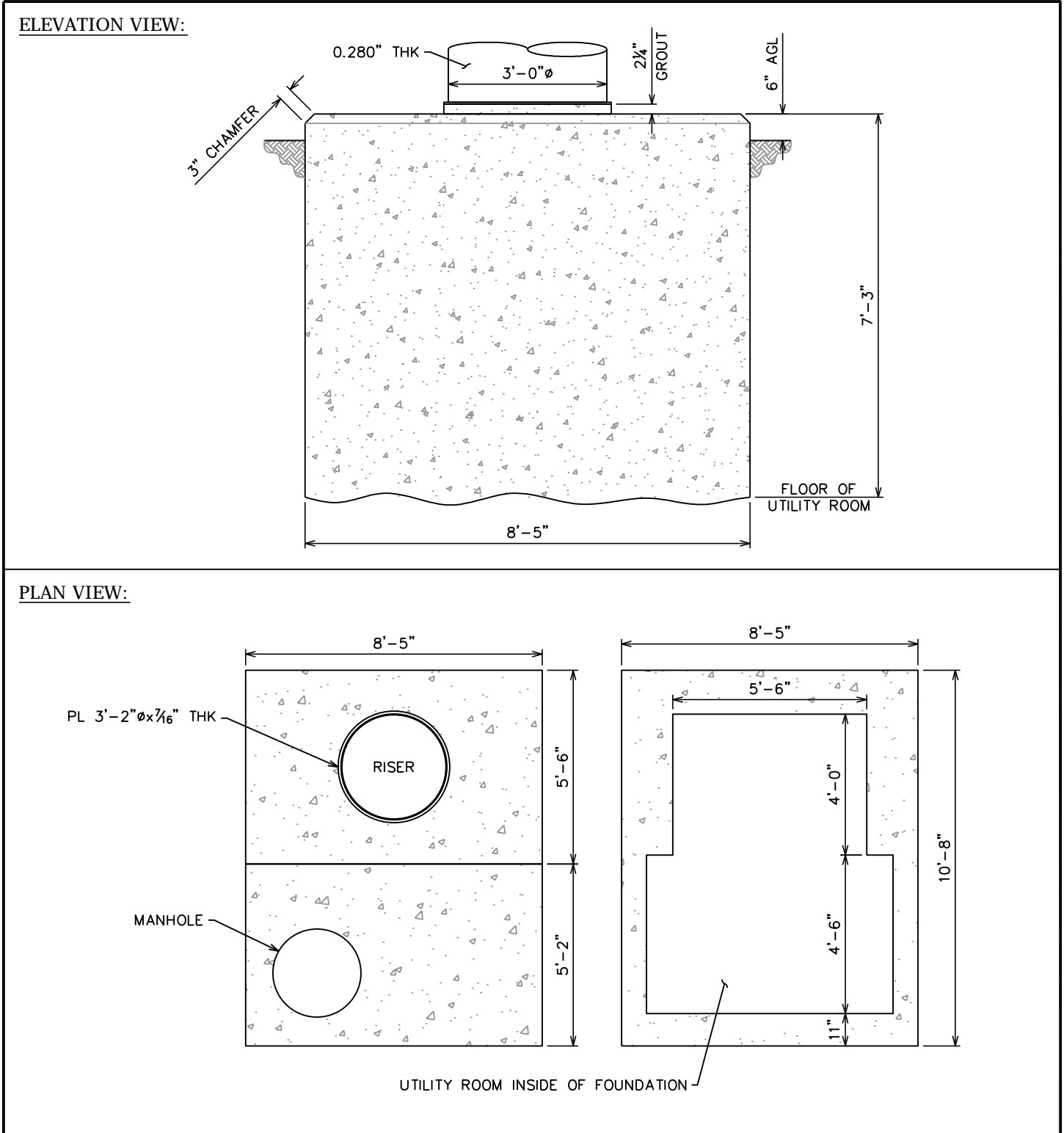
TOWER ELEVATION



TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
 Job # 173586E
 Client # CT03XC162
 Date 12/12/2017
 Page 5 of 15

RISER BASE & FOUNDATION DETAILS

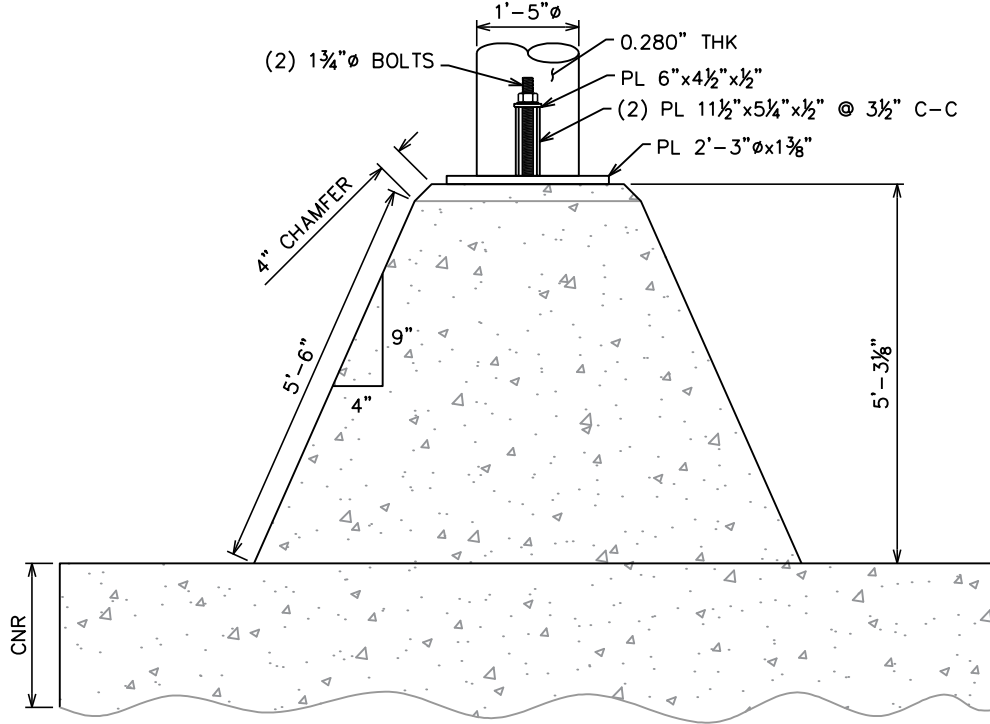


TOWER MAPPING

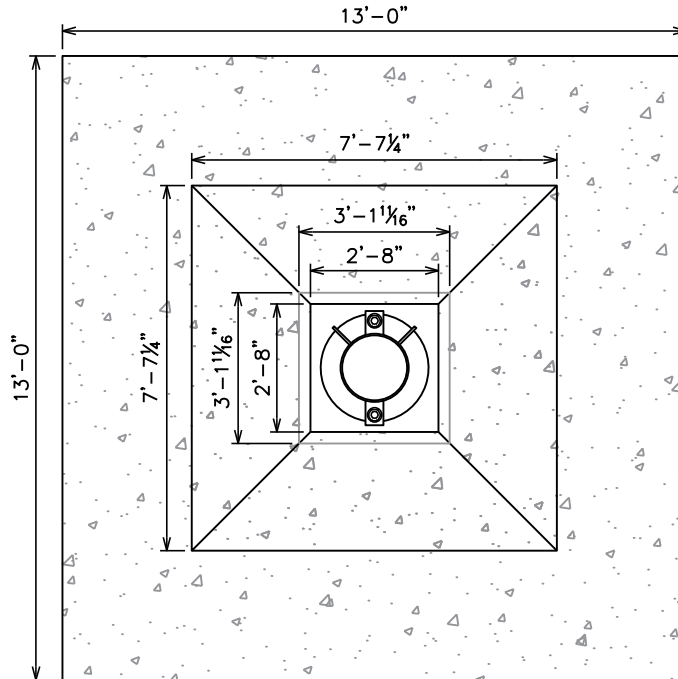
Site Name EE Dickenson Witchhazel WT
 Job # 173586E
 Client # CTO3XC162
 Date 12/12/2017
 Page 6 of 15

LEG BASE & FOUNDATION DETAILS

ELEVATION VIEW:



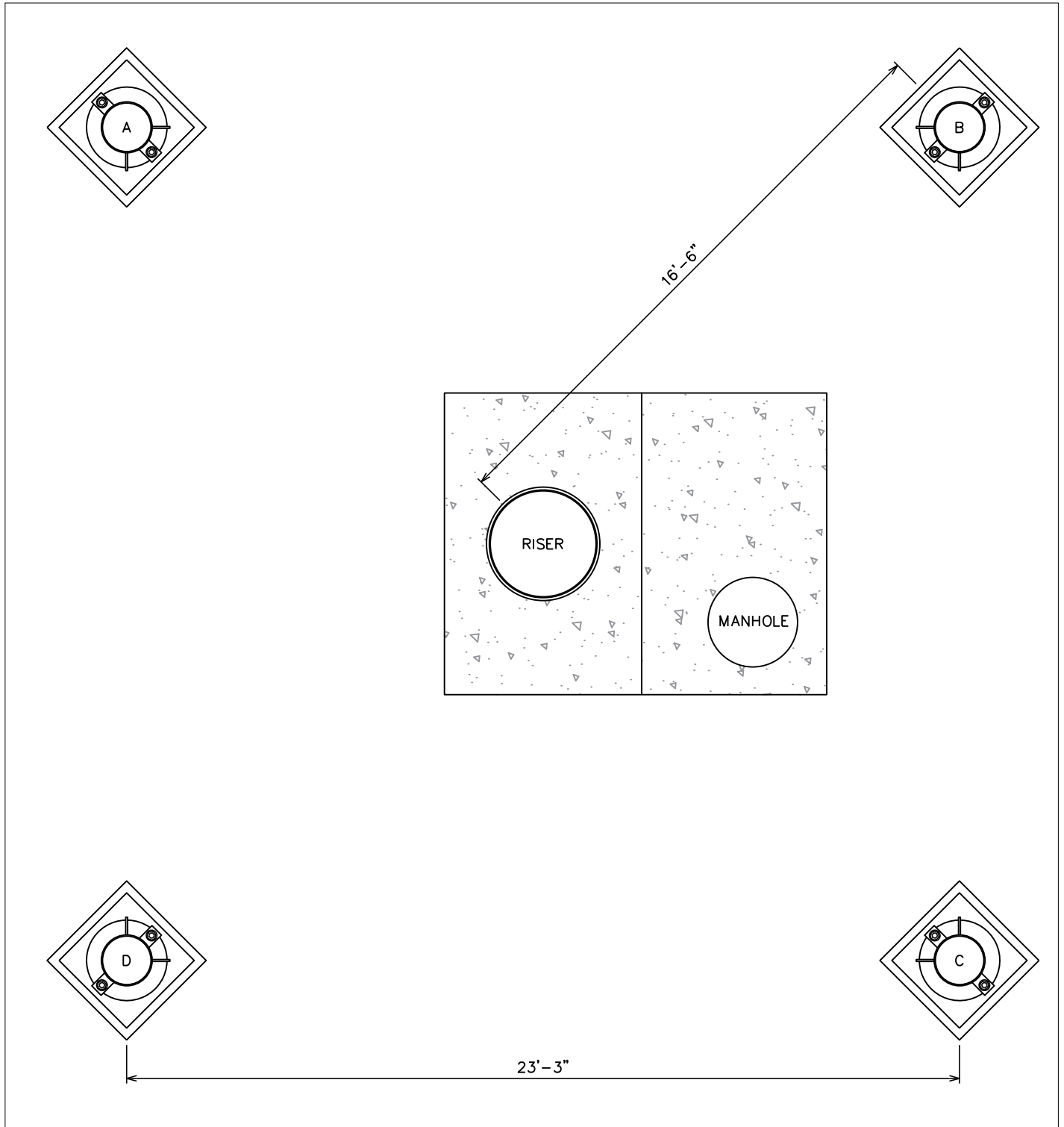
PLAN VIEW:



TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
Job # 173586E
Client # CT03XC162
Date 12/12/2017
Page 7 of 15

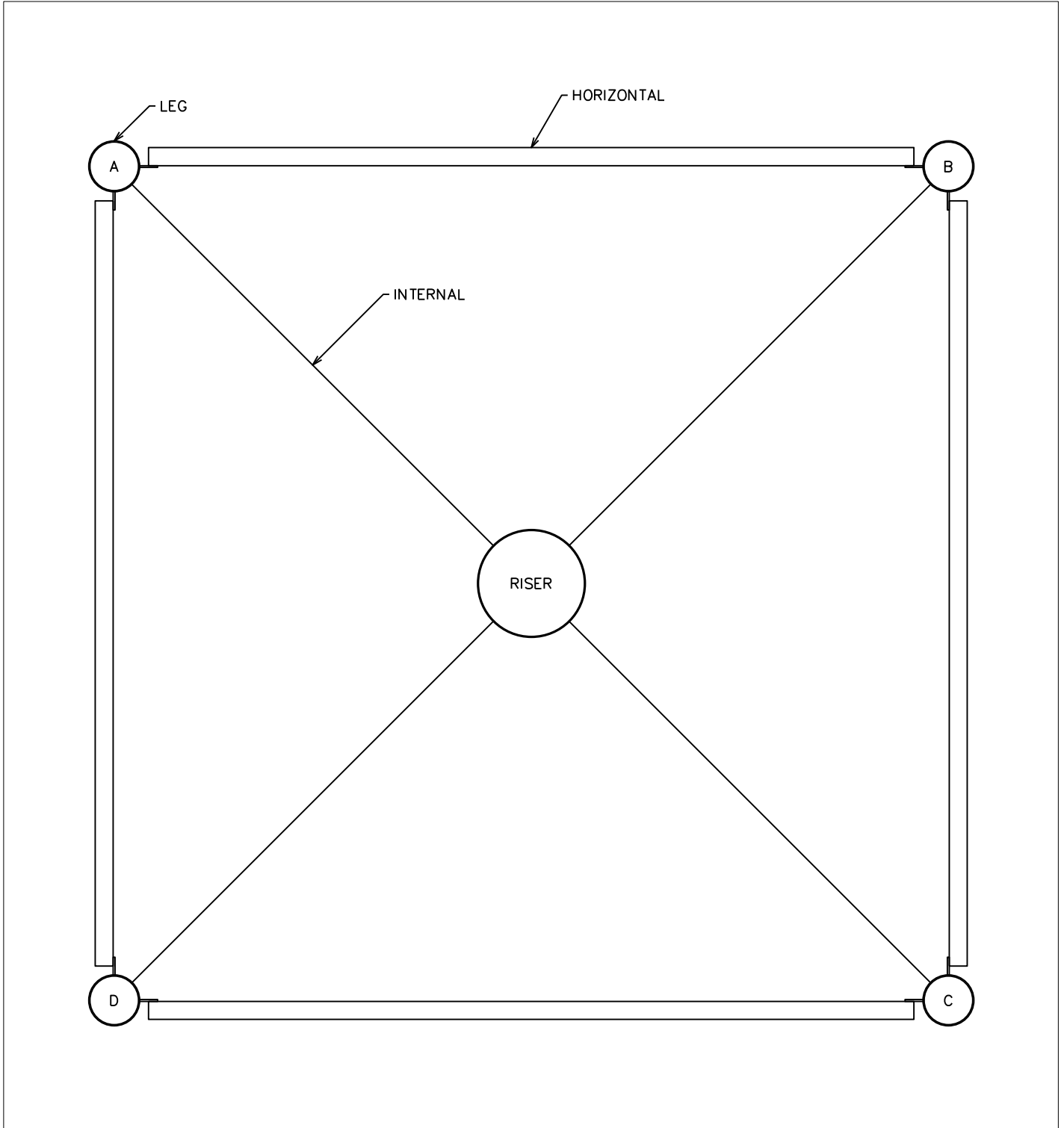
PLAN VIEW AT BASE



TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
Job # 173586E
Client # CT03XC162
Date 12/12/2017
Page 8 of 15

