

STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

IN RE:

A SUB-PETITION OF CELLCO	:	SUB-PETITION NO. 1133
PARTNERSHIP D/B/A VERIZON WIRELESS	:	320 OLD STAGECOACH ROAD
FOR THE MODIFICATION OF AN EXISTING	:	RIDGEFIELD, CT
WIRELESS TELECOMMUNICATIONS	:	
FACILITY AT 320 OLD STAGECOACH	:	
ROAD, RIDGEFIELD, CONNECTICUT	:	JANUARY 23, 2019

SUB-PETITION FOR DECLARATORY RULING:  
ELIGIBLE FACILITIES REQUEST FOR MODIFICATIONS  
THAT WILL NOT SUBSTANTIALLY CHANGE THE  
PHYSICAL DIMENSIONS OF AN EXISTING BASE STATION

I. Introduction

Pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. § 1455(a) (“Section 6409(a)”) and the October 21, 2014 Report and Order (FCC-14-153) issued by the Federal Communications Commission (“FCC”) (the “FCC Order”), Cellco Partnership d/b/a Verizon Wireless (“Cellco”) hereby petitions the Connecticut Siting Council (the “Council”) for a declaratory ruling (“Sub-Petition”) that the installation of antennas and related telecommunications equipment at the existing wireless telecommunications base station at 320 Old Stagecoach Road in Ridgefield, Connecticut (the “Property”) constitutes an Eligible Facilities Request (“EFR”) under the FCC Order. Cellco has designated this site as its “Ridgefield 3 Facility”.

II. Factual Background

On September 4, 2014, the Council approved an Application by Homeland Towers, LLC and New Cingular Wireless PCS, LLC (“AT&T”) for the construction of a new wireless

telecommunications facility at the Property (Council Docket No. 445).<sup>1</sup> The facility was constructed in accordance with the approved plan and is currently shared by AT&T, T-Mobile and the Town of Ridgefield. The Property is surrounded by residential uses and Town-owned open space. A Site Vicinity Map and Site Schematic showing the Property and surrounding land use is included in Attachment 1. The existing facility consists of a 150-foot monopole tower in the central portion of the Property. The Town of Ridgefield has installed antennas that extend above the top of the tower. AT&T antennas are located at the 146-foot level on the tower. T-Mobile antennas are proposed to be located at the 126-foot level. Equipment associated with the Town, AT&T and T-Mobile antennas is located within a fenced compound near the base of the tower.

### III. Cellco's Proposed Ridgefield 3 Facility

Cellco is licensed to provide wireless telecommunications services in the 700 MHz, 850 MHz, 1900 MHz and 2100 MHz frequency ranges in Ridgefield and throughout the State of Connecticut. The proposed Ridgefield 3 Facility described in this filing will provide wireless coverage and some limited capacity relief to Cellco's existing wireless network in north-central Ridgefield.

Cellco intends to install a total of nine (9) antennas and nine (9) remote radio heads ("RRHs") on an antenna platform at the 136-foot level on the tower. Cellco's equipment cabinet will be located on a 9' x 9' concrete pad in the northwest corner of the compound. A 30kW propane-fueled back-up generator will be installed on a separate concrete pad adjacent to Cellco's equipment. Cellco will also install a 1,000 gallon propane tank within a fenced enclosure on the Property, to the south of the tower compound. Power and telephone service to

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<sup>1</sup> The Docket No. 445 certificate was transferred to Insite Towers, LLC on October 13, 2016.

Cellco's equipment will extend from the existing utility backboard at the tower compound. Project Plans for the Ridgefield 3 Facility are included in Attachment 2. Specifications for Cellco's antennas and equipment are included in Attachment 3. A Structural Analysis Report confirming that the tower can support Cellco's antenna and related equipment modifications is included in Attachment 4.

#### IV. Discussion

##### A. The Proposed Modification Will Not Cause a Substantial Change to the Physical Dimensions of the Existing Base Station

Section 6409(a) provides, in relevant part, that "a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." Pursuant to the FCC Order, the proposed modification does not substantially change the physical dimensions of the base station if the following criteria are satisfied.

1. *The proposed modified facility will not increase the height of the tower by more than ten (10) percent of the height.* Cellco does not intend to increase the height of the existing tower. Cellco's antennas and RRHs will be located at the 136-foot level on the existing 150-foot tower.

2. *The proposed facility modification will not protrude from the edge of the structure more than six (6) feet.* Cellco's antennas and RRHs will not protrude more than six (6) feet from the face of the tower.

3. *The proposed facility does not involve installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets.* Cellco intends to install one (1) equipment cabinet and a back-up generator.

4. *The proposed facility does not entail any excavation or deployment outside the current site of the base station.* Cellco's proposed facility modifications will remain within the limits of the Property.

5. *The proposed facility does not defeat the existing concealment elements of the base station.* The existing facility does not maintain any concealment elements.

6. *The proposed facility complies with conditions associated with the prior approval of construction or modification of the base station.* Cellco's proposed facility will comply with the conditions of the Siting Council Docket No. 445 approval.

B. FCC Compliance

Included in Attachment 5 is a worst case cumulative General Power Density table for Cellco's proposed antennas confirming that the facility will operate within the FCC safety standards for radio frequency emissions.

C. Notice to the Town, Property Owner and Abutting Landowners


On January 23, 2019, a copy of this Sub-Petition was sent to Ridgefield's First Selectman, Rudy Marconi; Rebecca Mucchetti, Chair of the Ridgefield Planning and Zoning Commission; and Insite, the owner of the Property and the tower. Copies of the letters sent to Mr. Marconi, Ms. Mucchetti and Insite are included in Attachment 6. A copy of this Sub-Petition was also sent to the owners of land that abuts the Property. A sample abutter's letter and the list of those abutting landowners who were sent notice and a copy of this filing is included in Attachment 7.

V. Conclusion

Based on the information provided above, Cellco respectfully submits that the proposed modification of the existing base station at the Property constitutes an “eligible facilities request” under Section 6409(a) and the FCC Order.