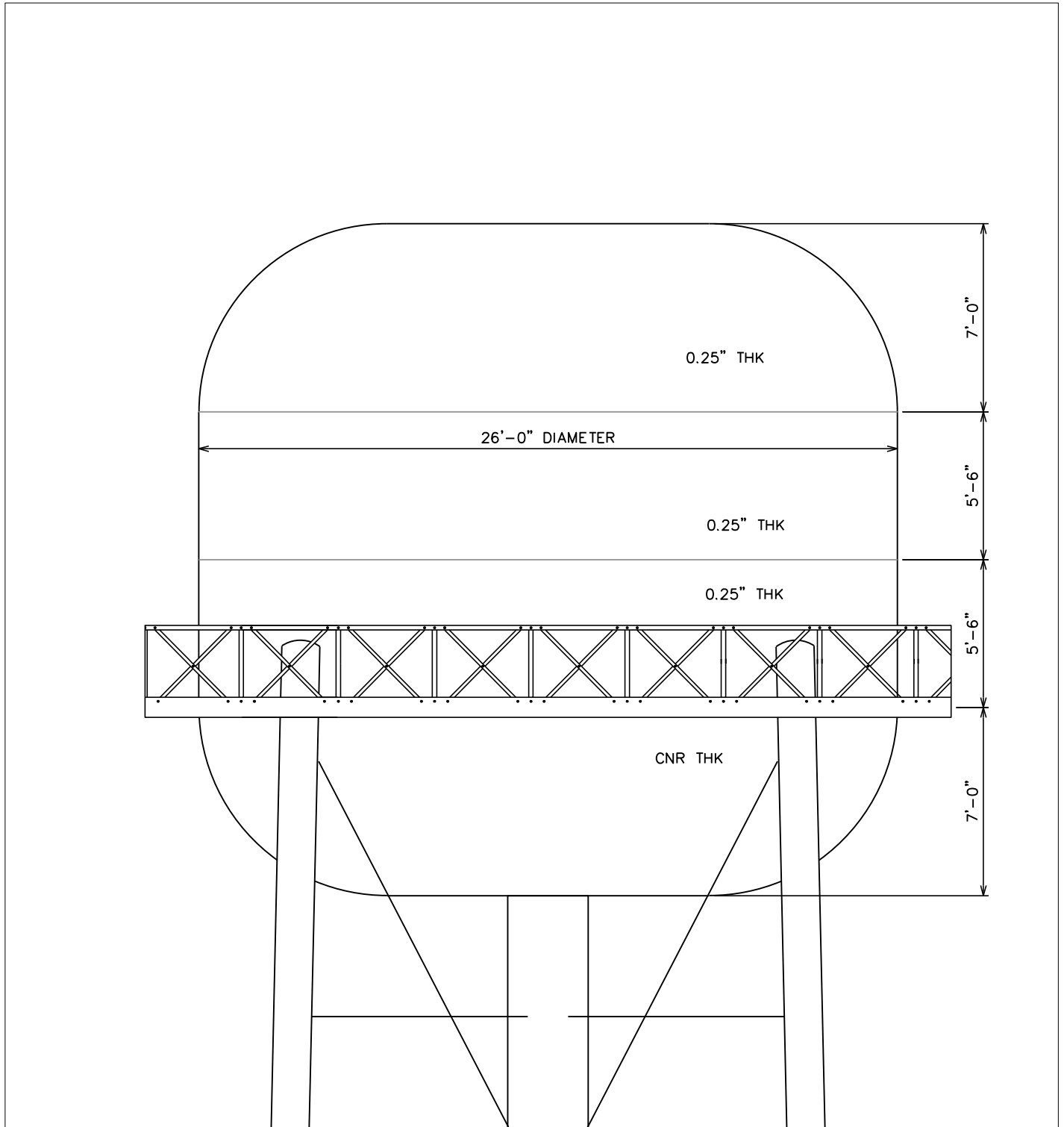
PLAN VIEW AT HORIZONTALS



TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
Job # 173586E
Client # CT03XC162
Date 12/12/2017
Page 9 of 15

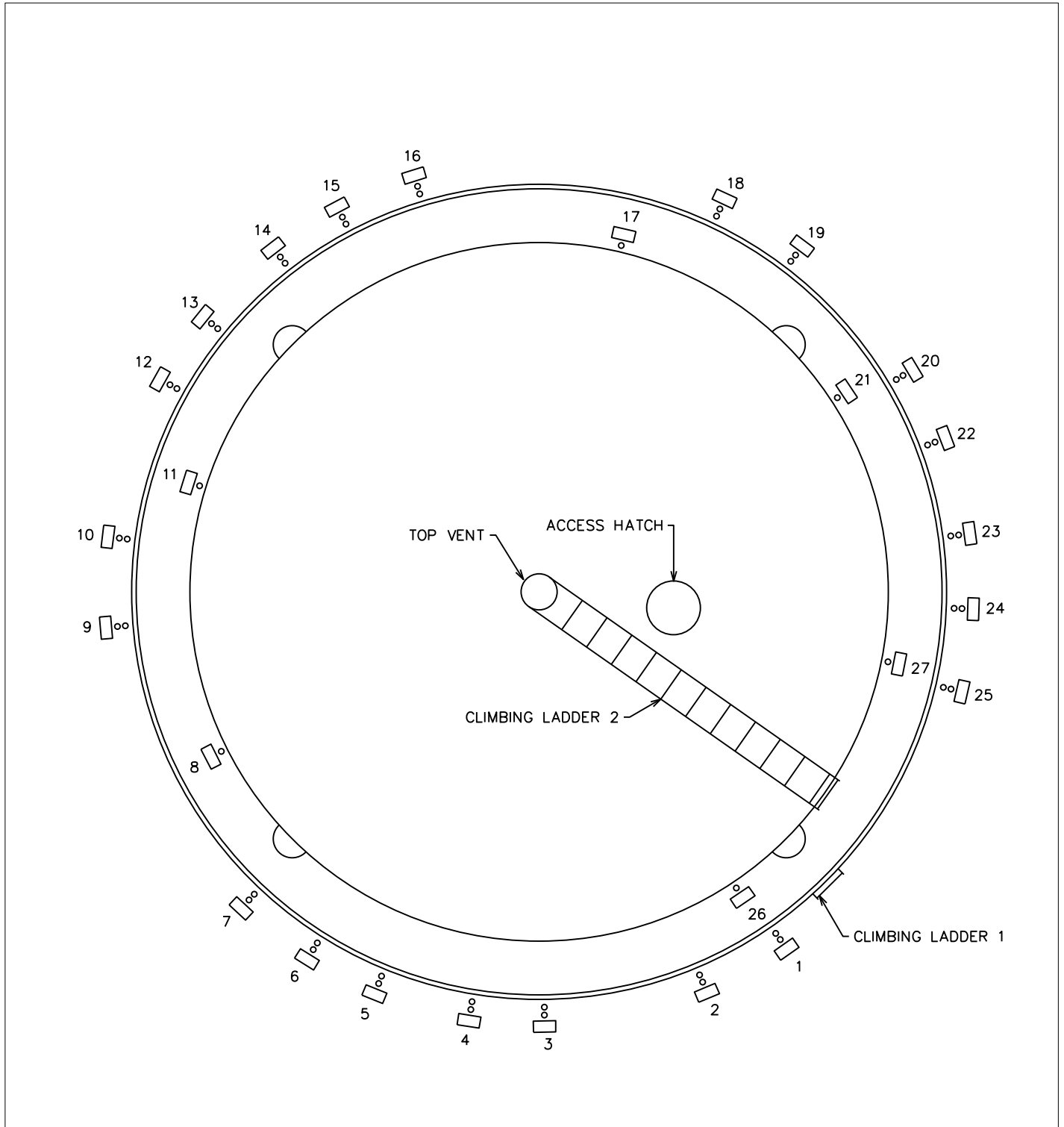
ELEVATION VIEW AT TANK



TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
Job # 17358GE
Client # CT03XC162
Date 12/12/2017
Page 10 of 15

PLAN VIEW AT CATWALK

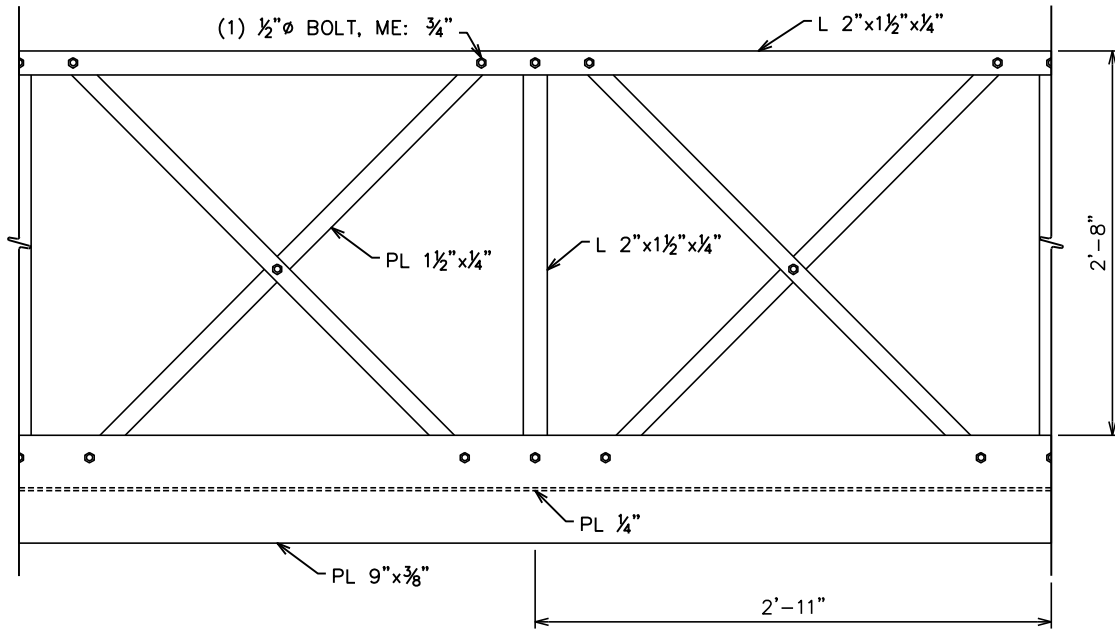


TOWER MAPPING

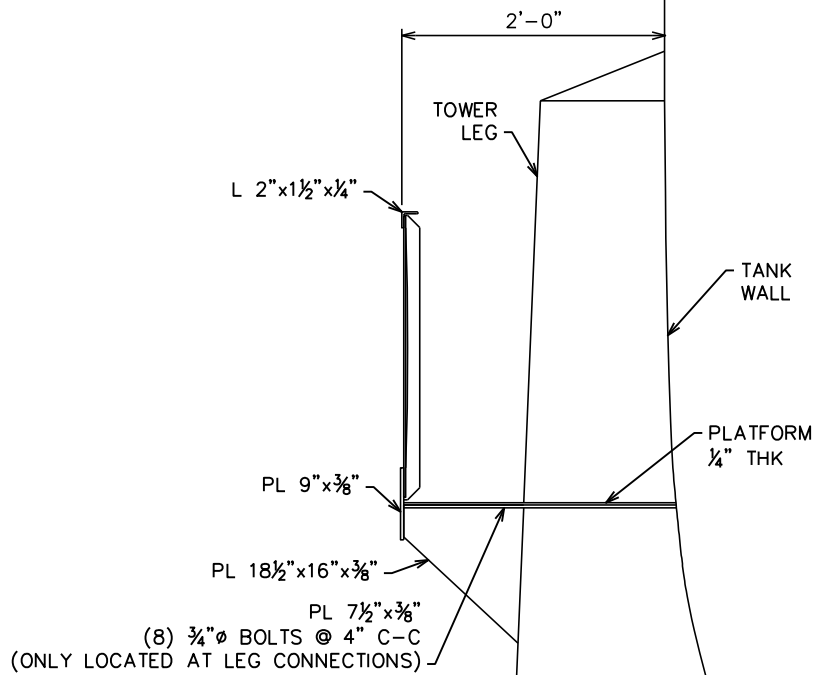
Site Name EE Dickenson Witchhazel WT
 Job # 173586E
 Client # CT03XC162
 Date 12/12/2017
 Page 11 of 15

CATWALK DETAILS

ELEVATION VIEW:



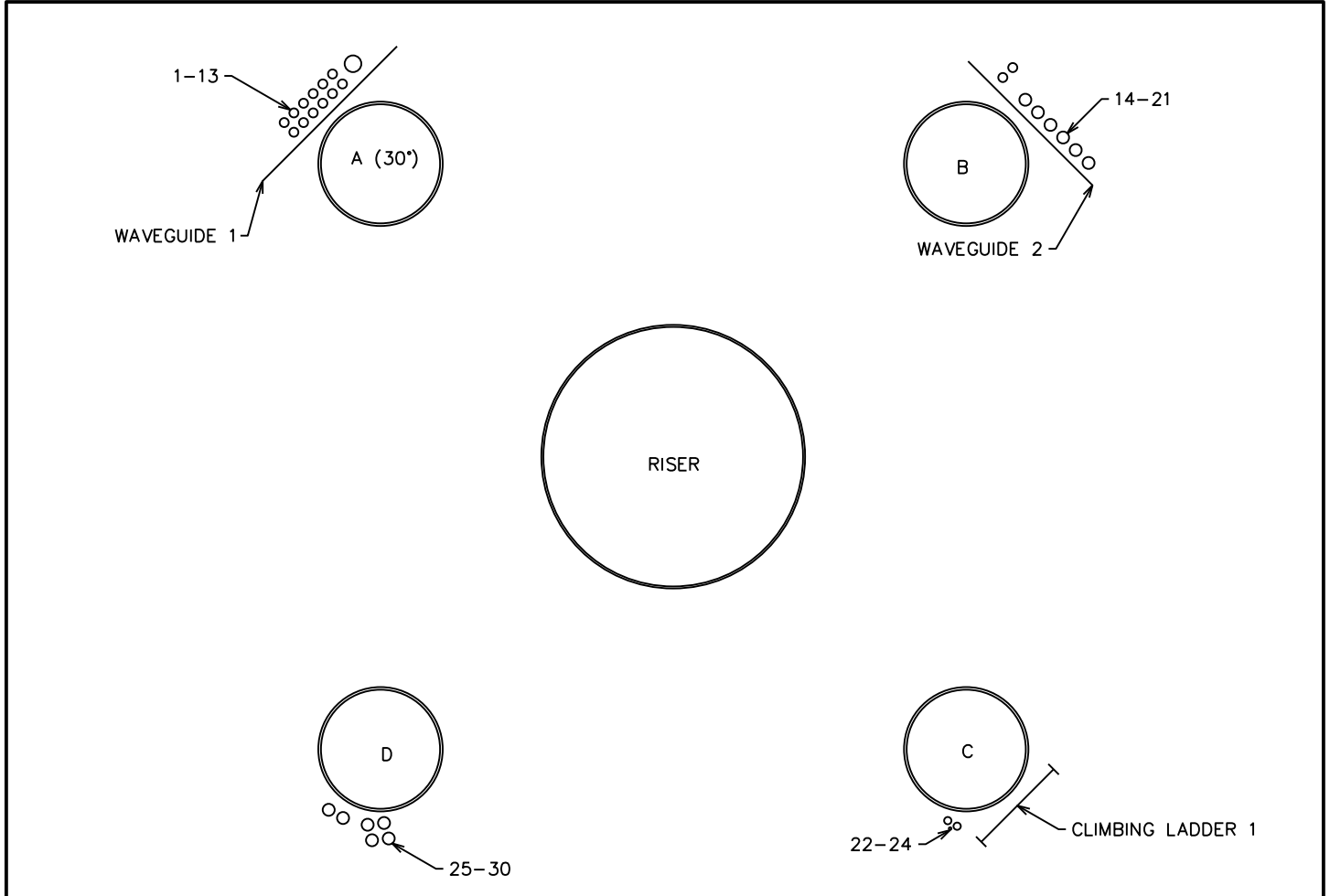
SIDE VIEW:



TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
 Job # 173586E
 Client # CTO3XC162
 Date 12/12/2017
 Page 12 of 15

TRANSMISSION CABLES



Coax #	Type	Size	Elevation	Antenna	Carrier	Notes
1-12	FH	1¼"	7'0" - 107'6"	1,4-6,9,13-15 18,22-24	AT&T	
13	Flex	2¼"Ø	7'0" - 107'6"		AT&T	
14-19	FH	1⅝"	7'0" - 107'6"	2-3,7,10,12 16,19-20,25	Verizon	
20-21	FH	1¼"	7'0" - 107'6"		Verizon	
22	MC	1"Ø	0'0" - 106'6"	-	Water Authority	
23	SM	¾"Ø	0'0" - 117'6"	-	Water Authority	
24	MC	1"Ø	0'0" - 117'6"	-	Water Authority	
25-30	FH	1⅝"	5'0" - 115'0"	8,11,17,21,26-27	Sprint	

TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
 Job # 173586E
 Client # CTO3XC162
 Date 12/12/2017
 Page 13 of 15