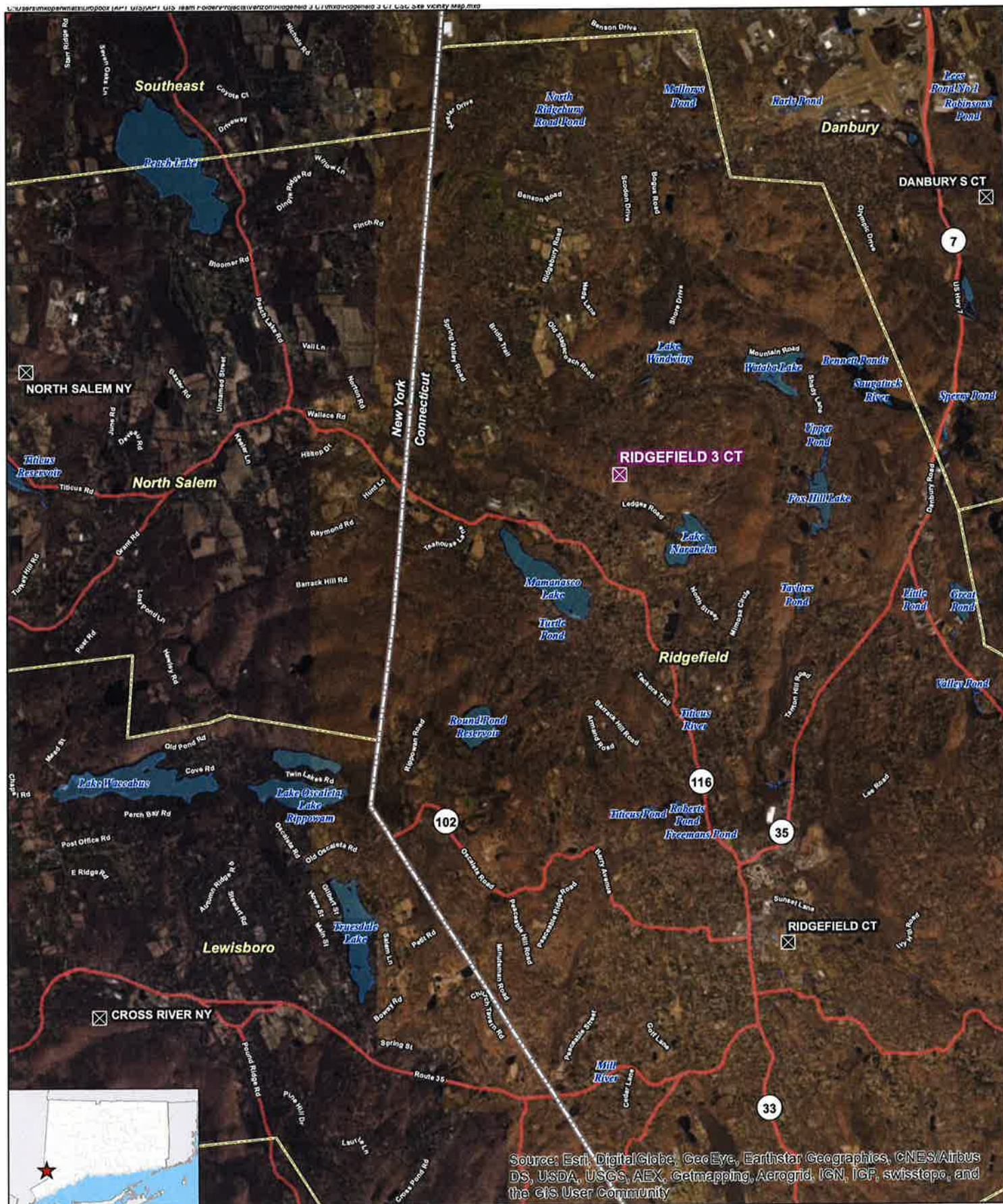
Respectfully submitted,

CELLCO PARTNERSHIP d/b/a VERIZON  
WIRELESS

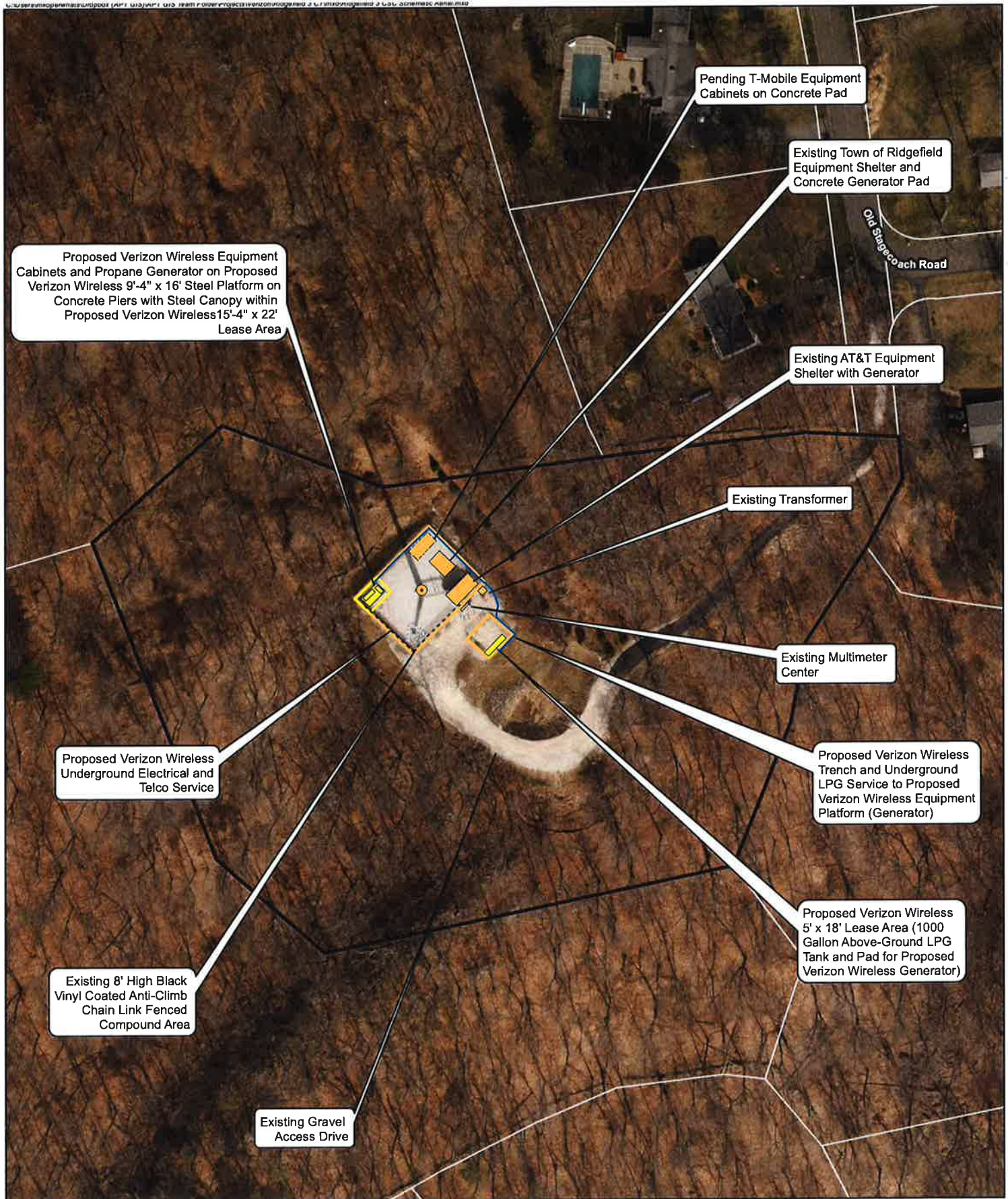
By   
Kenneth C. Baldwin, Esq.  
Robinson & Cole LLP  
280 Trumbull Street  
Hartford, CT 06103-3597  
(860) 275-8200  
Its Attorneys

# **ATTACHMENT 1**





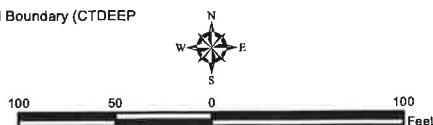




#### Legend

- Existing Monopole Tower (By Others)
- Proposed Verizon Wireless Lease
- Proposed Verizon Wireless Equipment
- Proposed Verizon Wireless Electrical/Telco Service
- Proposed Verizon Wireless Propane Gas Line
- Pending Equipment (By Others)
- Existing Equipment (By Others)
- Existing Compound (By Others)
- Subject Property
- Approximate Parcel Boundary (CTDEEP GIS)

Map Notes:  
Base Map Source: 2016 CT ECO Imagery  
Map Scale: 1 inch = 100 feet  
Map Date: December 2018



#### Site Schematic

Proposed Wireless  
Telecommunications Facility  
Ridgefield 3 CT  
320 Old Stagecoach Road  
Ridgefield, Connecticut

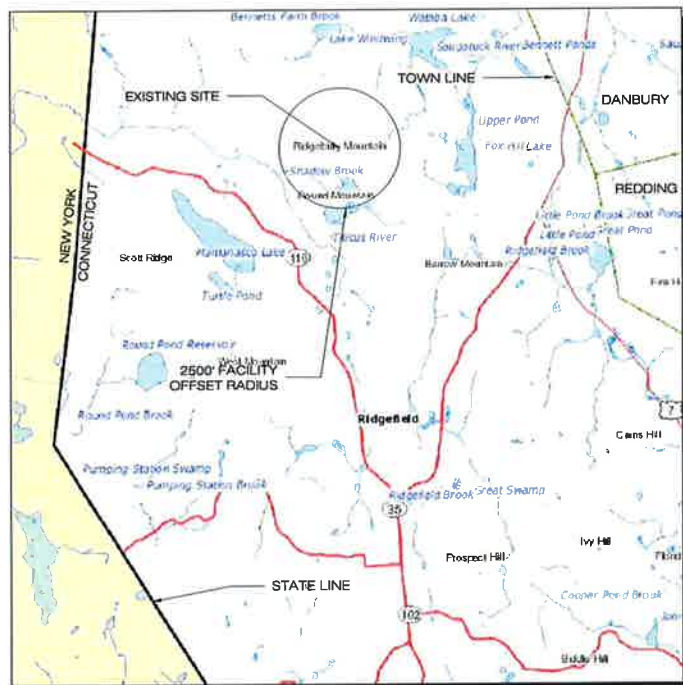
verizon





# **ATTACHMENT 2**

**verizon**  
**WIRELESS SERVICES FACILITY**  
**RIDGEFIELD 3 CT**  
**320 OLD STAGECOACH ROAD**  
**RIDGEFIELD, CT 06877**



**MUNICIPAL NOTIFICATION LIMIT MAP**  
SCALE: 1" = 4000'-0"



**LOCATION MAP**  
SCALE: 1" = 1000'-0"

**SITE INFORMATION**

VZ SITE NAME: RIDGEFIELD 3 CT  
VZ FUZE PROJECT NO.: 2133462  
VZ PROJECT CODE: 20171647943  
VZ LOCATION CODE: 470881  
LOCATION: 320 OLD STAGECOACH ROAD  
RIDGEFIELD, CT 06877

SITE TYPE/DESCRIPTION: COLOCATION ON AN EXIST. MONOPOLE SITE  
W/ NEW ANTENNAS, GROUND EQUIPMENT,  
GENERATOR & PROPANE TANK

GENERATOR INFORMATION: 30KW, PROPANE-FIRED GENERATOR

TOWER OWNER: INSITE TOWERS, LLC  
1199 N. FAIRFAX STREET, SUITE 700  
ALEXANDRIA, VA 22314

SITE CONTACT: RAY VERGATI (203) 605-9646

APPLICANT: CELCO PARTNERSHIP  
D.B.A. VERIZON WIRELESS  
20 ALEXANDER DRIVE  
WALLINGFORD, CT 06492

ENGINEER CONTACT: ROBERT C. BURNS  
(860) 663-1697 x206

LATITUDE: 41° 19' 49.0852" N (41.3303015° N)  
LONGITUDE: 73° 31' 00.5879" W (73.5168300° W)  
ELEVATION: 808.1± AMSL

MAP: D-08  
LOT: 124  
ZONE: "RAAA" (RESIDENTIAL 3AC)

**LIST OF DRAWINGS**

**T-1 TITLE SHEET & INDEX**

**SP-1 SITE PLAN**

**A-1 COMPOUND PLAN, TOWER ELEVATION  
& DETAILS**

COORDINATES & GROUND  
ELEVATION INDICATED HEREIN  
WERE ESTABLISHED FROM AN  
FAA 2-C SURVEY CERTIFICATION,  
AS PREPARED BY MARTIN  
SURVEYING ASSOCIATES, LLC.,  
DATED AUGUST 2, 2018.

Cellco Partnership d/b/a

**verizon**

20 ALEXANDER DRIVE  
WALLINGFORD, CT 06492

**ALL-POINTS**  
TECHNOLOGY CORPORATION

3 SADDLEBROOK DRIVE PHONE: (860)-663-1697  
KILLINGWORTH, CT 06419 FAX: (860)-663-0935  
WWW.ALLPOINTSTECH.COM

**PERMITTING DOCUMENTS**

NO	DATE	REVISION
0	09/30/16	FOR FILING: RCB
1	10/07/16	ATTORNEY REVISIONS: RCB
2	08/06/18	REV. PER NEW RFDS: RCB
3	01/19/19	EQUIP. REVISIONS: JRM
4		
5		
6		

**DESIGN PROFESSIONALS OF RECORD**

PROF: SCOTT M. CHASSE P.E.  
COMP: ALL-POINTS TECHNOLOGY  
CORPORATION  
ADD: 3 SADDLEBROOK DRIVE  
KILLINGWORTH, CT 06419

OWNER: INSITE TOWERS, LLC  
ADDRESS: 1199 N. FAIRFAX STREET,  
SUITE 700  
ALEXANDRIA, VA 22314

**RIDGEFIELD 3 CT**

SITE 320 OLD STAGECOACH ROAD  
ADDRESS: RIDGEFIELD, CT 06877

APT FILING NUMBER: NY141NB6930

DRAWN BY: CSH/JM

DATE: 09/30/16 CHECKED BY: RCB

SHEET TITLE:

**TITLE SHEET  
& INDEX**

SHEET NUMBER:

**T-1**

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COMP: ALL-POINTS TECHNOLOGY CORPORATION  
ADD: 3 SADDLEBROOK DRIVE  
KILLINGWORTH, CT 06419