ANTENNA AND MOUNT DETAILS

Ant #	Elevation		Location Circumferential distance from ladder (Tank: 82'-0")	Coax	Antenna/TMA/RRU (etc)	Mount (off railing typ.)
	κ Mnt	κ Ant				
1	107'-6"	107'-9"	2'-3"	1-13	Powerwave AXCM-800/1900-90-12.51/16.5 (Panel) (2) Powerwave LPG21401 (TMA)	(1) P 2.4"Øx4' (1) P 2.4"Øx6', SO: 7½"
2	107'-6"	108'-6"	5'-0"	14-21	Amphenol LPA80063/6CFEDIN (Panel)	(1) P 2.4"Øx4' (1) P 2.4"Øx6', SO: 7"
3	107'-6"	109'-0"	10'-0"	14-21	Commscope SBNHH-1D65B (Panel) (1) Alcatel Lucent B66a RRH 4x45 (RRH)	(1) P 2.4"Øx4' (1) P 2.4"Øx7', SO: 7" (1) P 2.4"Øx2'-6"
4	107'-6"	107'-9"	12'-3"	1-13	Powerwave AXCM-800/1900-90-12.51/16.5 (Panel)	(1) P 2.4"Øx4' (1) P 2.4"Øx6', SO: 7½"
5	107'-6"	109'-0"	15'-2"	1-13	Commscope SBNHH-1D65B (Panel) (1) Alcatel Lucent B13 RRH 4x30 (RRH) (1) 10"x10"x6¼" Box	(1) P 2.4"Øx4' (1) P 2.4"Øx7', SO: 8"
6	107'-6"	107'-6"	17'-6"	1-13	Andrew SBNH-1D4545A (Panel) (2) Ericsson RRUS 11 B12 (RRU)	(1) P 2.4"Øx4' (1) P 2.9"Øx10', SO: 6"
7	107'-6"	108'-6"	20'-0"	14-21	Amphenol LPA80063/6CFEDIN (Panel)	(1) P 2.4"Øx4' (1) P 2.4"Øx6', SO: 7"
8	115'-0"	115'-0"	24'-8"	25-30	Allen Telecom DB980H90E-M (Panel)	P 2.4"Øx5'-4", SO: 6¼" off tank wall
9	107'-6"	107'-9"	29'-3"	1-13	Powerwave AXCM-800/1900-90-12.51/16.5 (Panel) (2) Powerwave LPG21401 (TMA)	(1) P 2.4"Øx4' (1) P 2.4"Øx6', SO: 7½"
10	107'-6"	109'-0"	31'-9"	14-21	Amphenol LPA80080/6CFEDIN (Panel) (1) Raycap RRFDC-3315-PF-48 (SP)	(1) P 2.4"Øx4' (1) P 2.4"Øx6', SO: 7"
11	115'-0"	115'-0"	34'-7"	25-30	Allen Telecom DB980H90E-M (Panel)	P 2.4"Øx5'-4", SO: 6¼" off tank wall
12	107'-6"	109'-0"	37'-3"	14-21	Commscope SBNHH-1D65B (Panel) (1) Alcatel Lucent B66a RRH 4x45 (RRH)	(1) P 2.4"Øx4' (1) P 2.4"Øx7', SO: 7" (1) P 2.4"Øx2'-6"
13	107'-6"	107'-9"	40'-0"	1-13	Powerwave AXCM-800/1900-90-12.51/16.5 (Panel)	(1) P 2.4"Øx4' (1) P 2.4"Øx6', SO: 7½"
14	107'-6"	109'-0"	42'-7"	1-13	Commscope SBNHH-1D65B (Panel) (1) Alcatel Lucent B13 RRH 4x30 (RRH)	(1) P 2.4"Øx4' (1) P 2.4"Øx7', SO: 8"
15	107'-6"	107'-6"	44'-7"	1-13	Andrew SBNH-1D4545A (Panel) (2) Ericsson RRUS 11 B12 (RRU)	(1) P 2.4"Øx4' (1) P 2.9"Øx10', SO: 6"
16	107'-6"	109'-0"	47'-6"	14-21	Amphenol LPA80080/6CFEDIN (Panel)	(1) P 2.4"Øx4' (1) P 2.4"Øx6', SO: 7"
17	115'-0"	115'-0"	54'-3"	25-30	Allen Telecom DB980H90E-M (Panel)	P 2.4"Øx5'-4", SO: 6¼" off tank wall
18	107'-6"	107'-9"	56'-8"	1-13	Powerwave AXCM-800/1900-90-12.51/16.5 (Panel) (2) Powerwave LPG21401 (TMA)	(1) P 2.4"Øx4' (1) P 2.4"Øx6', SO: 7½"
19	107'-6"	108'-6"	59'-3"	14-21	Amphenol LPA80063/6CFEDIN (Panel) (1) Raycap RRFDC-3315-PF-48 (SP)	(1) P 2.4"Øx4' (1) P 2.4"Øx6', SO: 7"

TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
Job # 17358GE
Client # CTO3XC162
Date 12/12/2017
Page 14 of 15

ANTENNA AND MOUNT DETAILS

Ant #	Elevation		Location Circumferential distance from ladder (Tank: 82'-0")	Coax	Antenna/TMA/RRU (etc)	Mount (off railing typ.)
	↙ Mnt	↘ Ant				
20	107'-6"	109'-0"	64'-3"	14-21	Commscope SBNHH-1D65B (Panel) (1) Alcatel Lucent B66a RRH 4x45 (RRH)	(1) P 2.4"Øx4' (1) P 2.4"Øx7', SO: 7" (1) P 2.4"Øx2'-6"
21	115'-0"	115'-0"	64'-2"	25-30	Allen Telecom DB980H90E-M (Panel)	P 2.4"Øx5'-4", SO: 6¼" off tank wall
22	107'-6"	107'-9"	67'-2"	1-13	Powerwave AXCM-800/1900-90-12.51/16.5 (Panel)	(1) P 2.4"Øx4' (1) P 2.4"Øx6', SO: 7½"
23	107'-6"	109'-0"	69'-9"	1-13	Commscope SBNHH-1D65B (Panel) (1) Alcatel Lucent B13 RRH 4x30 (RRH)	(1) P 2.4"Øx4' (1) P 2.4"Øx7', SO: 8"
24	107'-6"	107'-6"	72'-4"	1-13	Andrew SBNH-1D4545A (Panel) (1) Ericsson RRUS 11 B12 (RRU) (1) Ericsson RRUS 12 B4 (RRU)	(1) P 2.4"Øx4' (1) P 2.9"Øx10', SO: 6"
25	107'-6"	108'-6"	75'-0"	14-21	Amphenol LPA80063/6CFEDIN (Panel)	(1) P 2.4"Øx4' (1) P 2.4"Øx6', SO: 7"
26	115'-0"	115'-0"	2'-6"	25-30	Allen Telecom DB980H90E-M (Panel)	P 2.4"Øx5'-4", SO: 6¼" off tank wall
27	115'-0"	115'-0"	74'-2"	25-30	Allen Telecom DB980H90E-M (Panel)	P 2.4"Øx5'-4", SO: 6¼" off tank wall

MISCELLANEOUS MOUNT DETAILS

Item	Elevation	Location Circumferential distance from ladder (Tank: 1057")	Coax	Details
Empty Mount Pipe	107'-6"	34'-9"	-	P 2.4"Øx4', SO: 4"
10"x10"x6¼" Box	110'-6"	42'-7"	1-13	(2) Unistrut on the inside of rail
14¼"x16"x6¼" Box	110'-6"	46'-2"	1-13	(2) Unistrut on the inside of rail
10"x10"x6¼" Box	110'-6"	71'-0"	1-13	(2) Unistrut on the inside of rail

TOWER MAPPING

Site Name EE Dickenson Witchhazel WT
 Job # 173586E
 Client # CT03XC162
 Date 12/12/2017
 Page 15 of 15

PHOTO LOG

PHOTO #	PHOTO DESCRIPTION
1-4	Site Signs and Tower Legs
5-7	Shelter
8-14	Tower Elevations
15-27	Up Tower Photos
28-36	Compound and Equipment
37-64	Tower up to Catwalk
65-117	Tower at Catwalk
118-120	Top of Tank
121-124	Surrounding Area
125	Top of Tank
126-150	Foundation Photos
151-155	Site Access and Tank

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1033 WATERVLIET SHAKER RD, ALBANY, NY 12205

January 18, 2018

Terri Burkholder

Project Manager

Airosmith Development

tburkholder@asdwireless.com

www.airosmithdevelopment.com

RE: Sprint Project DO Macro Upgrade Mount Analysis

Sprint Site Number:	CT03XC162
Sprint Site Name:	EE Dickenson Witchhazel
Site Address:	6 Main Street, Essex, CT 06426
Building Code:	2012 IBC / 2016 Connecticut State Building Code
Design Standard:	ANSI/TIA-222-G
Result:	45.0%
Usage:	Pass

Dear Ms. Burkholder:

At your request, Infinigy Engineering, PLLC has reviewed the existing Sprint water tank mounted equipment supports at the above referenced site for adequacy to support the existing and proposed loads for the referenced project. This evaluation is based on a review of the information from the RFDS (dated 04/22/2017) provided by Sprint and Construction Drawings (dated 09/27/17) provided by Infinigy Engineering, PLLC.

This evaluation assumes that all structural members are in good condition, have not been altered from the manufacturer's original design, and have been installed per the manufacturer's requirements. Prior to installation of any new appurtenances, the contractor shall inspect the condition of all relevant members and connections and shall tighten all connections. The contractor is responsible for the means and methods of construction and shall notify Infinigy Engineering, PLLC immediately if any field conditions differ from those listed above.

Should there be any questions, please do not hesitate to contact us at (518) 690-0790.

Sincerely,

Joseph R. Johnston, P.E.

VP Structural Engineering/Principal

structural@infinigy.com

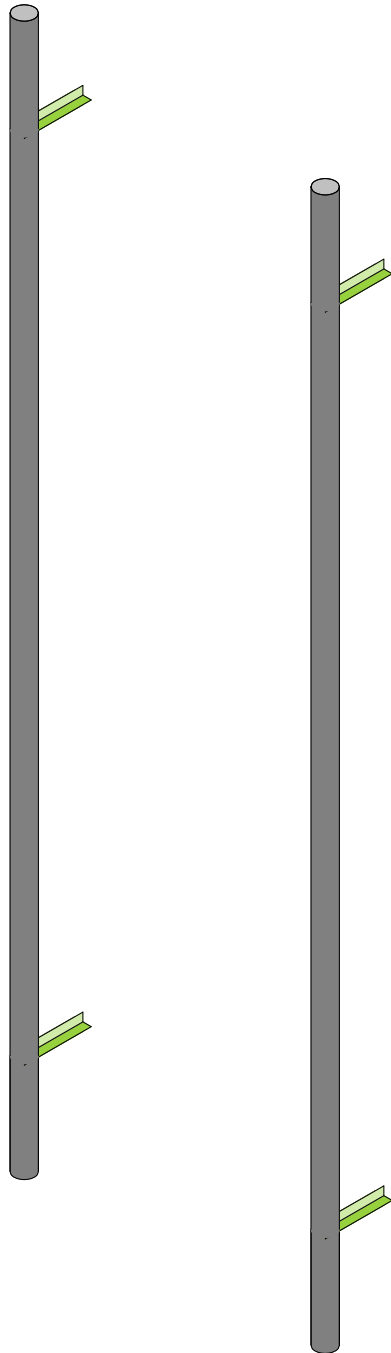
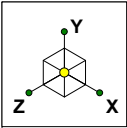
Connecticut P.E. License Number: PEN.0029460

KC/RJL



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

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Infinigy Engineering PLLC	CT03XC162, CT	Existing
DVA		Dec 11, 2017 at 11:51 AM
526-104		CT03XC162, CT - RJL.R3D

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			RIGID	None	None	RIGID	Typical
2	M2	N3	N4			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
3	M3	N5	N6			RIGID	None	None	RIGID	Typical
4	M4	N7	N8			RIGID	None	None	RIGID	Typical
5	M5	N9	N10			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
6	M6	N11	N12			RIGID	None	None	RIGID	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		4	28	0
3	Total General		4	28	0
4					
5	Hot Rolled Steel				
6	A53 Gr.B	PIPE_2.0	2	240	0
7	Total HR Steel		2	240	0

Basic Load Cases

	BLC Description	Category	X Gravi...	Y Gravi...	Z Gravity	Joint	Point	Distrib...	Area(M...Surfac...
1	Self Weight	DL		-1			5		
2	Wind Load AZI 000	WLZ					5		1
3	Wind Load AZI 090	WLX					5		1
4	Ice Weight	OL1					5	6	
5	Wind + Ice Load AZI 000	OL2					5		1
6	Wind + Ice Load AZI 090	OL3					5		1
7	Service Live 1	LL							
8	Seismic Load AZI 000	ELZ					5		
9	Seismic Load AZI 090	ELX					5		
10	BLC 2 Transient Area Loads	None						2	
11	BLC 3 Transient Area Loads	None						6	
12	BLC 5 Transient Area Loads	None						2	
13	BLC 6 Transient Area Loads	None						6	

Load Combinations

	Description	S...	PDelta	SRSS	BLC Fa...	B... Fa...	B... Fa...	B... Fa...	B... Fa...	B... Fa...	B... Fa...	B... Fa...	B... Fa...	B... Fa...	B... Fa...	B... Fa...	B... Fa...
1	1.4D	Yes	Y		DL	1.4											
2	1.2D + 1.6W AZI 000	Yes	Y		DL	1.2	W...1.6										
3	1.2D + 1.6W AZI 030	Yes	Y		DL	1.2	W...1.3...W... .8										
4	1.2D + 1.6W AZI 060	Yes	Y		DL	1.2	W... .8 W...1.3...										
5	1.2D + 1.6W AZI 090	Yes	Y		DL	1.2	W...1.6										
6	1.2D + 1.6W AZI 120	Yes	Y		DL	1.2	W...-.8 W...1.3...										
7	1.2D + 1.6W AZI 150	Yes	Y		DL	1.2	W...-1... W... .8										
8	1.2D + 1.6W AZI 180	Yes	Y		DL	1.2	W...-1.6										
9	1.2D + 1.6W AZI 210	Yes	Y		DL	1.2	W...-1... W...-.8										
10	1.2D + 1.6W AZI 240	Yes	Y		DL	1.2	W...-.8 W...-1...										
11	1.2D + 1.6W AZI 270	Yes	Y		DL	1.2	W...-1.6										
12	1.2D + 1.6W AZI 300	Yes	Y		DL	1.2	W... .8 W...-1...										
13	1.2D + 1.6W AZI 330	Yes	Y		DL	1.2	W...1.3...W...-.8										
14	0.9D + 1.6W AZI 000	Yes	Y		DL	.9	W...1.6										
15	0.9D + 1.6W AZI 030	Yes	Y		DL	.9	W...1.3...W... .8										
16	0.9D + 1.6W AZI 060	Yes	Y		DL	.9	W... .8 W...1.3...										

Load Combinations (Continued)

	Description	S...	PDelta	SRSS	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...
17	0.9D + 1.6W AZI 090	Yes	Y		DL	.9			W...	1.6											
18	0.9D + 1.6W AZI 120	Yes	Y		DL	.9	W...	-.8	W...	1.3...											
19	0.9D + 1.6W AZI 150	Yes	Y		DL	.9	W...	-1...	W...	.8											
20	0.9D + 1.6W AZI 180	Yes	Y		DL	.9	W...	-1.6													
21	0.9D + 1.6W AZI 210	Yes	Y		DL	.9	W...	-1...	W...	-.8											
22	0.9D + 1.6W AZI 240	Yes	Y		DL	.9	W...	-.8	W...	-1...											
23	0.9D + 1.6W AZI 270	Yes	Y		DL	.9			W...	-1.6											
24	0.9D + 1.6W AZI 300	Yes	Y		DL	.9	W...	.8	W...	-1...											
25	0.9D + 1.6W AZI 330	Yes	Y		DL	.9	W...	1.3...	W...	-.8											
26	1.2D + 1.0Di	Yes	Y		DL	1.2	O...	1													
27	1.2D + 1.0Di + 1.0Wi AZ...	Yes	Y		DL	1.2	O...	1	O...	1											
28	1.2D + 1.0Di + 1.0Wi AZ...	Yes	Y		DL	1.2	O...	1	O...	.866	O...	.5									
29	1.2D + 1.0Di + 1.0Wi AZ...	Yes	Y		DL	1.2	O...	1	O...	.5	O...	.866									
30	1.2D + 1.0Di + 1.0Wi AZ...	Yes	Y		DL	1.2	O...	1			O...	1									
31	1.2D + 1.0Di + 1.0Wi AZ...	Yes	Y		DL	1.2	O...	1	O...	-.5	O...	.866									
32	1.2D + 1.0Di + 1.0Wi AZ...	Yes	Y		DL	1.2	O...	1	O...	-.8...	O...	.5									
33	1.2D + 1.0Di + 1.0Wi AZ...	Yes	Y		DL	1.2	O...	1	O...	-.1											
34	1.2D + 1.0Di + 1.0Wi AZ...	Yes	Y		DL	1.2	O...	1	O...	-.8...	O...	-.5									
35	1.2D + 1.0Di + 1.0Wi AZ...	Yes	Y		DL	1.2	O...	1	O...	-.5	O...	-.8...									
36	1.2D + 1.0Di + 1.0Wi AZ...	Yes	Y		DL	1.2	O...	1	O...	-.1											
37	1.2D + 1.0Di + 1.0Wi AZ...	Yes	Y		DL	1.2	O...	1	O...	.5	O...	-.8...									
38	1.2D + 1.0Di + 1.0Wi AZ...	Yes	Y		DL	1.2	O...	1	O...	.866	O...	-.5									
39	1.2D + 1.5L + 1.0WL (30...	Yes	Y		DL	1.2	LL	1.5	W...	.082											
40	1.2D + 1.5L + 1.0WL (30...	Yes	Y		DL	1.2	LL	1.5	W...	.071	W...	.041									
41	1.2D + 1.5L + 1.0WL (30...	Yes	Y		DL	1.2	LL	1.5	W...	.041	W...	.071									
42	1.2D + 1.5L + 1.0WL (30...	Yes	Y		DL	1.2	LL	1.5			W...	.082									
43	1.2D + 1.5L + 1.0WL (30...	Yes	Y		DL	1.2	LL	1.5	W...	-.0...	W...	.071									
44	1.2D + 1.5L + 1.0WL (30...	Yes	Y		DL	1.2	LL	1.5	W...	-.0...	W...	.041									
45	1.2D + 1.5L + 1.0WL (30...	Yes	Y		DL	1.2	LL	1.5	W...	-.0...											
46	1.2D + 1.5L + 1.0WL (30...	Yes	Y		DL	1.2	LL	1.5	W...	-.0...	W...	-.0...									
47	1.2D + 1.5L + 1.0WL (30...	Yes	Y		DL	1.2	LL	1.5	W...	-.0...	W...	-.0...									
48	1.2D + 1.5L + 1.0WL (30...	Yes	Y		DL	1.2	LL	1.5			W...	-.0...									
49	1.2D + 1.5L + 1.0WL (30...	Yes	Y		DL	1.2	LL	1.5	W...	.041	W...	-.0...									
50	1.2D + 1.5L + 1.0WL (30...	Yes	Y		DL	1.2	LL	1.5	W...	.071	W...	-.0...									
51	(1.2+0.2Sds) + 1.0 E AZ...	Yes	Y		DL	1.2...	ELZ	1													
52	(1.2+0.2Sds) + 1.0 E AZ...	Yes	Y		DL	1.2...	ELZ	.866	E...	.5											
53	(1.2+0.2Sds) + 1.0 E AZ...	Yes	Y		DL	1.2...	ELZ	.5	E...	.866											
54	(1.2+0.2Sds) + 1.0 E AZ...	Yes	Y		DL	1.2...			E...	1											
55	(1.2+0.2Sds) + 1.0 E AZ...	Yes	Y		DL	1.2...	ELZ	-.5	E...	.866											
56	(1.2+0.2Sds) + 1.0 E AZ...	Yes	Y		DL	1.2...	ELZ	-.8...	E...	.5											
57	(1.2+0.2Sds) + 1.0 E AZ...	Yes	Y		DL	1.2...	ELZ	-.1													
58	(1.2+0.2Sds) + 1.0 E AZ...	Yes	Y		DL	1.2...	ELZ	-.8...	E...	-.5											
59	(1.2+0.2Sds) + 1.0 E AZ...	Yes	Y		DL	1.2...	ELZ	-.5	E...	-.8...											
60	(1.2+0.2Sds) + 1.0 E AZ...	Yes	Y		DL	1.2...			E...	-.1											
61	(1.2+0.2Sds) + 1.0 E AZ...	Yes	Y		DL	1.2...	ELZ	.5	E...	-.8...											
62	(1.2+0.2Sds) + 1.0 E AZ...	Yes	Y		DL	1.2...	ELZ	.866	E...	-.5											
63	(0.9-0.2Sds) + 1.0E AZI ...	Yes	Y		DL	.864	ELZ	1													
64	(0.9-0.2Sds) + 1.0E AZI ...	Yes	Y		DL	.864	ELZ	.866	E...	.5											
65	(0.9-0.2Sds) + 1.0E AZI ...	Yes	Y		DL	.864	ELZ	.5	E...	.866											
66	(0.9-0.2Sds) + 1.0E AZI ...	Yes	Y		DL	.864			E...	1											
67	(0.9-0.2Sds) + 1.0E AZI ...	Yes	Y		DL	.864	ELZ	-.5	E...	.866											
68	(0.9-0.2Sds) + 1.0E AZI ...	Yes	Y		DL	.864	ELZ	-.8...	E...	.5											
69	(0.9-0.2Sds) + 1.0E AZI ...	Yes	Y		DL	.864	ELZ	-.1													
70	(0.9-0.2Sds) + 1.0E AZI ...	Yes	Y		DL	.864	ELZ	-.8...	E...	-.5											
71	(0.9-0.2Sds) + 1.0E AZI ...	Yes	Y		DL	.864	ELZ	-.5	E...	-.8...											
72	(0.9-0.2Sds) + 1.0E AZI ...	Yes	Y		DL	.864			E...	-.1											
73	(0.9-0.2Sds) + 1.0E AZI ...	Yes	Y		DL	.864	ELZ	.5	E...	-.8...											