OWNER: INSITE TOWERS, LLC  
ADDRESS: 1199 N. FAIRFAX STREET,  
SUITE 700  
ALEXANDRIA, VA 22314

## RIDGEFIELD 3 CT

SITE 320 OLD STAGECOACH ROAD  
ADDRESS: RIDGEFIELD, CT 06877

APT FILING NUMBER: NY141NB6930

DRAWN BY: CSH/JM

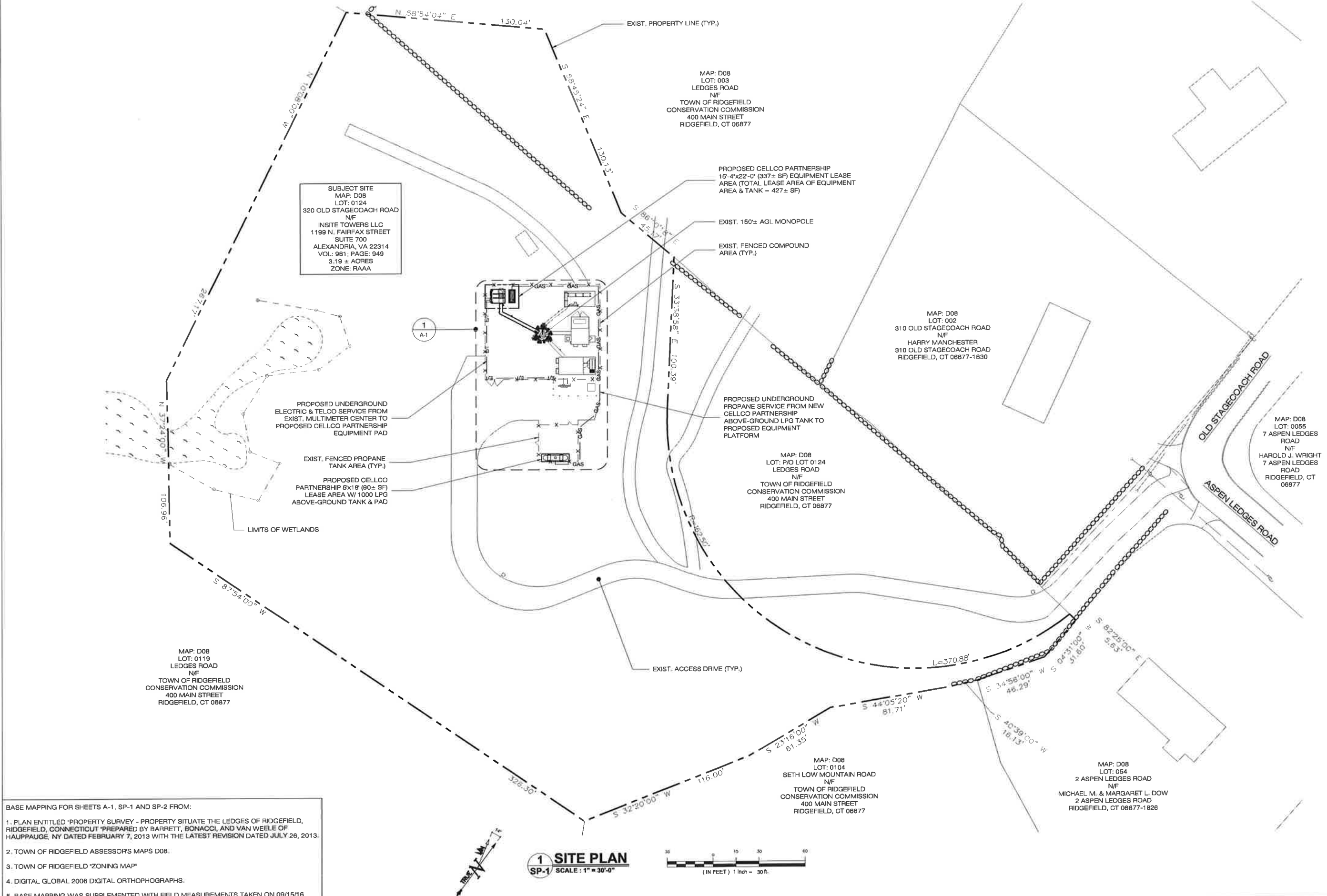
DATE: 09/30/16 CHECKED BY: RCB

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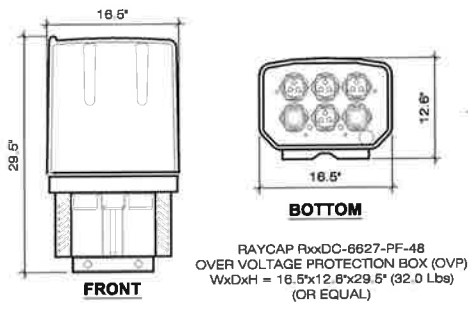
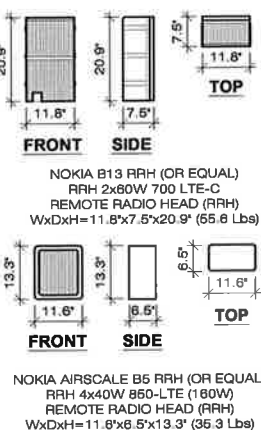
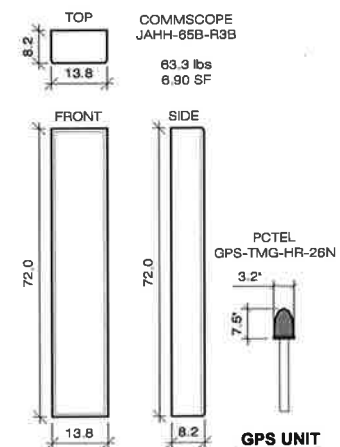
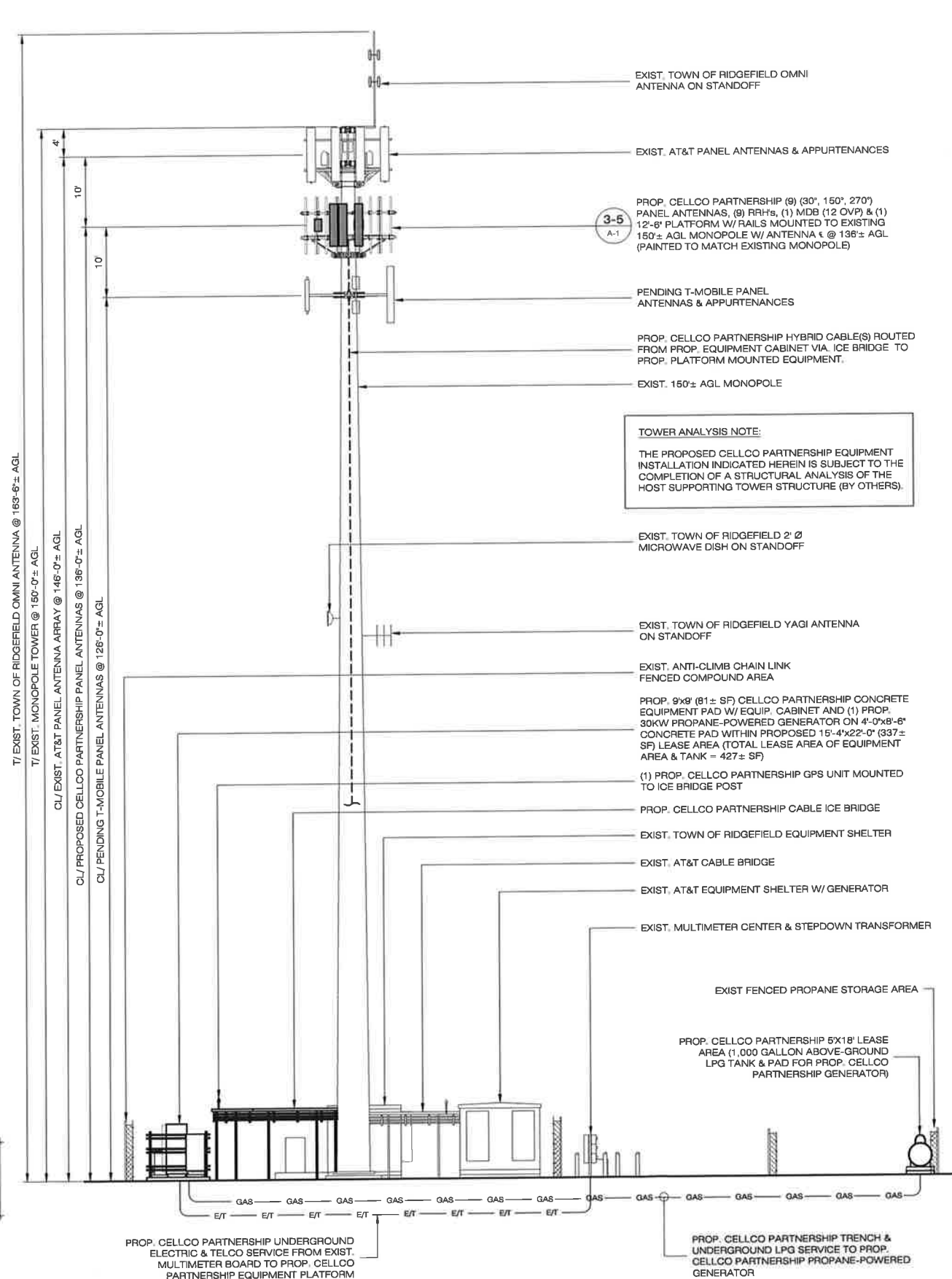
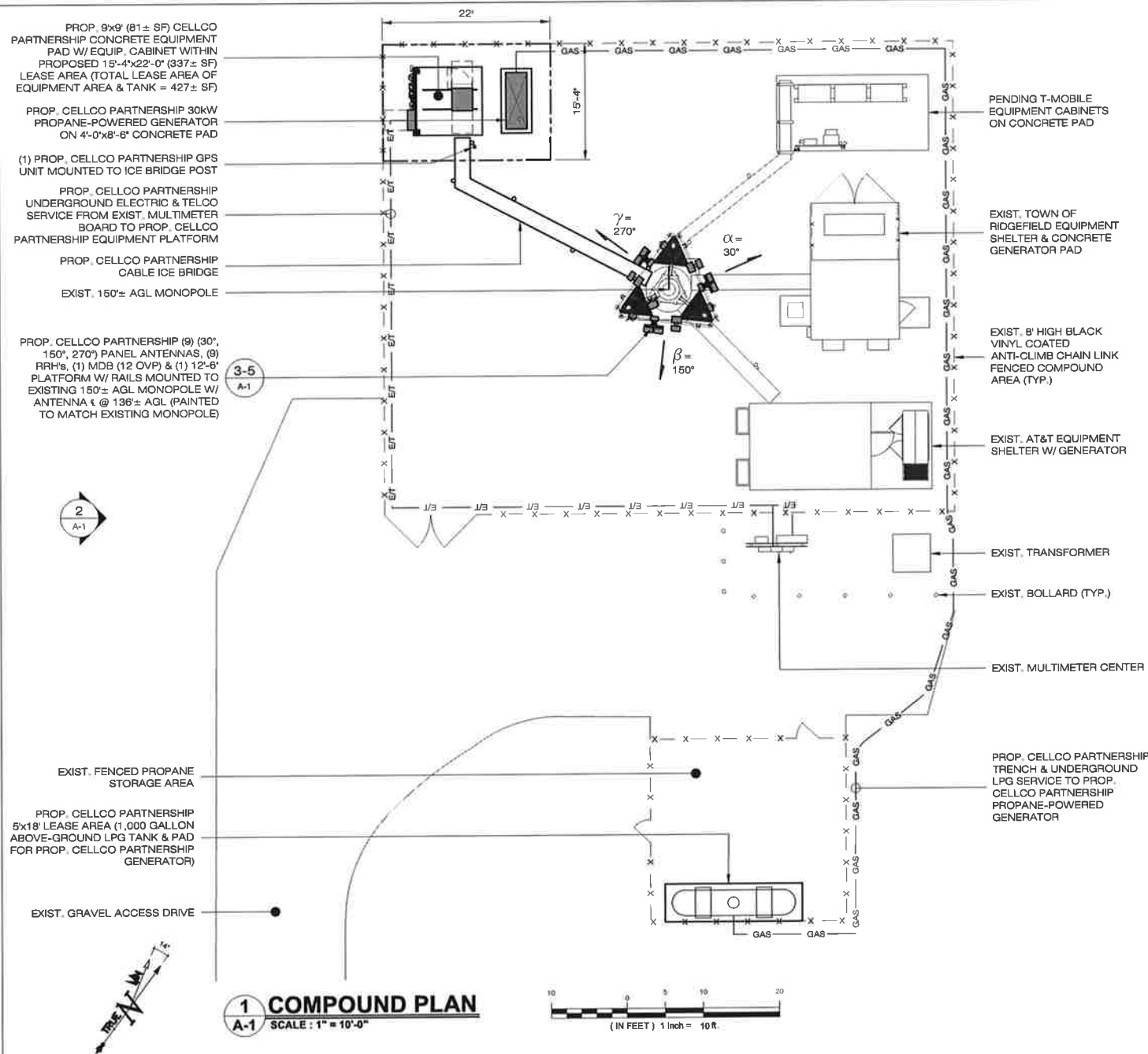
## SITE PLAN

## SHEET NUMBER:

SP-1







Cellco Partnership d/b/a

**verizon**

20 ALEXANDER DRIVE  
WALLINGFORD, CT 06492

**ALL-POINTS**  
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PROP: SCOTT M. CHASSE P.E.  
COMP: ALL-POINTS TECHNOLOGY CORPORATION  
ADD: 3 SADDLEBROOK DRIVE  
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RIDGEFIELD 3 CT

SITE 320 OLD STAGECOACH ROAD  
ADDRESS: RIDGEFIELD, CT 06877

APT FILING NUMBER: NY141NB6930

DATE: 09/30/16 DRAWN BY: CSH/JM  
CHECKED BY: RCB

SHEET TITLE:

**COMPOUND PLAN,  
TOWER ELEVATION  
& DETAILS**

SHEET NUMBER:

**A-1**

# **ATTACHMENT 3**



8-port sector antenna, 2x 698–787, 2x 824–894 and 4x 1695–2360 MHz, 65° HPBW, 3x RET and low bands have duplexers. Internal SBT's on first LB (Port 1) and first HB (Port 5).

- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- One RET for 700MHz, one RET for 850MHz, and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO
- Internal filter on low band and interleaved dipole technology providing for attractive, low wind load mechanical package
- Separate RS-485 RET input/output for low and high band

## Electrical Specifications

Frequency Band, MHz	698–787	824–894	1695–1880	1850–1990	1920–2200	2300–2360
Gain, dBi	14.5	15.8	18.0	18.4	18.5	18.8
Beamwidth, Horizontal, degrees	67	65	63	63	65	68
Beamwidth, Vertical, degrees	12.4	10.5	5.7	5.2	4.9	4.4
Beam Tilt, degrees	2–14	2–14	0–10	0–10	0–10	0–10
USLS (First Lobe), dB	18	18	20	20	21	23
Front-to-Back Ratio at 180°, dB	32	34	31	35	36	38
Isolation, dB	25	25	25	25	25	25
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR   Return Loss, dB	1.5   14.0	1.5   14.0	1.5   14.0	1.5   14.0	1.5   14.0	1.5   14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50°C, maximum, watts	200	200	300	300	300	250
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm

## Electrical Specifications, BASTA\*

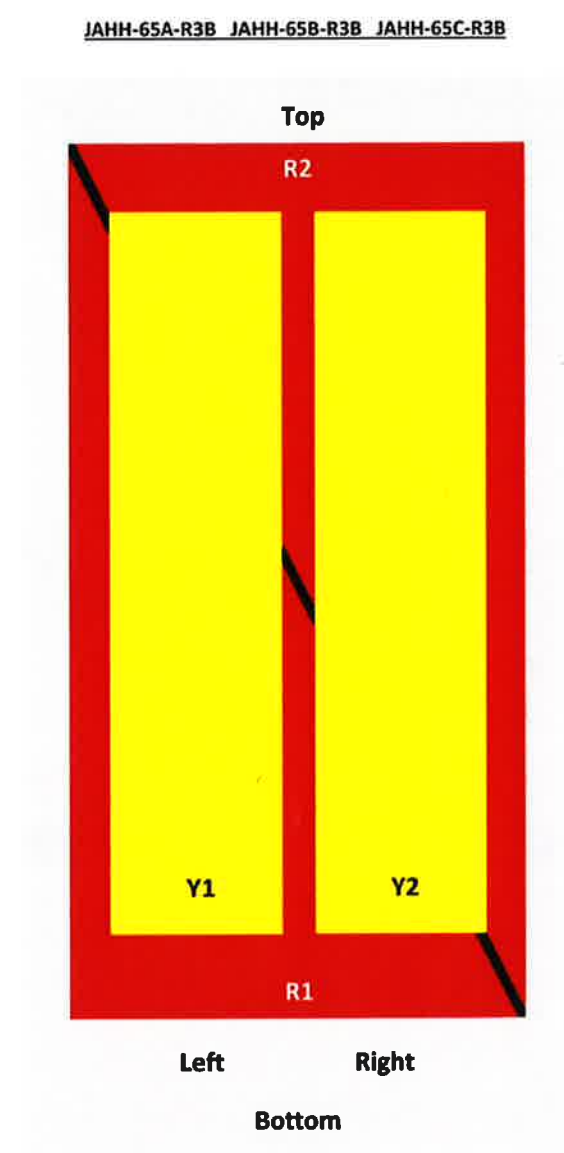
Frequency Band, MHz	698–787	824–894	1695–1880	1850–1990	1920–2200	2300–2360
Gain by all Beam Tilts, average, dBi	14.3	14.9	17.6	18.1	18.2	18.5
Gain by all Beam Tilts Tolerance, dB	±0.3	±0.5	±0.6	±0.4	±0.5	±0.6
Gain by Beam Tilt, average, dBi	2 °   14.3 8 °   14.3 14 °   14.3	2 °   15.0 8 °   14.9 14 °   15.4	0 °   17.2 5 °   17.6 10 °   17.6	0 °   17.6 5 °   18.2 10 °   18.2	0 °   17.7 5 °   18.3 10 °   18.3	0 °   17.9 5 °   18.7 10 °   18.7
Beamwidth, Horizontal Tolerance, degrees	±1.2	±1.4	±4	±2.4	±2.9	±2.7
Beamwidth, Vertical Tolerance, degrees	±0.9	±0.5	±0.3	±0.2	±0.3	±0.1
USLS, beampeak to 20° above beampeak, dB	18	17	17	18	19	18
Front-to-Back Total Power at 180° ± 30°, dB	25	24	26	29	27	29
CPR at Boresight, dB	22	23	20	21	21	24
CPR at Sector, dB	11	12	11	11	11	8

\* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, [download the whitepaper Time to Raise the Bar on BSAs](#).





Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-798	1-2	1	ANXXXXXXXXXXXXX1
R2	824-894	3-4	2	ANXXXXXXXXXXXXX2
Y1	1695-2360	5-6	3	ANXXXXXXXXXXXXX3
Y2	1695-2360	7-8		

View from the front of the antenna

(Sizes of colored boxes are not true depictions of array sizes)

General Specifications

Operating Frequency Band

1695 – 2360 MHz | 698 – 787 MHz | 824 – 894 MHz

# JAHH-65B-R3B

<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<b>Performance Note</b>	Outdoor usage

## Mechanical Specifications

<b>RF Connector Quantity, total</b>	8
<b>RF Connector Quantity, low band</b>	4
<b>RF Connector Quantity, high band</b>	4
<b>RF Connector Interface</b>	4.3-10 Female
<b>Color</b>	Light gray
<b>Grounding Type</b>	RF connector body grounded to reflector and mounting bracket
<b>Radiator Material</b>	Aluminum   Low loss circuit board
<b>Radome Material</b>	Fiberglass, UV resistant
<b>Reflector Material</b>	Aluminum
<b>RF Connector Location</b>	Bottom
<b>Wind Loading, frontal</b>	301.0 N @ 150 km/h 67.7 lbf @ 150 km/h
<b>Wind Loading, lateral</b>	254.0 N @ 150 km/h 57.1 lbf @ 150 km/h
<b>Wind Loading, maximum</b>	638.0 N @ 150 km/h 143.4 lbf @ 150 km/h
<b>Wind Speed, maximum</b>	241 km/h   150 mph

## Dimensions

<b>Length</b>	1828.0 mm   72.0 in
<b>Width</b>	350.0 mm   13.8 in
<b>Depth</b>	208.0 mm   8.2 in
<b>Net Weight, without mounting kit</b>	28.7 kg   63.3 lb

## Remote Electrical Tilt (RET) Information

<b>Input Voltage</b>	10–30 Vdc
<b>Internal Bias Tee</b>	Port 1   Port 5
<b>Internal RET</b>	High band (1)   Low band (2)
<b>Power Consumption, idle state, maximum</b>	2 W
<b>Power Consumption, normal conditions, maximum</b>	13 W
<b>Protocol</b>	3GPP/AISG 2.0 (Single RET)
<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	2 female   2 male

## Packed Dimensions



# JAHH-65B-R3B

Length	1975.0 mm   77.8 in
Width	456.0 mm   18.0 in
Depth	357.0 mm   14.1 in
Shipping Weight	42.0 kg   92.6 lb

## Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system



## Included Products

BSAMNT-1 — Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

## \* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance
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# ALCATEL-LUCENT B13 RRH4X30-4R

Alcatel-Lucent B13 Remote Radio Head 4x30-4R is the newest addition of Remote Radio Head to the extended product line of Alcatel-Lucent's distributed Base Station solutions, aimed at facilitating smooth RF site acquisition and related civil engineering.

**Supporting 2Tx/4Tx MIMO and 4-way Rx diversity**, Alcatel-Lucent B13 RRH4x30-4R allows operators to have a compact radio solution to deploy LTE in the 700U band (700 MHz, 3GPP band 13), providing them with the means to achieve high capacity, high quality and high coverage with minimum site requirements.

The Alcatel-Lucent B13 RRH4x30-4R product has four transmit RF paths, offering the possibility to **select, via software only, 2Tx or 4Tx MIMO configurations** with either 2x60 W or 4x30 W RF output power. It supports also 4-way Rx diversity and up to 10MHz instantaneous bandwidth.

The Alcatel-Lucent B13 RRH4x30-4R is a near zero-footprint solution and operates noise free, simplifying negotiations with site property owners and minimizing environmental impacts.

Its compactness and slim design makes the Alcatel-Lucent B13 RRH4x30-4R easy to install close to the antenna: operators can therefore locate this Remote Radio Head where RF design conditions are deemed ideal, minimizing trade-offs between available sites and RF optimum sites, together with reducing the RF feeder needs and installation costs.

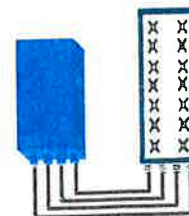


## FEATURES

- Supporting LTE in 700 MHz band (700U, 3GPP band 13)
- LTE 2Tx or 4Tx MIMO (SW switchable)
- Output power: Up to 2x60W or 4x30W
- 10MHz LTE carrier with 4Rx Diversity
- Convection-cooled (fan-less)
- Supports AISG 2.0 ALD devices (RET, TMA) through RS485 or RF ports

## BENEFITS

- Compact to reduce additional footprint when adding LTE in 700U band
- MIMO scheme operation selection (2Tx or 4Tx) by software only
- Improves downlink spectral efficiency through MIMO4
- Increases LTE coverage thanks to 4Rx diversity capability and best in class Rx sensitivity
- Flexible mounting options: Pole or Wall



4x30W with 4T4R  
or  
2x60W with 2T4R  
Can be switched between  
modes via SW w/o site  
visit

## TECHNICAL SPECIFICATIONS

Features & performance	
Number of TX/RX paths	4 duplexed (either 4T4R or 2T4R by SW)
Frequency band	U700 (C) (3GPP bands 13): DL: 746 - 756 MHz / UL: 777 - 787 MHz
Instantaneous bandwidth - #carriers	10MHz – 1 LTE carrier (in 10MHz occupied bandwidth)
LTE carrier bandwidth	10 MHz
RF output power	2x60W or 4x30W (by SW)
Noise figure – RX Diversity scheme	2 dB typ. (<2.5 dB max) – 2 or 4 way Rx diversity
Sizes (HxWxD) in mm (in.)	550 x 305 x 230 (21.6" x 12.0" x 9") (with solar shield)
Volume in L	38 (with solar shield)
Weight in kg (lb) (w/o mounting HW)	26 (57.2) (with solar shield)
DC voltage range	-40.5 to -57V at full performance, -38 to -57V with relaxation on power consumption
DC power consumption	550W typical @100% RF load ( in 2Tx or 4TX mode)
Environmental conditions	-40°C (-40°F) / +55°C (+131°F) IP65
Wind load (@150km/h or 93mph)	Frontal: <200N / Lateral : <150N
Antenna ports	4 ports 7/16 DIN female (50 ohms) VSWR < 1.5
CPRI ports	2 CPRI ports (HW ready for Rate7, 9.8 Gbps) SFP single mode dual fiber
AISG interfaces	1 AISG2.0 output (RS485) Integrated Smart Bias Tees (x2)
Misc. Interfaces	4 external alarms (1 connector) – 4 RF Tx & 4 RF Rx monitor ports - 1 DC connector (2 pins)
Installation conditions	Pole and wall mounting
Regulatory compliance	3GPP 36.141 / 3GPP 36.113 / GR-1089-CORE / GR-3108-CORE / UL 60950-1 / FCC Part 27