Load Combinations (Continued)

Description	S...	P	Delta	SRSS	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...
74 (0.9-0.2Sds) + 1.0E AZI ...	Yes	Y			DL	.864	ELZ	.866	E...	-.5											

Envelope Joint Reactions

Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1 N1 max	387.326	17	494.9	27	874.761	2	791.561	14	225.94	17	378.598	11
2 min	-387.326	23	104.658	69	-874.761	20	-939.92	8	-225.94	23	-378.598	5
3 N5 max	341.491	5	413.672	33	752.152	14	243.481	14	199.203	5	55.804	11
4 min	-341.491	11	64.638	63	-752.152	8	-335.137	8	-199.203	11	-55.804	5
5 N7 max	151.901	5	216.701	27	171.211	2	223.617	14	88.609	5	219.479	11
6 min	-151.901	11	59.782	69	-171.211	20	-308.362	8	-88.609	11	-219.479	5
7 N11 max	219.331	17	305.251	33	258.87	14	301.107	20	127.943	17	293.038	17
8 min	-219.331	23	89.639	63	-258.87	8	-428.175	2	-127.943	23	-293.038	23
9 Totals: max	1100.05	17	1430.524	33	2056.994	2						
10 min	-1100.05	23	318.717	63	-2056.994	8						

Envelope AISC 14th(360-10): LRFD Steel Code Checks

Member	Shape	Code Check	Loc[in]	LC	Shear C...	Loc...	Dir	LC	phi*Pnc...	phi*Pnt...	phi*Mn y-y	phi*Mn ...	Cb	Eqn
1	M2 PIPE_...	.450	12.5	2	.089	12.5		2	9836.597	32130	1871.625	1871.625	1	H1-...
2	M5 PIPE_...	.191	107.5	8	.025	107.5		8	9836.597	32130	1871.625	1871.625	1	H1-...

Sprint



PROJECT: DO MACRO UPGRADE
 SITE NAME: EE DICKENSON WITCHHAZEL
 SITE CASCADE: CT03XC162
 SITE ADDRESS: 6 MAIN STREET
 ESSEX, CT 06426
 SITE TYPE: WATER TANK
 MARKET: NORTHERN CONNECTICUT

PLANS PREPARED FOR:

PLANS PREPARED BY:

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

PROJECT MANAGER:

32 CLINTON ST.
 SARATOGA SPRINGS, NY 12868
 OFFICE# (518) 308-3740

ENGINEERING LICENSE:

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REVISIONS:	DESCRIPTION	DATE	BY	REV.
ISSUED FOR PERMIT		1/25/18	JDL	0

SITE NAME:
EE DICKENSON WITCHHAZEL

SITE NUMBER:
CT03XC162

SITE ADDRESS:
**6 MAIN STREET
 ESSEX, CT 06426**

SHEET DESCRIPTION:
TITLE SHEET & PROJECT DATA

SHEET NUMBER:
T-1

SITE INFORMATION	AREA MAP	PROJECT DESCRIPTION	DRAWING INDEX																																							
<p>STRUCTURE OWNER: MACBETH VENTURES, LLC 6 RAILROAD AVE ESSEX, CT 06426</p> <p>LATITUDE (NAD83): 41° 21' 4.608" N 41.35128000'</p> <p>LONGITUDE (NAD83): 72° 24' 22.284" W -72.40619000'</p> <p>COUNTY: ESSEX COUNTY</p> <p>ZONING JURISDICTION: CONNECTICUT SITING COUNCIL</p> <p>ZONING DISTRICT: CML</p> <p>POWER COMPANY: NIMO PHONE: (800) 642-4272</p> <p>AAV PROVIDER: VERIZON PHONE: (800) 870-6464</p> <p>PROJECT MANAGER: AIROSMITH DEVELOPMENT TERRI BURKHOLDER (315) 719-2928 TBURKHOLDER@AIROSMITHDEVELOPMENT.COM</p>		<p>SPRINT PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY.</p> <ul style="list-style-type: none"> REMOVE (6) EXISTING PANEL ANTENNAS INSTALL (3) PANEL ANTENNAS INSTALL (9) RRH'S NEAR ANTENNAS RELOCATE (3) RRH'S TO WATER TANK INSTALL (24) JUMPER CABLES REMOVE (6) EXISTING COAX CABLE INSTALL (4) HYBRID CABLES INSTALL 2.5 EQUIPMENT INSIDE EXISTING N.V. MMBS CABINET <p>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.</p>	<table border="1"> <thead> <tr> <th>SHEET NO.</th> <th>SHEET TITLE</th> <th>REV.</th> </tr> </thead> <tbody> <tr> <td>T-1</td> <td>TITLE SHEET & PROJECT DATA</td> <td>0</td> </tr> <tr> <td>SP-1</td> <td>SPRINT SPECIFICATIONS</td> <td>0</td> </tr> <tr> <td>SP-2</td> <td>SPRINT SPECIFICATIONS</td> <td>0</td> </tr> <tr> <td>SP-3</td> <td>SPRINT SPECIFICATIONS</td> <td>0</td> </tr> <tr> <td>A-1</td> <td>SITE PLAN</td> <td>0</td> </tr> <tr> <td>A-2</td> <td>TOWER ELEVATION</td> <td>0</td> </tr> <tr> <td>A-3</td> <td>ANTENNA LAYOUT & MOUNTING DETAILS</td> <td>0</td> </tr> <tr> <td>A-4</td> <td>EQUIPMENT & MOUNTING DETAILS</td> <td>0</td> </tr> <tr> <td>A-5</td> <td>CIVIL DETAILS</td> <td>0</td> </tr> <tr> <td>A-6</td> <td>PLUMBING DIAGRAM</td> <td>0</td> </tr> <tr> <td>E-1</td> <td>ELECTRICAL & GROUNDING PLAN</td> <td>0</td> </tr> <tr> <td>E-2</td> <td>ELECTRICAL & GROUNDING DETAILS</td> <td>0</td> </tr> </tbody> </table>	SHEET NO.	SHEET TITLE	REV.	T-1	TITLE SHEET & PROJECT DATA	0	SP-1	SPRINT SPECIFICATIONS	0	SP-2	SPRINT SPECIFICATIONS	0	SP-3	SPRINT SPECIFICATIONS	0	A-1	SITE PLAN	0	A-2	TOWER ELEVATION	0	A-3	ANTENNA LAYOUT & MOUNTING DETAILS	0	A-4	EQUIPMENT & MOUNTING DETAILS	0	A-5	CIVIL DETAILS	0	A-6	PLUMBING DIAGRAM	0	E-1	ELECTRICAL & GROUNDING PLAN	0	E-2	ELECTRICAL & GROUNDING DETAILS	0
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	<p>LOCATION MAP</p>	<p>APPLICABLE CODES</p> <p>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.</p> <ol style="list-style-type: none"> INTERNATIONAL BUILDING CODE (2015 IBC) TIA-222-G OR LATEST EDITION NFPA 780 - LIGHTNING PROTECTION CODE 2011 NATIONAL ELECTRIC CODE OR LATEST EDITION ANY OTHER NATIONAL OR LOCAL APPLICABLE CODES, MOST RECENT EDITIONS NY BUILDING CODE LOCAL BUILDING CODE CITY/COUNTY ORDINANCES 																																								



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-7B-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT.
 - 3. GR-1089 CORE, ELECTROMAGNETIC COMPATIBILITY AND ELECTRICAL SAFETY -GENERIC CRITERIA FOR NETWORK TELECOMMUNICATIONS EQUIPMENT.
 - 4. NATIONAL FIRE PROTECTION ASSOCIATION CODES AND STANDARDS (NFPA) INCLUDING NFPA 70 (NATIONAL ELECTRICAL CODE - 'NEC') AND NFPA 101 (LIFE SAFETY CODE).
 - 5. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM)
 - 6. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE)
 - 7. AMERICAN CONCRETE INSTITUTE (ACI)
 - 8. AMERICAN WIRE PRODUCERS ASSOCIATION (AWPA)
 - 9. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
 - 10. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)
 - 11. PORTLAND CEMENT ASSOCIATION (PCA)
 - 12. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
 - 13. BRICK INDUSTRY ASSOCIATION (BIA)
 - 14. AMERICAN WELDING SOCIETY (AWS)
 - 15. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
 - 16. SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)
 - 17. DOOR AND HARDWARE INSTITUTE (DHI)
 - 18. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
 - 19. APPLICABLE BUILDING CODES INCLUDING UNIFORM BUILDING CODE, SOUTHERN BUILDING CODE, BOCA, AND THE INTERNATIONAL BUILDING CODE.

1.5 DEFINITIONS:

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

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

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

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

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

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

SECTION 01 200 - COMPANY FURNISHED MATERIAL AND EQUIPMENT

PART 1 - GENERAL

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

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

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

SECTION 01 300 - CELL SITE CONSTRUCTION CO.

PART 1 - GENERAL


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

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

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

PLANS PREPARED FOR:



PLANS PREPARED BY:



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REVISIONS:

DESCRIPTION	DATE	BY	REV.

ISSUED FOR PERMIT: 1/25/18 .JL 0

SITE NAME:

**EE DICKENSON
WITCHHAZEL**

SITE NUMBER:

CT03XC162

SITE ADDRESS:

**6 MAIN STREET
ESSEX, CT 06426**

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, AASHTO, AND OTHER METHODS IS NEEDED.
4. EXPERIENCE IN SOILS, CONCRETE, MASONRY, AGGREGATE, AND ASPHALT TESTING USING ASTM, AASHTO, AND OTHER METHODS IS NEEDED.

3.2 REQUIRED TESTS:

- A. CONTRACTOR SHALL ACCOMPLISH TESTING INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 1. CONCRETE CYLINDER BREAK TESTS FOR THE TOWER AND ANCHOR FOUNDATIONS AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
 2. ASPHALT ROADWAY COMPACTED THICKNESS, SURFACE SMOOTHNESS, AND COMPACTED DENSITY TESTING AS SPECIFIED IN SECTION: HOT MIX ASPHALT PAVING.
 3. FIELD QUALITY CONTROL TESTING AS SPECIFIED IN SECTION: PORTLAND CEMENT CONCRETE PAVING.
 4. TESTING REQUIRED UNDER SECTION: AGGREGATE BASE FOR ACCESS ROADS, PADS AND ANCHOR LOCATIONS
 5. STRUCTURAL BACKFILL COMPACTION TESTS FOR THE TOWER FOUNDATION.
 6. SITE RESISTANCE TO EARTH TESTING PER EXHIBIT: CELL SITE GROUNDING SYSTEM DESIGN.
 7. ANTENNA AND COAX SWEEP TESTS PER EXHIBIT: ANTENNA TRANSMISSION LINE ACCEPTANCE STANDARDS.
 8. GROUNDING AT ANTENNA MASTS FOR GPS AND ANTENNAS
 9. ALL OTHER TESTS REQUIRED BY COMPANY OR JURISDICTION.

3.3 REQUIRED INSPECTIONS

- A. SCHEDULE INSPECTIONS WITH COMPANY REPRESENTATIVE.
- B. CONDUCT INSPECTIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 1. GROUNDING SYSTEM INSTALLATION PRIOR TO EARTH CONCEALMENT DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
 2. FORMING FOR CONCRETE AND REBAR PLACEMENT PRIOR TO POUR DOCUMENTED WITH DIGITAL PHOTOGRAPHS BY CONTRACTOR, APPROVED BY A&E OR SPRINT REPRESENTATIVE.
 3. COMPACTION OF BACKFILL MATERIALS; AGGREGATE BASE FOR ROADS, PADS, AND ANCHORS; ASPHALT PAVING; AND SHAFT BACKFILL FOR CONCRETE AND WOOD POLES, BY INDEPENDENT THIRD PARTY AGENCY.
 4. PRE- AND POST-CONSTRUCTION ROOFTOP AND STRUCTURAL INSPECTIONS ON EXISTING FACILITIES.
 5. TOWER ERECTION SECTION STACKING AND PLATFORM ATTACHMENT DOCUMENTED BY DIGITAL PHOTOGRAPHS BY THIRD PARTY AGENCY.
 6. ANTENNA AZIMUTH, DOWN TILT AND PER SUNLIGHT TOOL SUNSIGHT INSTRUMENTS - ANTENNA ALIGNMENT TOOL (AAT)

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ENGINEERING LICENSE:



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REVISIONS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR PERMIT	1/25/18	JL	0

SITE NAME:

**EE DICKENSON
WITCHHAZEL**

SITE NUMBER:

CT03XC162

SITE ADDRESS:

**6 MAIN STREET
ESSEX, CT 06426**

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-2

CONTINUE FROM SP-2

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

SECTION 01 400 - SUBMITTALS & TESTS

PART 1 - GENERAL

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

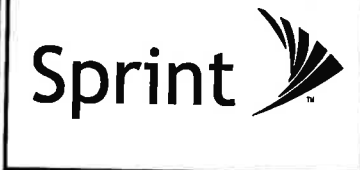
PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

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

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

PLANS PREPARED FOR:



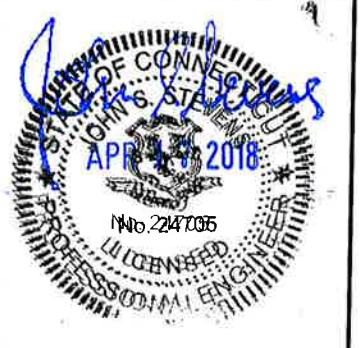
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SITE NAME:

**EE DICKENSON
WITCHHAZEL**

SITE NUMBER:

CT03XC162

SITE ADDRESS:

**6 MAIN STREET
ESSEX, CT 06426**

SHEET DESCRIPTION:

SPRINT SPECIFICATIONS

SHEET NUMBER:

SP-3

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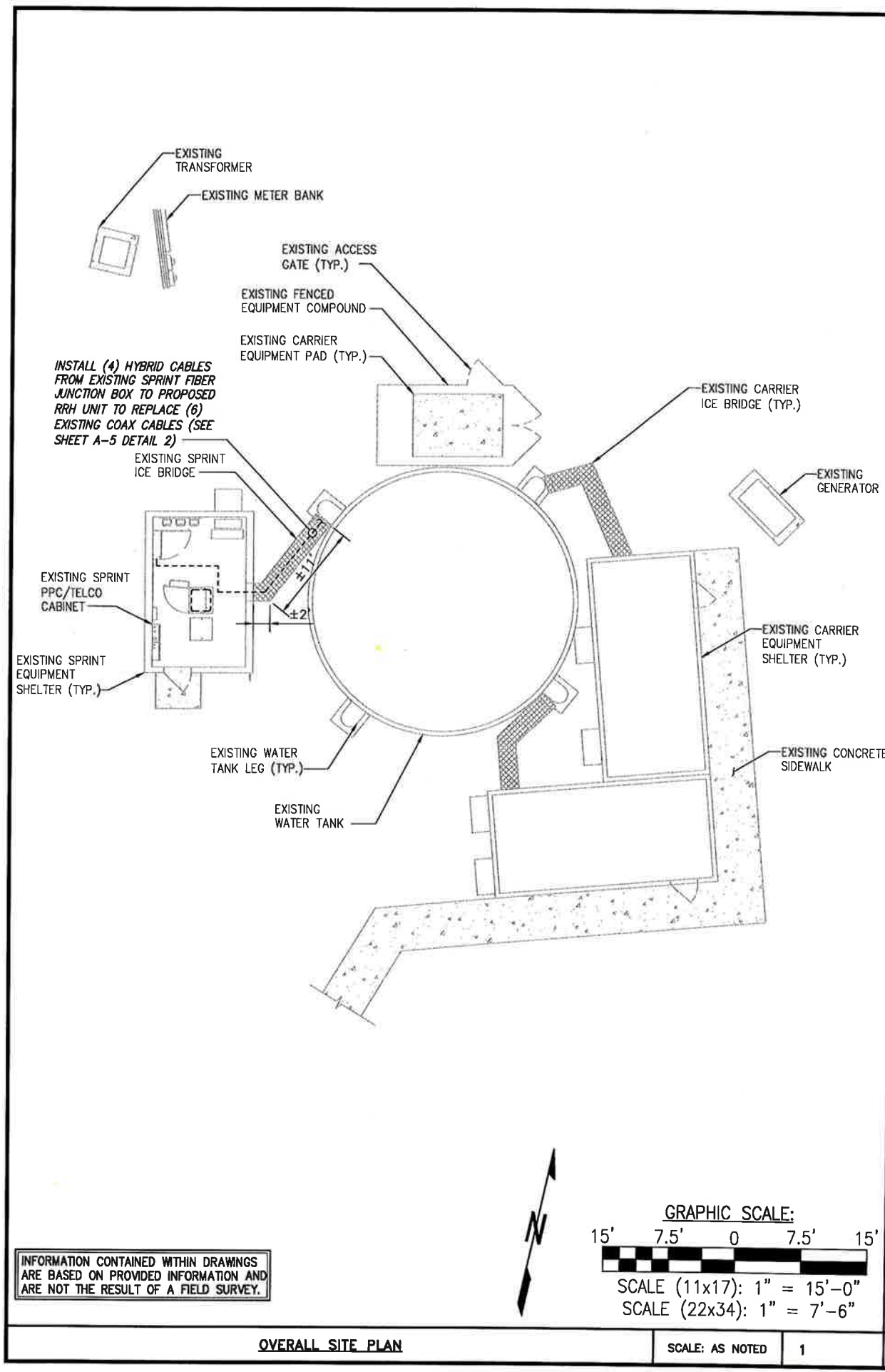
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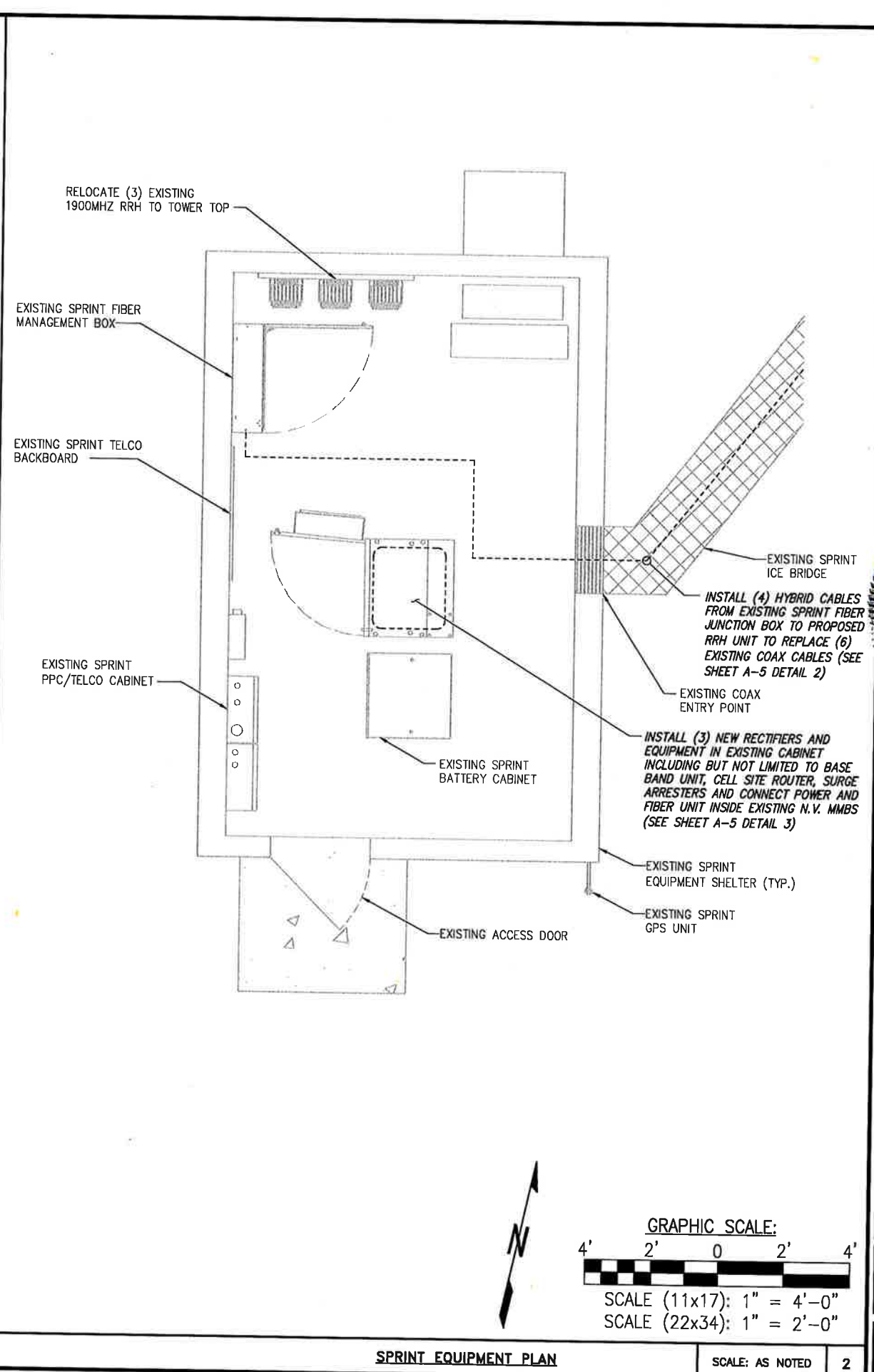
SITE PLAN

SHEET NUMBER:

A-1



OVERALL SITE PLAN SCALE: AS NOTED 1



SPRINT EQUIPMENT PLAN SCALE: AS NOTED 2

NOTE:
 INFINIGY ENGINEERING HAS NOT EVALUATED THE EXISTING STRUCTURE FOR THIS SITE, AND ASSUMES NO RESPONSIBILITY FOR ITS STRUCTURAL INTEGRITY. REFER TO STRUCTURAL ANALYSIS BY OTHERS PRIOR TO ANY CONSTRUCTION.

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

TOP OF TOWER
 ELEV. = ±124'-6" A.G.L.
 C. OF EXISTING/TO BE
 INSTALLED SPRINT ANTENNAS
 ELEV. = 117.9' A.G.L.

INSTALL (1) SPRINT 2.5 GHz RRH MOUNTED BELOW PROPOSED ANTENNAS EACH SECTOR (SEE SHEET A-4 DETAIL 1)

INSTALL (1) SPRINT TRIBAND ANTENNA EACH SECTOR (SEE SHEET A-4 DETAIL 3)

INSTALL (2) SPRINT 800 MHz RRH ON EXISTING PIPE MOUNT EACH SECTOR (SEE SHEET A-4 DETAIL 4)

RELOCATE EXISTING (1) 1900 MHz RRH FROM H-FRAME TO TOWER TOP EACH SECTOR

EXISTING CARRIER PANEL ANTENNA (TYP.)

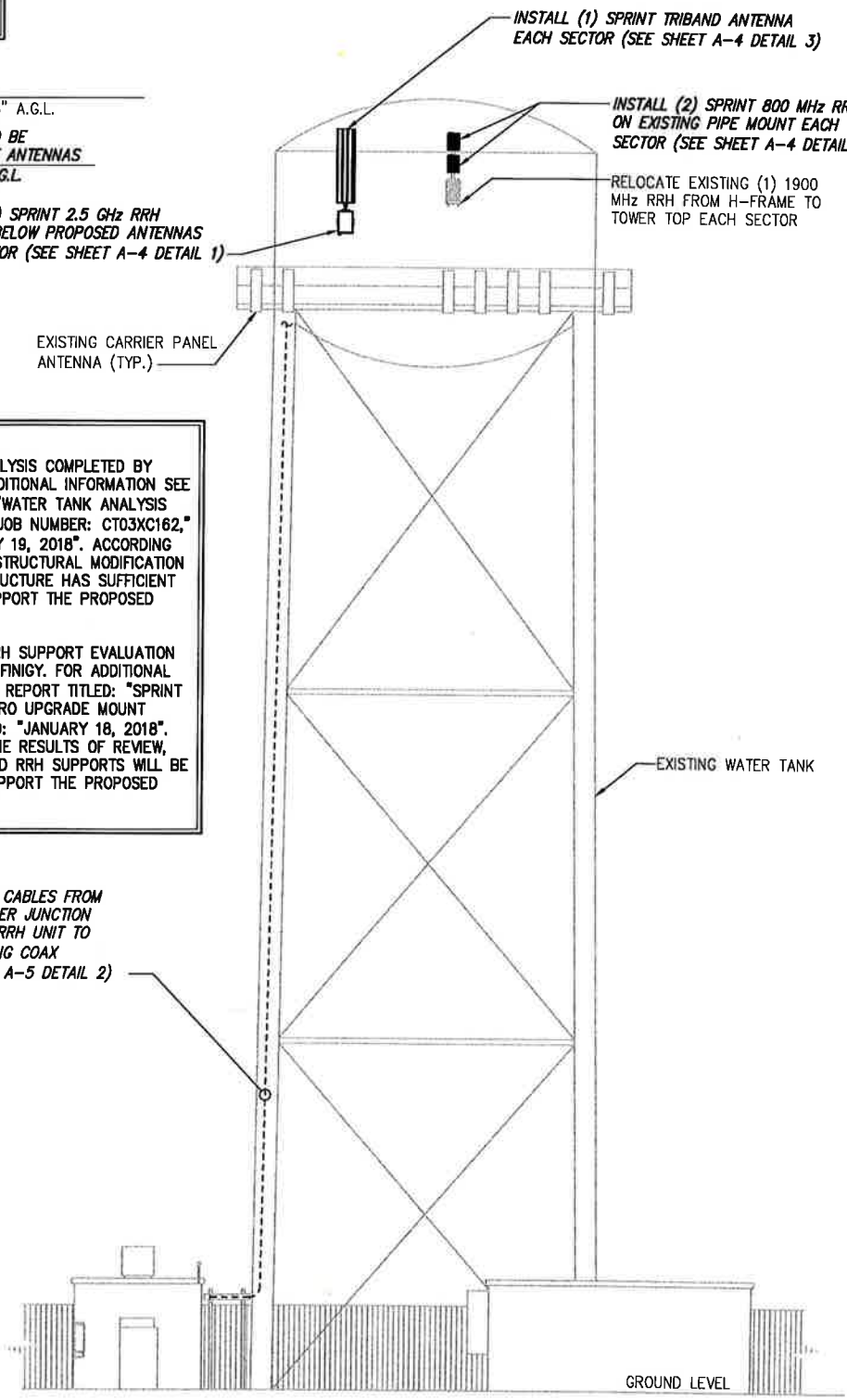
EXISTING WATER TANK

GROUND LEVEL

NOTE:

- STRUCTURAL ANALYSIS COMPLETED BY INFINIGY. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "WATER TANK ANALYSIS REPORT, SPRINT JOB NUMBER: CT03XC162," DATED: "JANUARY 19, 2018". ACCORDING TO RESULTS OF STRUCTURAL MODIFICATION REPORT, THE STRUCTURE HAS SUFFICIENT CAPACITY TO SUPPORT THE PROPOSED LOADING.
- ANTENNA AND RRH SUPPORT EVALUATION COMPLETED BY INFINIGY. FOR ADDITIONAL INFORMATION SEE REPORT TITLED: "SPRINT PROJECT DO MACRO UPGRADE MOUNT ANALYSIS", DATED: "JANUARY 18, 2018". ACCORDING TO THE RESULTS OF REVIEW, THE ANTENNA AND RRH SUPPORTS WILL BE ADEQUATE TO SUPPORT THE PROPOSED LOADING.

INSTALL (4) HYBRID CABLES FROM EXISTING SPRINT FIBER JUNCTION BOX TO PROPOSED RRH UNIT TO REPLACE (6) EXISTING COAX CABLES (SEE SHEET A-5 DETAIL 2)



TOWER ELEVATION

NO SCALE

1

SITE LOADING CHART

SECTOR	EXISTING/PROPOSED	ANTENNA MODEL #	VENDOR	AZIMUTH	QTY.	REMAIN/REMOVED	RRH (QTY/MODEL)	CABLE	CABLE LENGTH	RAD CENTER
ALPHA	PROPOSED	KMW ETCR-654L12H6	KMW	330°	1	-	(2) 800 MHz 2X50W RRH	SEE SHEET A-5 DETAIL 1	±117.9' AGL	±117.9' AGL
	EXISTING	DB980H90E-M	DECIBEL	330°	1	REMOVE	(1) TD-RRHBX20-25 W/ SOLAR SHIELD	EXISTING COAX		
	EXISTING	DB980H90E-M	DECIBEL	330°	1	REMOVE	(1) 1900 MHz 4X45 RRH	EXISTING COAX		
BETA	PROPOSED	KMW ETCR-654L12H6	KMW	120°	1	-	(2) 800 MHz 2X50W RRH	SEE SHEET A-5 DETAIL 1	±164*	±117.9' AGL
	EXISTING	DB980H90E-M	DECIBEL	120°	1	REMOVE	(1) TD-RRHBX20-25 W/ SOLAR SHIELD	EXISTING COAX		
	EXISTING	DB980H90E-M	DECIBEL	120°	1	REMOVE	(1) 1900 MHz 4X45 RRH	EXISTING COAX		
GAMMA	PROPOSED	KMW ETCR-654L12H6	KMW	210°	1	-	(2) 800 MHz 2X50W RRH	SEE SHEET A-5 DETAIL 1	±117.9' AGL	±117.9' AGL
	EXISTING	DB980H90E-M	DECIBEL	210°	1	REMOVE	(1) TD-RRHBX20-25 W/ SOLAR SHIELD	EXISTING COAX		
	EXISTING	DB980H90E-M	DECIBEL	210°	1	REMOVE	(1) 1900 MHz 4X45 RRH	EXISTING COAX		

PROJECT SCOPE:

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

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

SITE LOADING CHART

NO SCALE

2

DETAIL NOT USED

NO SCALE

2

PLANS PREPARED FOR:



PLANS PREPARED BY:

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 JOB NUMBER 528-104

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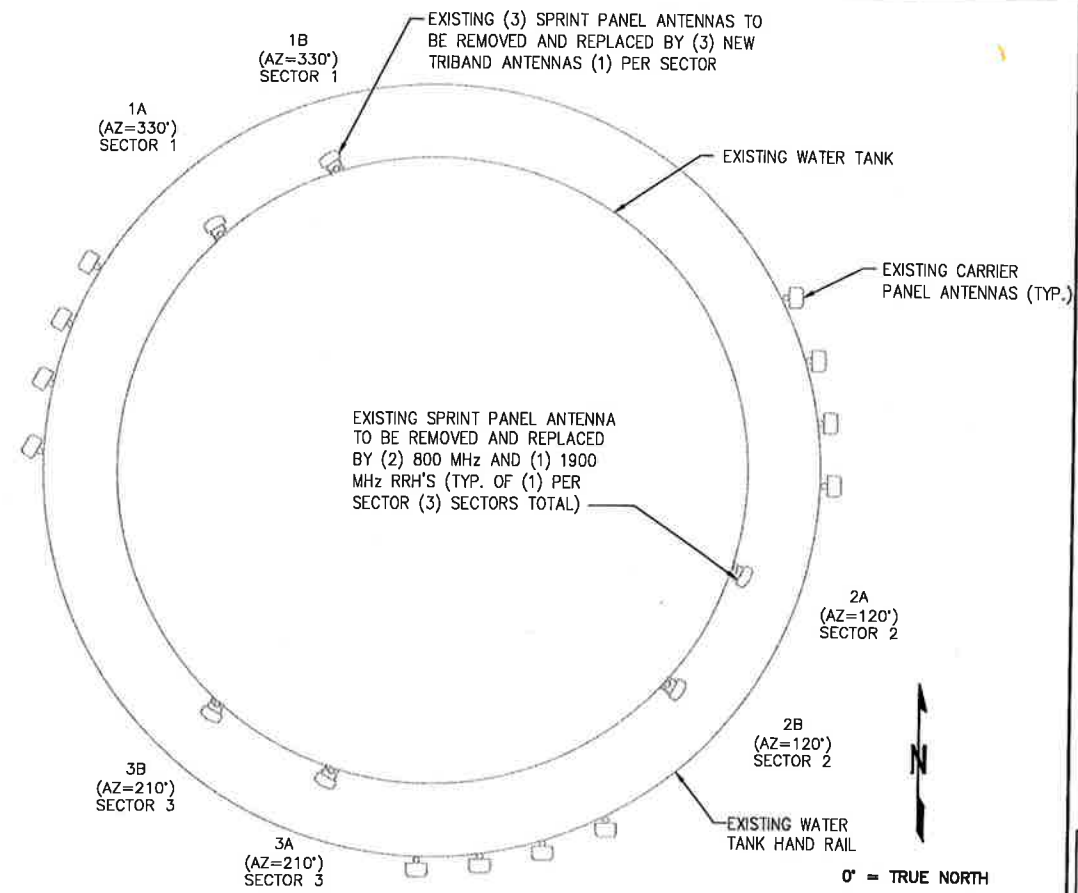
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SITE NUMBER:
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SITE ADDRESS:
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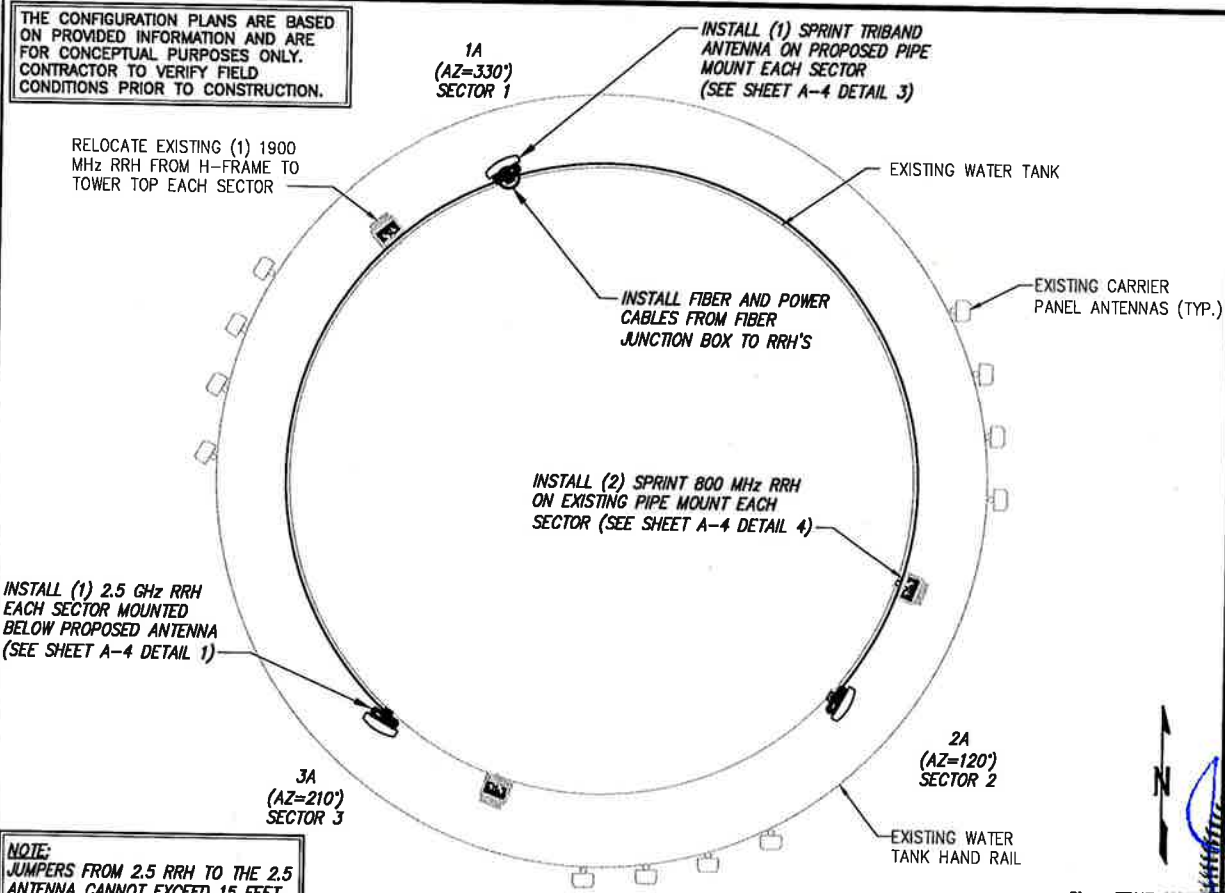
SHEET DESCRIPTION:
TOWER ELEVATION

SHEET NUMBER:
A-2



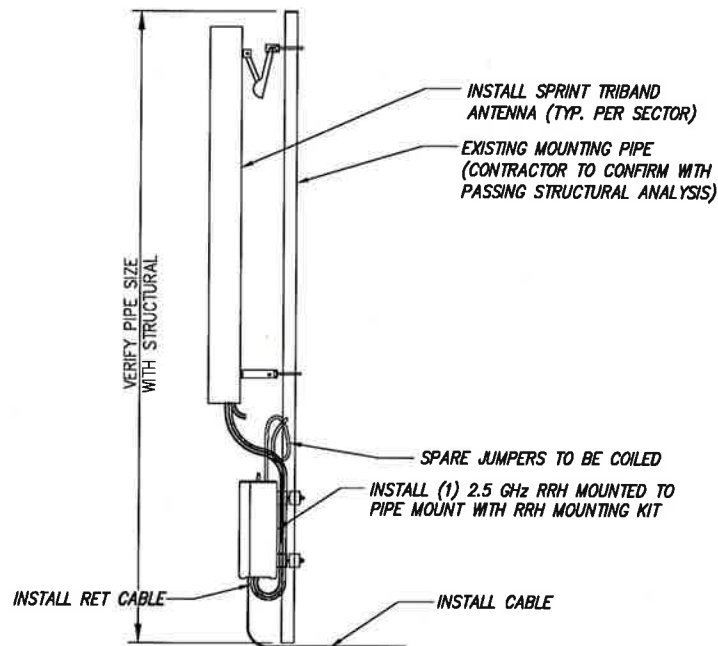
EXISTING ANTENNA LAYOUT

NO SCALE 1



FINAL ANTENNA & RRH LAYOUT

NO SCALE 2



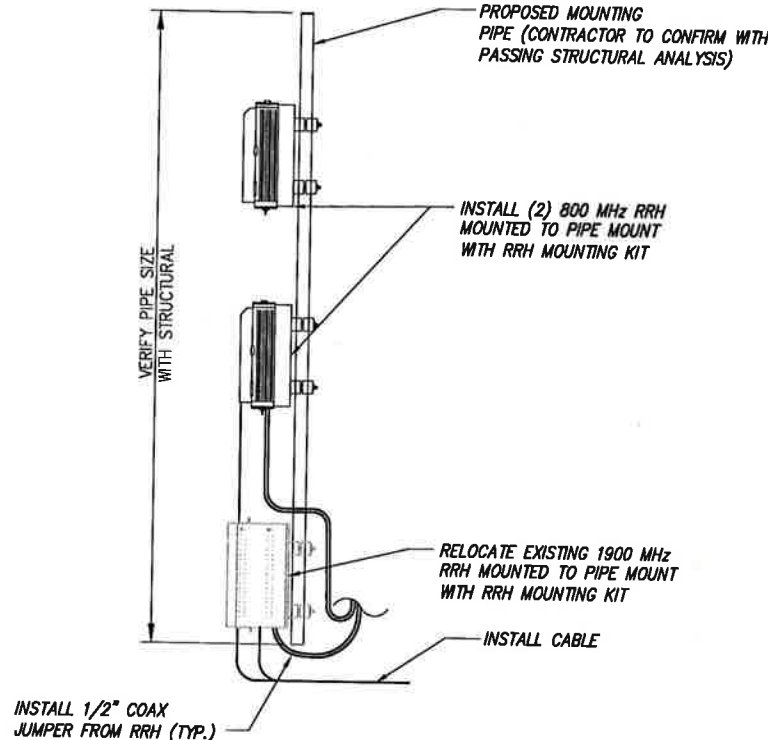
TYPICAL ANTENNA & RRH MOUNTING DETAILS

NO SCALE 3

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

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

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



TYPICAL 800 MHz RRH MOUNTING DETAIL

NO SCALE 4

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

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

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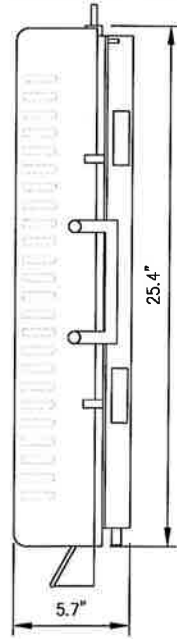
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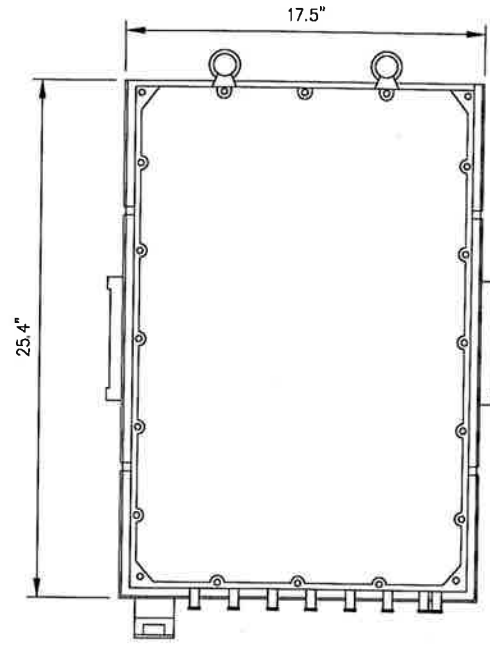
SHEET DESCRIPTION:
ANTENNA LAYOUT & MOUNTING DETAILS

SHEET NUMBER:
A-3

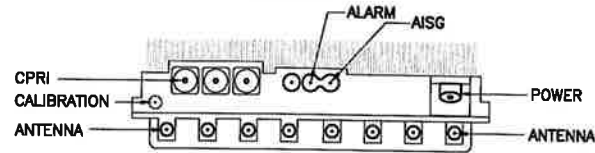
RRH: ALCATEL LUCENT TD-RRH8X20
 COLOR: LIGHT GREY
 WEIGHT: 70 LBS.



SIDE VIEW



FRONT VIEW



PLAN VIEW

NOTES

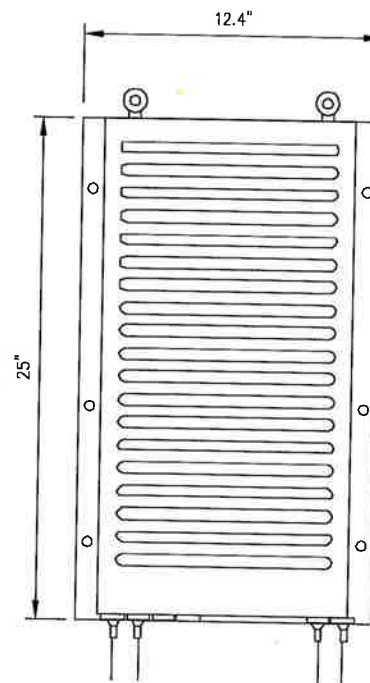
COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRH'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING. DO NOT OPEN RRH PACKAGES IN THE RAIN.

2.5 RRH

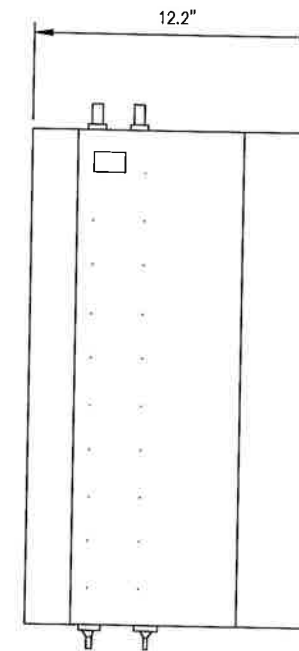
NO SCALE

1

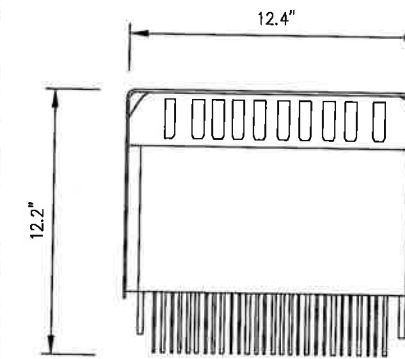
RRH: ALCATEL LUCENT 1900 MHz
 COLOR: LIGHT GREY
 WEIGHT: 70 LBS.
 (INCLUDING OPTIONAL SOLAR SHIELD)



FRONT VIEW



SIDE VIEW



TOP VIEW

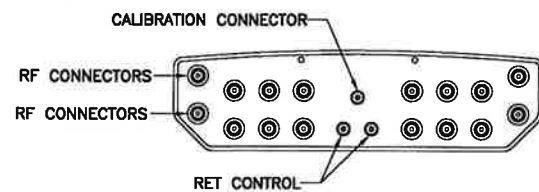
1900 MHz RRH

NO SCALE

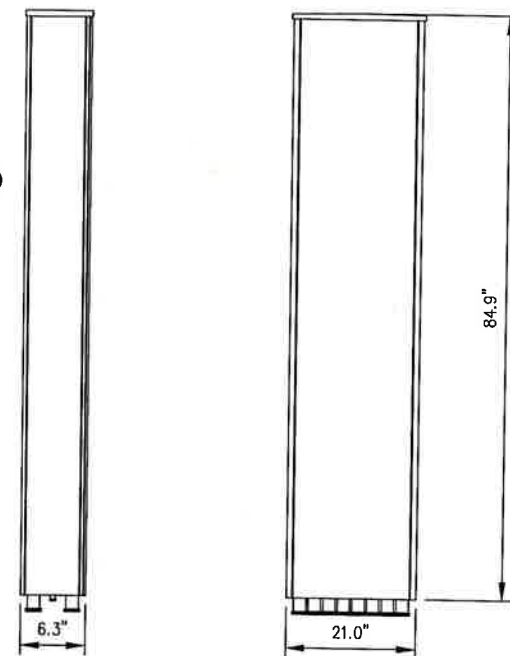
2

ANTENNA RFS ETCR-654L12H6

- RADOME MATERIAL: ASA
- RADOME COLOR: LIGHT GREY
- DIMENSIONS, HxWxD.in(m/m): 84.9"x21.0"x6.3" (2156x533x160mm)
- WEIGHT: 84.9 lbs
- CONNECTORS: (8) 7/16" DIN FEMALE
(8) MINI DIN FEMALE
(1) N TYPE(CAL. PORT, FEMALE)



PLAN VIEW



SIDE VIEW

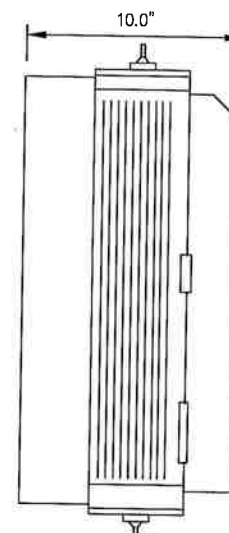
FRONT VIEW

TRIBAND ANTENNA

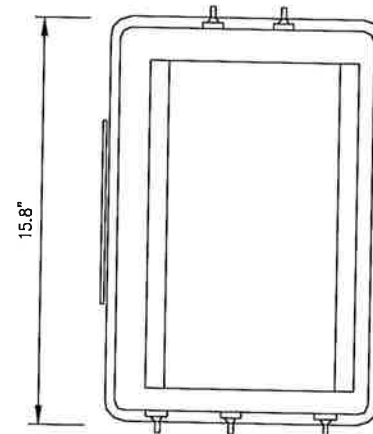
NO SCALE

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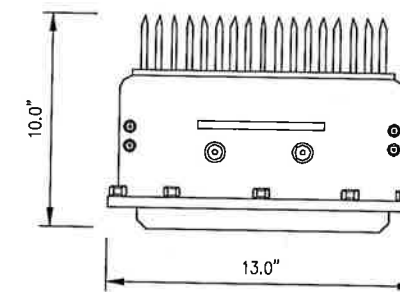
RRH: ALCATEL LUCENT RRH 800 MHz 2x50W
 COLOR: LIGHT GREY
 WEIGHT: 53 LBS.