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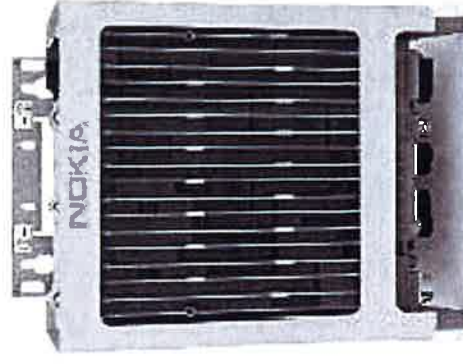
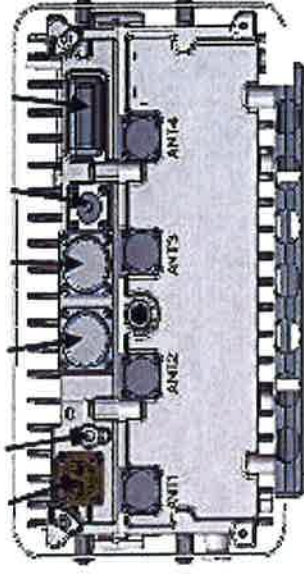


# AHCA AirScale RRH 4T4R B5 160W

Supported Frequency bands	3GPP band 5
Frequencies	DL 869-894MHz, UL 824-849MHz
Number of TX/RX paths/pipes	4TX/4RX
Instantaneous Bandwidth IBW	25MHz (Full Band)
Occupied Bandwidth OBW	25MHz (Full Band)
Output Power	4T4R @ 40W / 2T4R @ 60W
RF Sharing	LTE, WCDMA, LTE + NB-IoT supported
256 QAM Back Off	No backoff at 40W and 0.8dB at 60W.
Supply Voltage / Voltage Range	DC -48V / -36V to -60V
Typical Power Consumption	365W [50% ETSI Busy Hour Load at 4TX @ 40W]
	529W [100% RF Load at 4TX @ 40W]
	574W [100% RF Load at 4TX @ 40W with SBT and 4ISG ON]
Antenna Ports	4 Ports, 4.3-10+
Optical Ports	2x CPRI 9.8 Gbps
ALD Control Interfaces	4ISG3.0 from ANT1, 2, 3, 4 and RET (Power supply ANT1 and ANT3)
Other Interfaces	External Alarm MOR-26 Serial connector (4 inputs, 1 Output) DC Circular Power Connector

51 © Nokia 2017

DC IN GND OPT1 OPT2 RET EAC



Operational Temperature Range	-40°C to 55°C (with solar cover)
Dimensions (mm)	337 x 295 x 165 (radio only)
Height x width x depth	13.3" x 11.7" x 6.5" 428 x 324 x 208 (with bracket and enclosure) 16.9" x 12.8" x 8.2"
Volume (liters)	16.5
Weight (kg)	16/ 35.3 lb - w/o bracket
Ingress protection class	IP65
Installation options	Pole or Wall, Vertical or Horizontal Rack Mount
Surge protection	Class II 5kA

**NOKIA**

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# SAMSUNG

## Dual-Band Radio Unit

### AWS/PCS (B66/B2)

#### RFV01U-D1A

Samsung's RFV01U-D1A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.



The RFV01U-D1A RU targets dual-band support across Band 66 (AWS) and Band 2 (PCS), making it an ideal product for broad coverage footprints across multiple common mid-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

#### Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation
- Built-in Broadcast Auxiliary Services (BAS) filter ensures compliant AWS operation without impacting footprint

#### Key Technical Specifications

Duplex Type: FDD

Operating Frequencies:

B66: DL(2,110-2,180MHz)/UL(1,710-1,780MHz)

B2: DL(1,930-1,990MHz)/UL(1,850-1,910MHz)

Instantaneous Bandwidth:

70MHz(B66) + 60MHz(B2)

RF Chain: 4T4R/2T4R/2T2R

Output Power: Total 320W

DU-RU Interface: CPRI (10Gbps)

Dimensions: 380 x 380 x 255mm (36.8L)

Weight: 38.3kg

Input Power: -48V DC

Operating Temp.: -40 - 55°(w/o solar load)

Cooling: Natural convection

## Product Data Sheet HB158-1-08U8-S8J18

### HYBRIFLEX™ RRH Hybrid Feeder Cabling Solution, 1-5/8", Single-Mode Fiber

#### Product Description

RFS' HYBRIFLEX Remote Radio Head (RRH) hybrid feeder cabling solution combines optical fiber and DC power for RRHs in a single lightweight aluminum corrugated cable, making it the world's most innovative solution for RRH deployments.

It was developed to reduce installation complexity and costs at Cellular sites. HYBRIFLEX allows mobile operators deploying an RRH architecture to standardize the RRH installation process and eliminate the need for and cost of cable grounding. HYBRIFLEX combines optical fiber (multi-mode or single-mode) and power in a single corrugated cable. It eliminates the need for junction boxes and can connect multiple RRHs with a single feeder. Standard RFS CELLFLEX® accessories can be used with HYBRIFLEX cable. Both pre-connectorized and on-site options are available.

#### Features/Benefits

- Aluminum corrugated armor with outstanding bending characteristics - minimizes installation time and enables mechanical protection and shielding
- Same accessories as 1 5/8" coaxial cable
- Outer conductor grounding - Eliminates typical grounding requirements and saves on installation costs
- Lightweight solution and compact design - Decreases tower loading
- Robust cabling - Eliminates need for expensive cable trays and ducts
- Installation of tight bundled fiber optic cable pairs directly to the RRH - Reduces CAPEX and wind load by eliminating need for interconnection
- Optical fiber and power cables housed in single corrugated cable - Saves CAPEX by standardizing RRH cable installation and reducing installation requirements
- Outdoor polyethylene jacket - Ensures long-lasting cable protection

#### Technical Specifications

Outer Conductor Armor	Corrugated Aluminum	(mm (in))	45.5 (1.83)
Jacket	Polyethylene, PE	(mm (in))	50.3 (1.98)
UV-Protection	Individual and External Jacket		Yes
Weight, Approximate		(kg/m (lb/ft))	1.9 (1.30)
Minimum Bending Radius, Single Bending		(mm (in))	200 (8)
Minimum Bending Radius, Repeated Bending		(mm (in))	500 (20)
Recommended/Maximum Clamp Spacing		(m (ft))	1.0 / 1.2 (3.25 / 4.0)
DC-Resistance Outer Conductor Armor		(Ω/km (Ω/1000ft))	0.68 (0.205)
DC-Resistance Power Cable, 8.4mm <sup>2</sup> (8AWG)		(Ω/km (Ω/1000ft))	2.1 (0.307)
Version			Single-mode OM3
Quantity, Fiber Count			16 (8 pairs)
Core/Clad		(μm)	50/125
Primary Coating (Acrylate)		(μm)	245
Buffer Diameter, Nominal		(μm)	900
Secondary Protection, Jacket, Nominal		(mm (in))	2.0 (0.08)
Minimum Bending Radius		(mm (in))	104 (4.1)
Insertion Loss @ wavelength 850nm		dB/km	3.0
Insertion Loss @ wavelength 1310nm		dB/km	1.0
Standards (Meets or exceeds)			UL34-V0, UL1666 RoHS Compliant
Size (Power)		(mm (AWG))	8.4 (8)
Quantity, Wire Count (Power)			16 (8 pairs)
Size (Alarm)		(mm (AWG))	0.8 (18)
Quantity, Wire Count (Alarm)			4 (2 pairs)
Type			UV protected
Strands			19
Primary Jacket Diameter, Nominal		(mm (in))	6.8 (0.27)
Standards (Meets or exceeds)			NFPA 130, IECE S-95-658 UL Type XHHW-2, UL 44 UL-LS Limited Smoke, UL VW-1 IEEE-383 (1974), IEEE1202/FT4 RoHS Compliant
Installation Temperature		(°C (°F))	-40 to +65 (-40 to 149)
Operation Temperature		(°C (°F))	-40 to +65 (-40 to 149)