SIDE VIEW



FRONT VIEW



PLAN VIEW

800 MHz RRH

NO SCALE

4

NOTES

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

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SITE ADDRESS:

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 ESSEX, CT 06426

SHEET DESCRIPTION:

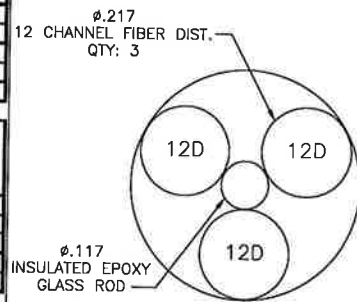
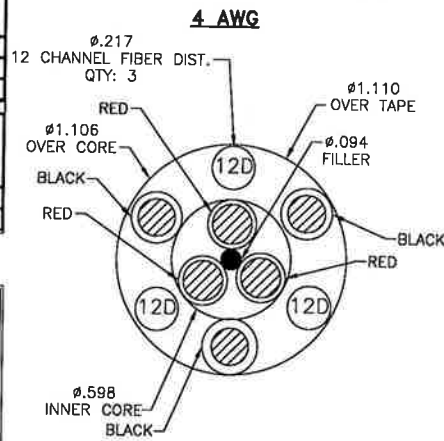
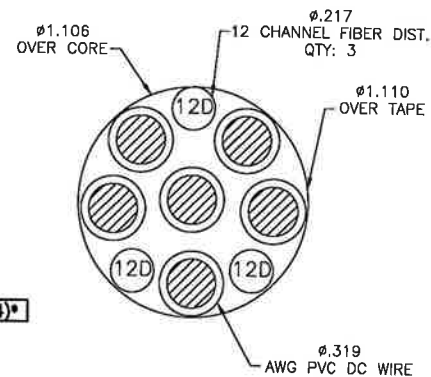
EQUIPMENT &
 MOUNTING DETAILS

SHEET NUMBER:

A-4

RFS HYBRIFLEX RISER CABLE SCHEDULE

Fiber Only (Existing DC Power)	Hybrid cable MN: H8058-M12-050F 12x multi-mode fiber pairs, Top: Outdoor protected connectors, Bottom: LC Connectors, 5/8 cable, 50 ft	50 ft
	MN: H8058-M12-075F	75 ft
	MN: H8058-M12-100F	100 ft
	MN: H8058-M12-125F	125 ft
	MN: H8058-M12-150F	150 ft
	MN: H8058-M12-175F	175 ft
8 AWG Power	Hybrid cable MN: H8114-08U3M12-050F 3x8 AWG power pairs, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 50 ft	50 ft
	MN: H8114-08U3M12-075F	75 ft
	MN: H8114-08U3M12-100F	100 ft
	MN: H8114-08U3M12-125F	125 ft
	MN: H8114-08U3M12-150F	150 ft
	MN: H8114-08U3M12-175F	175 ft
6 AWG Power	Hybrid cable MN: H8114-13U3M12-225F 3x6 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 225 ft	225 ft
	MN: H8114-13U3M12-250F	250 ft
	MN: H8114-13U3M12-275F	275 ft
	MN: H8114-13U3M12-300F	300 ft
4 AWG Power	Hybrid cable MN: H8114-21U3M12-325F 3x4 AWG power pair, 12x multi-mode fiber pairs, Outdoor rated connectors & LC Connectors, 1 1/4 cable, 325 ft	325 ft
	MN: H8114-21U3M12-350F	350 ft
	MN: H8114-21U3M12-375F	375 ft



RFS HYBRIFLEX JUMPER CABLE SCHEDULE

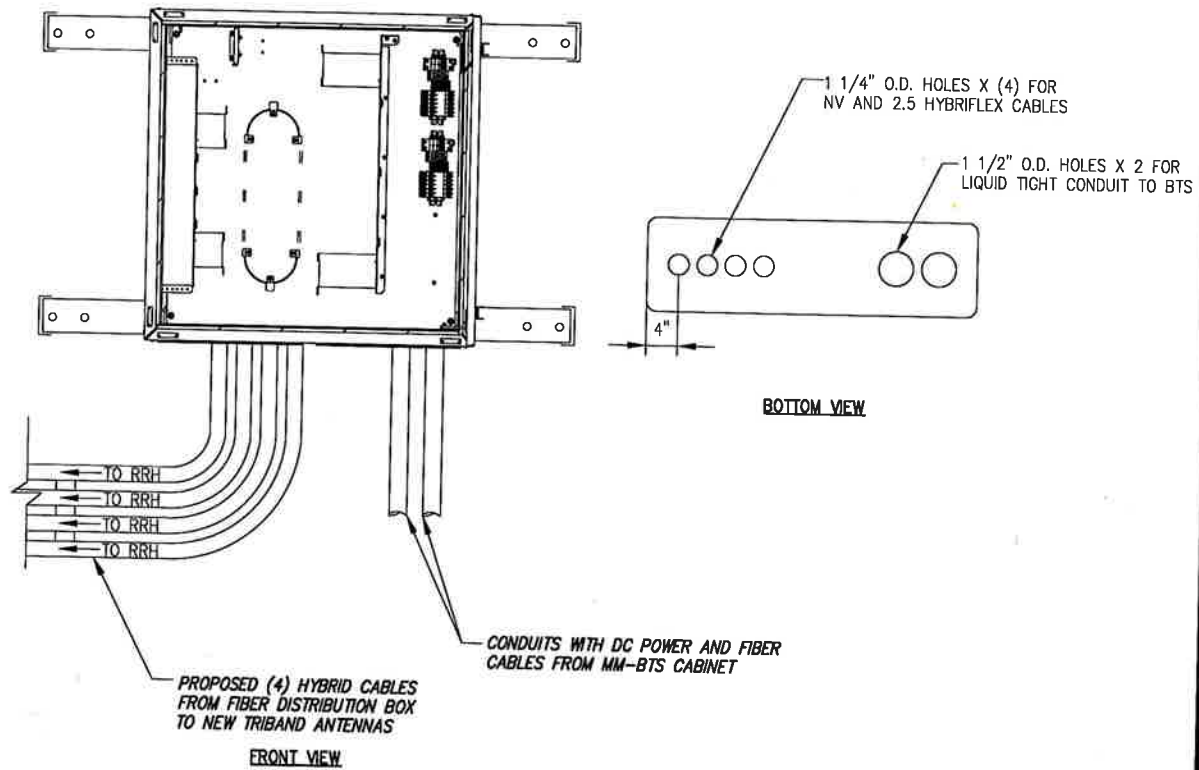
Fiber Only	Hybrid Jumper cable MN: H8F012-M3-SF1 5 ft, 3x multi-mode fiber pairs, Outdoor & LC connectors, 1/2 cable	5 ft
	MN: H8F012-M3-10F1	10 ft
	MN: H8F012-M3-15F1	15 ft
	MN: H8F012-M3-20F1	20 ft
	MN: H8F012-M3-25F1	25 ft
	MN: H8F012-M3-30F1	30 ft
8 AWG Power	Hybrid Jumper cable MN: H8F058-08U1M3-SF1 5 ft, 1x 8 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: H8F058-08U1M3-10F1	10 ft
	MN: H8F058-08U1M3-15F1	15 ft
	MN: H8F058-08U1M3-20F1	20 ft
	MN: H8F058-08U1M3-25F1	25 ft
	MN: H8F058-08U1M3-30F1	30 ft
6 AWG Power	Hybrid Jumper cable MN: H8F058-13U1M3-SF1 5 ft, 1x 6 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 5/8 cable	5 ft
	MN: H8F058-13U1M3-10F1	10 ft
	MN: H8F058-13U1M3-15F1	15 ft
	MN: H8F058-13U1M3-20F1	20 ft
	MN: H8F058-13U1M3-25F1	25 ft
	MN: H8F058-13U1M3-30F1	30 ft
4 AWG Power	Hybrid Jumper cable MN: H8F078-21U1M3-SF1 5 ft, 1x 4 AWG power pair, 3x multi-mode fiber pairs, Outdoor & LC Connectors, 7/8 cable	5 ft
	MN: H8F078-21U1M3-10F1	10 ft
	MN: H8F078-21U1M3-15F1	15 ft
	MN: H8F078-21U1M3-20F1	20 ft
	MN: H8F078-21U1M3-25F1	25 ft
	MN: H8F078-21U1M3-30F1	30 ft

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

2.5 CABLE CROSS SECTION DATA

NO SCALE

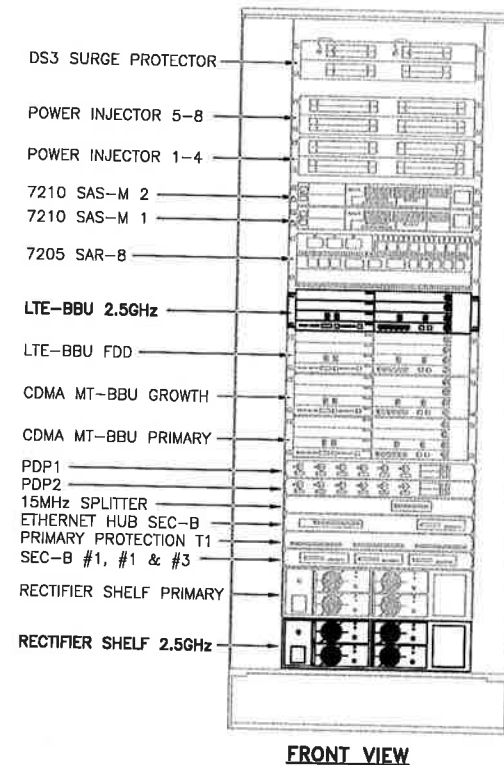
1



FIBER JUNCTION BOX PENETRATION

NO SCALE

2



FRONT VIEW

NEW EQUIPMENT IN EXISTING CABINET

NO SCALE

3

PLANS PREPARED FOR:



PLANS PREPARED BY:

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www.infinigy.com
JOB NUMBER 526-104

PROJECT MANAGER:

AIRSMITH DEVELOPMENT
32 CLINTON ST.
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OFFICE: (518) 308-3740

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DESCRIPTION	DATE	BY	REV
ISSUED FOR PERMIT	1/25/18	JDL	0

SITE NAME:

EE DICKENSON
WITCHHAZEL

SITE NUMBER:

CT03XC162

SITE ADDRESS:

6 MAIN STREET
ESSEX, CT 06426

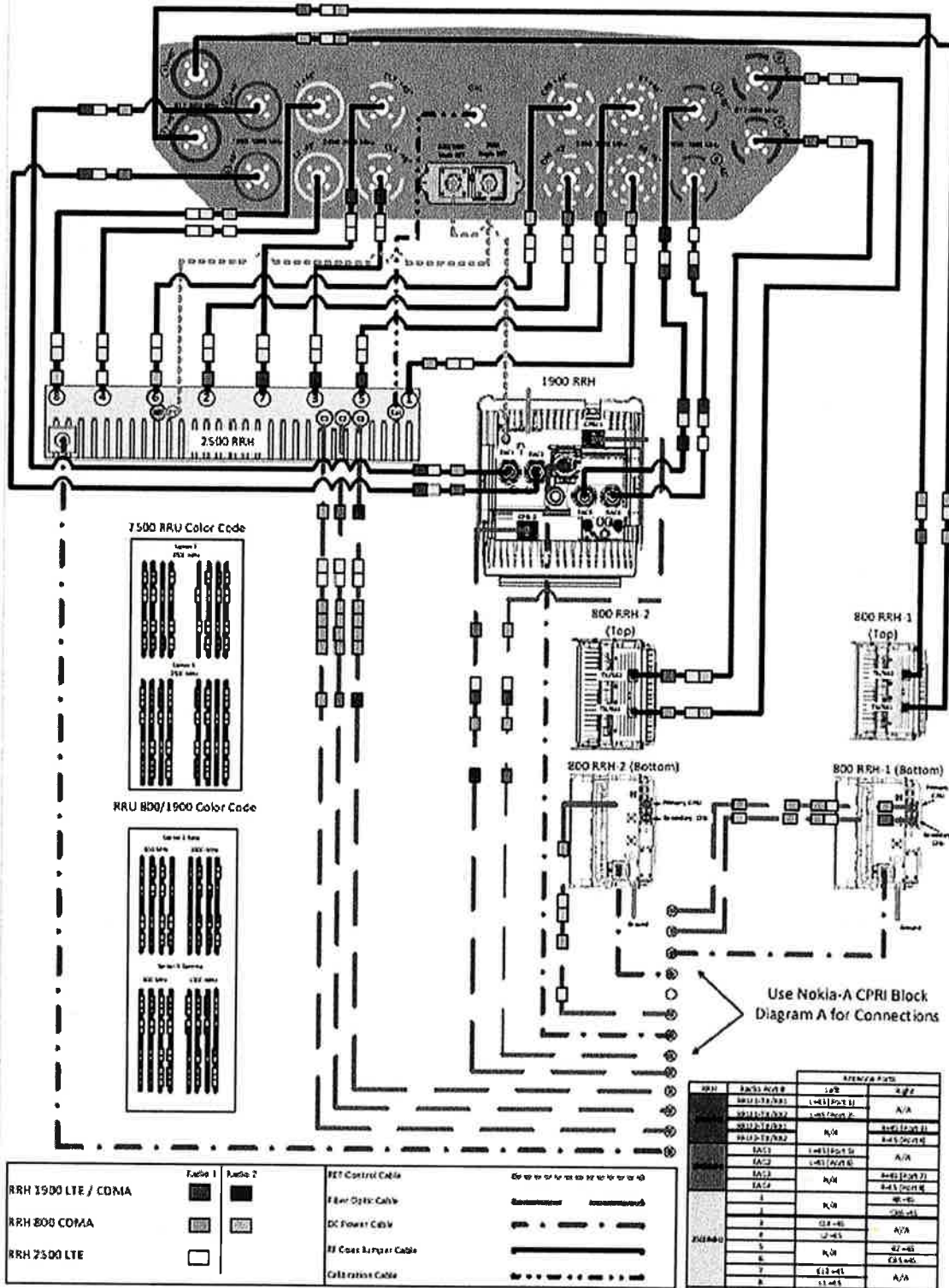
SHEET DESCRIPTION:

CIVIL DETAILS

SHEET NUMBER:

A-5

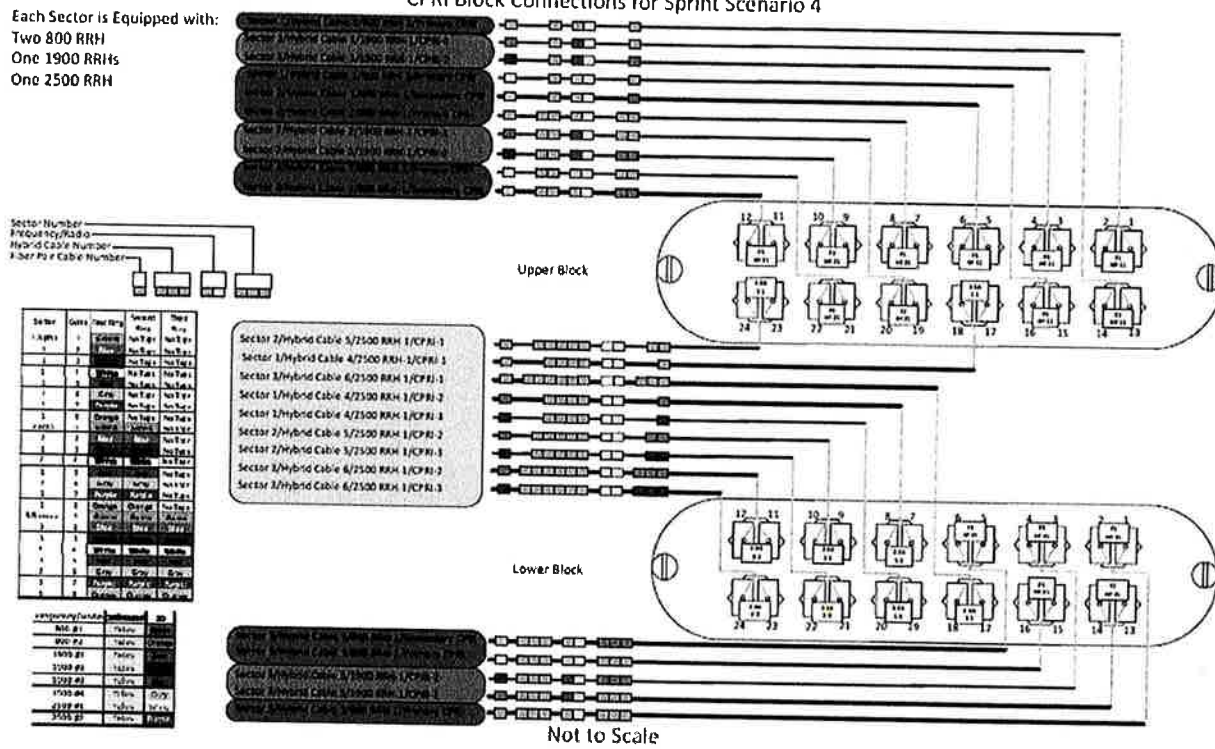
KMW 16 Port Nokia-A RRH 800, 1900, and 2500 (Sprint Scenario 4)



Not to Scale

Each Sector is Equipped with:
Two 800 RRH
One 1900 RRHs
One 2500 RRH

CPRI Block Connections for Sprint Scenario 4



Sector Number	RRH #/Port #	Hybrid Cable Number	Fiber Port Cable Number
1	1	1	1
1	2	2	2
1	3	3	3
1	4	4	4
1	5	5	5
1	6	6	6
1	7	7	7
1	8	8	8
2	1	1	1
2	2	2	2
2	3	3	3
2	4	4	4
2	5	5	5
2	6	6	6
2	7	7	7
2	8	8	8

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WITCHHAZEL

SITE NUMBER:

CT03XC162

SITE ADDRESS:

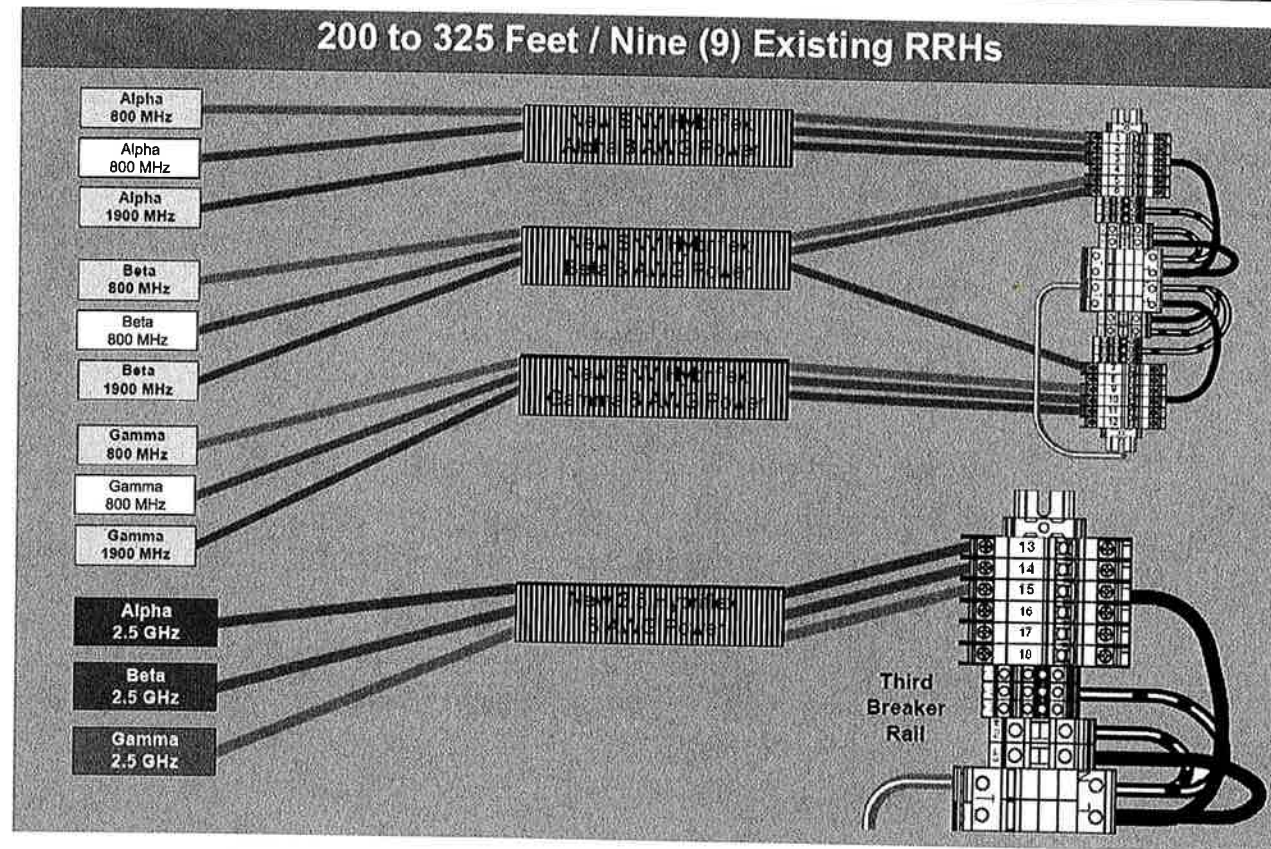
6 MAIN STREET
ESSEX, CT 06426

SHEET DESCRIPTION:

PLUMBING DIAGRAM

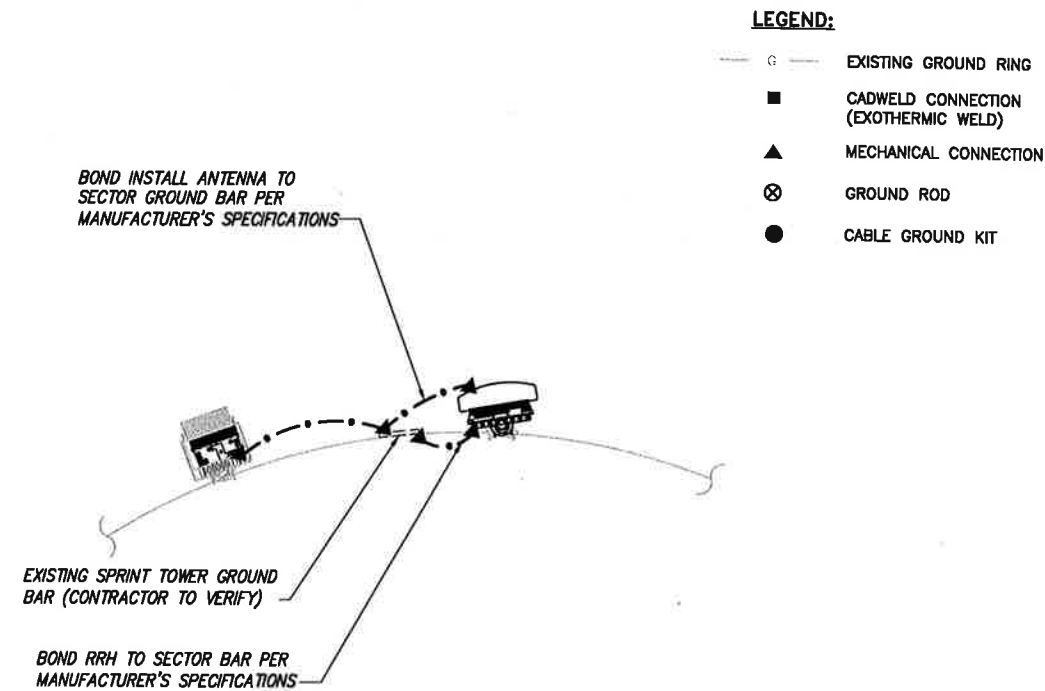
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A-6



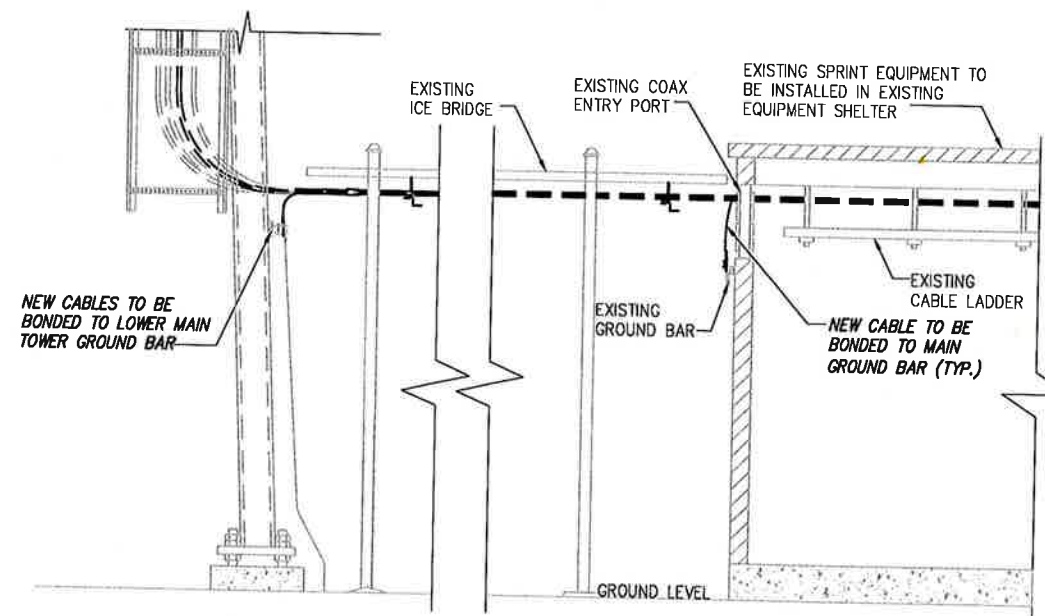
RRH TO DISTRIBUTION BOX POWER CONNECTIVITY

NO SCALE 1



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE 2



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

TYPICAL EQUIPMENT GROUNDING PLAN (ELEVATION)

NO SCALE 3

PLANS PREPARED FOR:

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SITE NAME:
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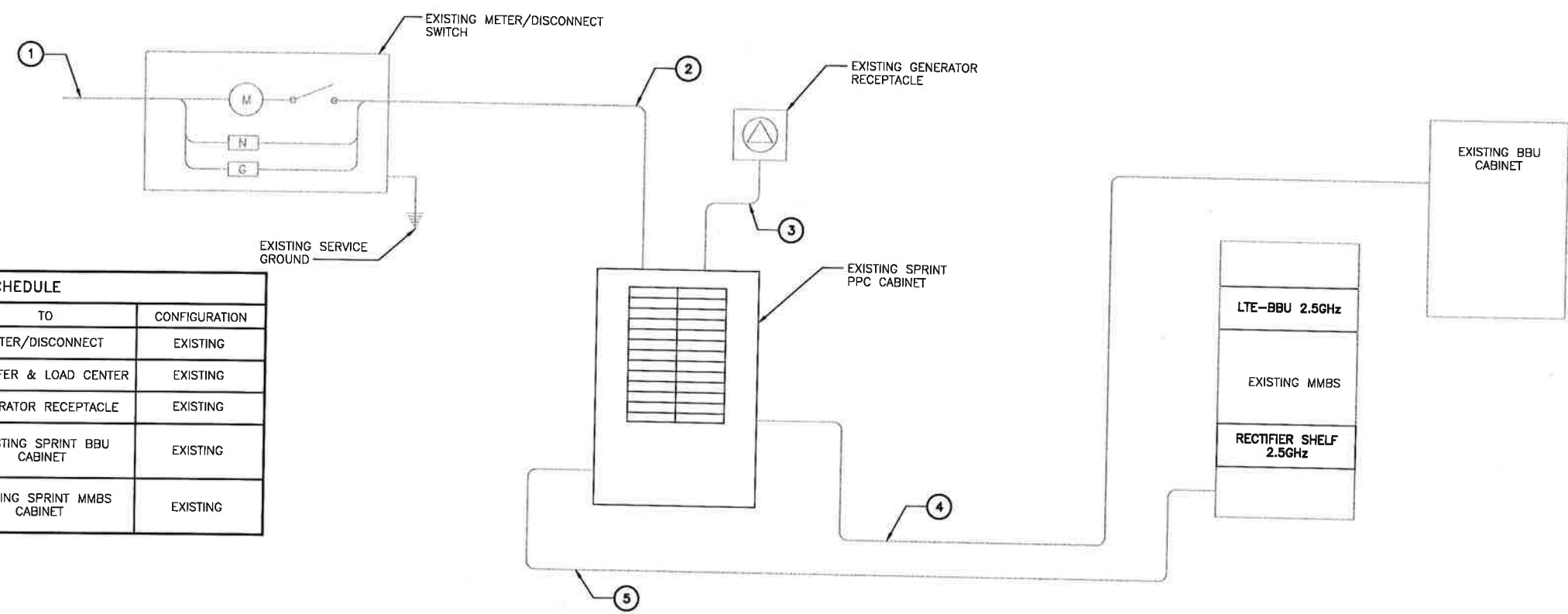
SITE NUMBER:
CT03XC162

SITE ADDRESS:
6 MAIN STREET ESSEX, CT 06426

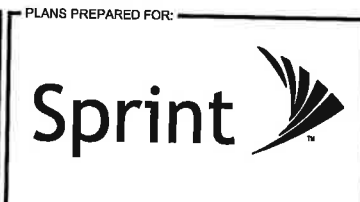
SHEET DESCRIPTION:
ELECTRICAL & GROUNDING PLAN

SHEET NUMBER:
E-1

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

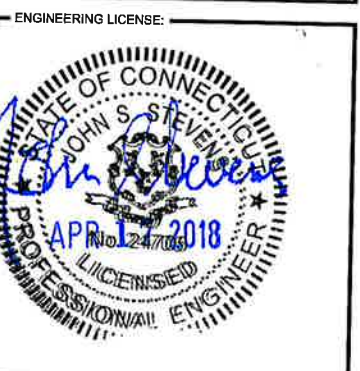


CIRCUIT SCHEDULE			
NO	FROM	TO	CONFIGURATION
①	UTILITY SOURCE	METER/DISCONNECT	EXISTING
②	METER/DISCONNECT	TRANSFER & LOAD CENTER	EXISTING
③	TRANSFER & LOAD CENTER	GENERATOR RECEPTACLE	EXISTING
④	TRANSFER & LOAD CENTER	EXISTING SPRINT BBU CABINET	EXISTING
⑤	TRANSFER & LOAD CENTER	EXISTING SPRINT MMBS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



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ISSUED FOR PERMIT		1/25/18	JDL	0

SITE NAME:
EE DICKENSON WITCHHAZEL

SITE NUMBER:
CT03XC162

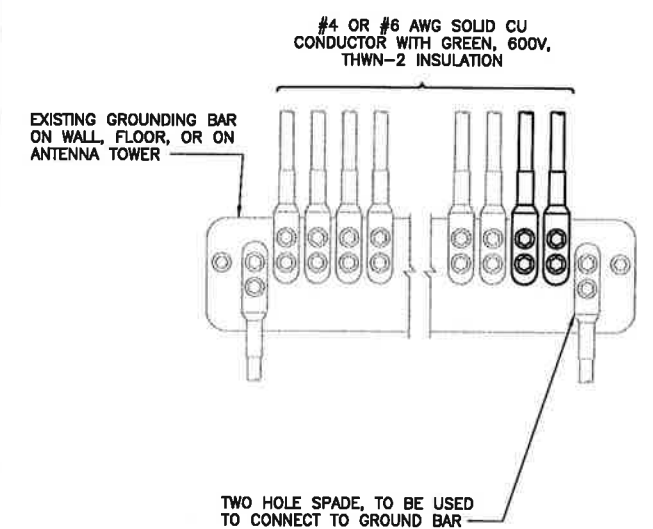
SITE ADDRESS:
6 MAIN STREET ESSEX, CT 06426

SHEET DESCRIPTION:
ELECTRICAL & GROUNDING DETAILS

SHEET NUMBER:
E-2

ELECTRICAL ONE-LINE DIAGRAM

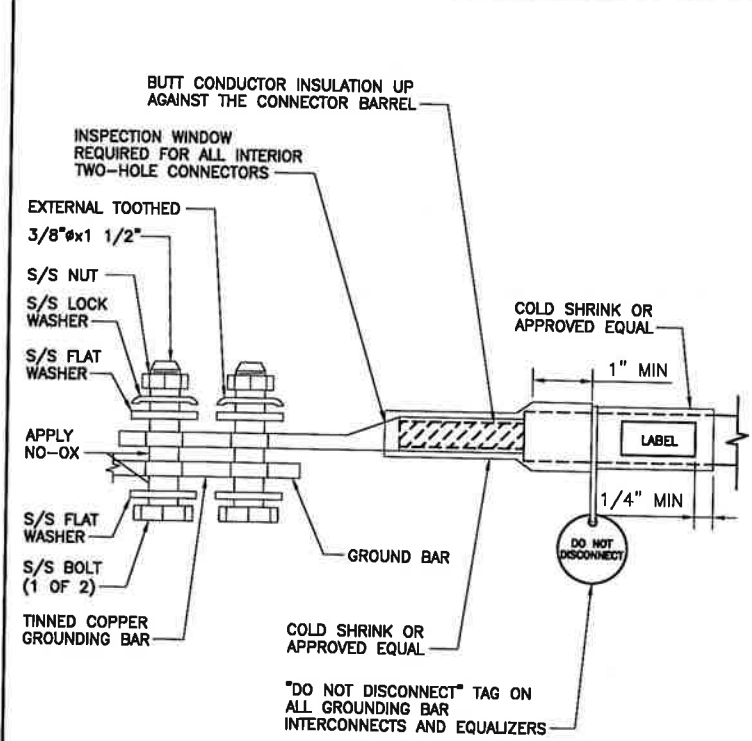
NO SCALE 1



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

INSTALLATION OF GROUNDING CONDUCTOR TO GROUNDING BAR

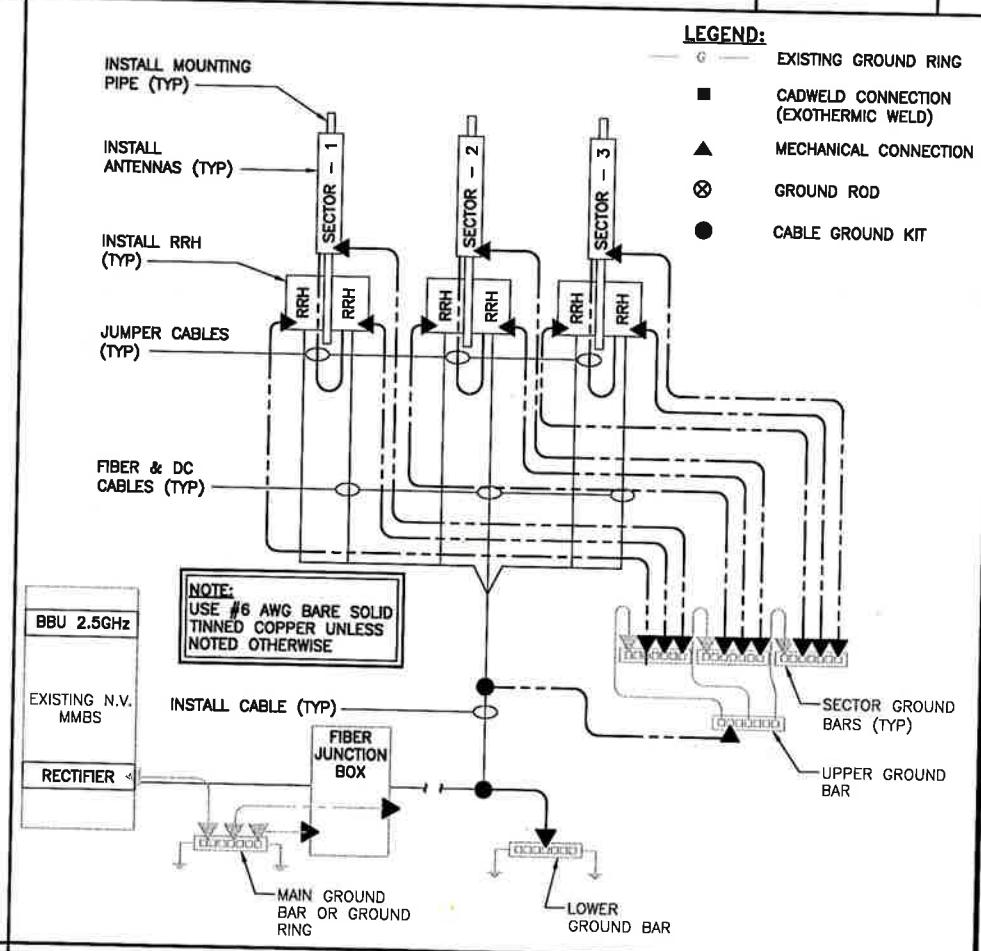
NO SCALE 2



"DO NOT DISCONNECT" TAG ON ALL GROUNDING BAR INTERCONNECTS AND EQUALIZERS

TWO HOLE LUG

NO SCALE 3



NOTE:
 USE #6 AWG BARE SOLID TINNED COPPER UNLESS NOTED OTHERWISE

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

GROUNDING RISER DIAGRAM

NO SCALE 4