\* This data is provisional and subject to change

RFS The Clear Choice®

HB158-1-08U8-S8J18



Figure 1: HYBRIFLEX Series

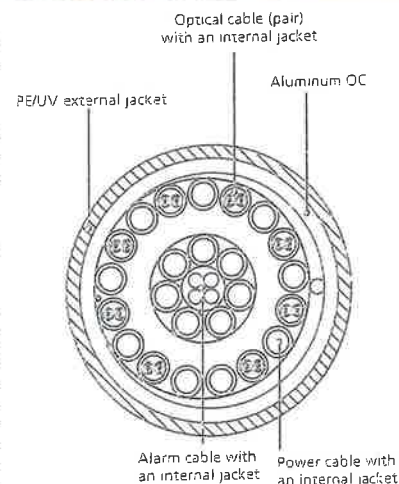


Figure 2: Construction Detail





**EPA-Certified for Stationary  
Emergency Applications**

### Ratings Range

Standby:	kW	60 Hz
	kVA	30
		30-38



### The Kohler® Advantage

- **High Quality Power**  
Kohler generators provide advanced voltage and frequency regulation along with ultra-low levels of harmonic distortion for excellent generator power quality to protect your valuable electronics.
- **Extraordinary Reliability**  
Kohler is known for extraordinary reliability and performance and backs that up with a premium five-year or 2000 hour limited warranty.
- **All-Aluminum Sound Enclosure**  
Durable aluminum sound-attenuating enclosure.

### Generator Set Ratings

Alternator	Voltage	Ph	Hz	Natural Gas 130°C Rise		LP Gas 130°C Rise	
				Standby Rating kW/kVA	Amps	Standby Rating kW/kVA	Amps
4D8.3	120/208	3	60	30/38	106	30/38	106
	127/220	3	60	30/38	100	30/38	100
	120/240	3	60	30/38	92	30/38	92
	120/240	1	60	30/30	125	30/30	125
	139/240	3	60	30/38	92	30/38	92
	220/380	3	60	30/38	58	30/38	58
	277/480	3	60	30/38	46	30/38	46
	347/600	3	60	30/38	37	30/38	37
4P7BX	120/208	3	60	30/38	106	30/38	106
	127/220	3	60	30/38	100	30/38	100
	120/240	3	60	30/38	92	30/38	92
	120/240	1	60	30/30	125	30/30	125
	139/240	3	60	30/38	92	30/38	92
	220/380	3	60	30/38	58	30/38	58
	277/480	3	60	30/38	46	30/38	46
4E8.3	120/240	1	60	30/30	125	30/30	125
4Q7BX	120/240	1	60	30/30	125	30/30	125

**RATINGS:** All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor. **Standby Ratings:** The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. Obtain technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

### Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The generator set accepts rated load in one step.
- A five-year/2000 hour limited warranty covers all generator set systems and components. A five-year extended comprehensive limited warranty is also available.
- **Engine Features**
  - Powerful and reliable 2.2 L turbocharged liquid-cooled engine
  - Electronic engine management system.
  - Simple field conversion between natural gas and LPG fuels while maintaining emission certification.
- **Innovative Cooling System**
  - Electronically controlled fan speeds minimize generator set sound signature.
- **Alternator features:**
  - Kohler's wound field excitation system with its unique PowerBoost™ design delivers great voltage response and short-circuit capability.
  - The unique Fast-Response® X excitation system delivers excellent voltage response and short-circuit capability using a rare-earth, permanent magnet (PM)-excited alternator.
  - The brushless, rotating-field alternator has broadrange reconnectability.
- Kohler designed controller for one-source system integration and remote communication. See Controller on page 3.
- **Certifications**
  - The generator set engine is certified by the Environmental Protection Agency (EPA) to conform to the New Source Performance Standard (NSPS) for stationary spark-ignited emissions.
  - UL 2200/cUL listing is available.
  - The generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
  - CSA certification is available.
  - Accepted by the Massachusetts Board of Registration of Plumbers and Gas Fitters.
- Approved for stationary standby applications in locations served by a reliable utility source.



## Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Exciter type	Brushless, Wound-Field
Leads: quantity, type	
4D	12, Reconnectable
4E	4, 110–120/220–240 V
4PX	12, Reconnectable
4QX	4, 110–120/220–240 V
Voltage regulator	Solid State, Volts/Hz
Insulation:	NEMA MG1
Material	Class H
Temperature rise	130°C, Standby
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Amortisseur windings	Full
Voltage regulation, no-load to full-load	Controller Dependent
One-step load acceptance	100% of Rating
Unbalanced load capability	100% of Rated Standby Current
Peak motor starting kVA:	(35% dip for voltages below)
480 V      4D8.3 (12 lead)	120
240 V      4E8.3 (4 lead)	74
480 V      4P7BX (12 lead)	180
240 V      4Q7BX (4 lead)	113

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and drip-proof construction.
- Windings are vacuum-impregnated with epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.

## Application Data

### Engine

Engine Specifications	
Manufacturer	Kohler
Engine: model, type	KG2204T, 2.2 L, 4-Cycle Turbocharged
Cylinder arrangement	In-line 4
Displacement, L (cu. in.)	2.2 (134.25)
Bore and stroke, mm (in.)	91 x 86 (3.5 x 3.4)
Compression ratio	10.5:1
Piston speed, m/min. (ft./min.)	340 (1016)
Main bearings: quantity, type	5, plain alloy steel
Rated rpm	1800
Max power at rated RPM, kW (HP)	
LPG	47.8 (64.1)
Natural Gas	47.6 (63.9)
Cylinder head material	Cast Iron
Piston type and material	High Silicon Aluminum
Crankshaft material	Nodular Iron
Valve (exhaust) material	Forged Steel
Governor type	Electronic
Frequency regulation, no-load to full-load	Isochronous
Frequency regulation, steady state	±1.0%
Frequency	Fixed
Air cleaner type, all models	Dry

### Engine Electrical

Engine Electrical System	
Ignition system	Electronic
Battery charging alternator:	
Ground (negative/positive)	Negative
Volts (DC)	14
Ampere rating	90
Starter motor rated voltage (DC)	12
Battery, recommended cold cranking amps (CCA):	
Qty., rating for -18°C (0°F)	One, 630
Battery voltage (DC)	12
Battery group size	24

### Exhaust

Exhaust System	
Exhaust manifold type	Dry
Exhaust temperature at rated kW, dry exhaust, °C (°F)	610 (1130)
Maximum allowable back pressure, kPa (in. Hg)	7.5 (2.2)

### Fuel

Fuel System		
Fuel type	Natural Gas or LPG	
Fuel supply line inlet	1 NPTF	
Natural gas fuel supply pressure, kPa (in. H <sub>2</sub> O)	1.24–2.74 (5–11)	
LPG vapor withdrawal fuel supply pressure, kPa (in. H <sub>2</sub> O)	1.24–2.74 (5–11)	
Fuel Composition Limits *	Nat. Gas	LP Gas
Methane, % by volume	90 min.	—
Ethane, % by volume	4.0 max.	—
Propane, % by volume	1.0 max.	85 min.
Propene, % by volume	0.1 max.	5.0 max.
C <sub>4</sub> and higher, % by volume	0.3 max.	2.5 max.
Sulfur, ppm mass	25 max.	
Lower heating value, MJ/m <sup>3</sup> (Btu/ft <sup>3</sup> ), min.	33.2 (890)	84.2 (2260)

\* Fuels with other compositions may be acceptable. If your fuel is outside the listed specifications, contact your local distributor for further analysis and advice.

## Application Data

### Lubrication

#### Lubricating System

Type	Full Pressure
Oil pan capacity, L (qt.) §	4.2 (4.4)
Oil added during oil change (on average), L (qt.) §	3.3 (3.5)
Oil pan capacity with filter, L (qt.) §	8.5 (9.0)
Oil filter: quantity, type §	1, Cartridge
§ Kohler recommends the use of Kohler Genuine oil and filters.	

### Cooling

#### Radiator System

Ambient temperature, °C (°F)	50 (122)
Engine jacket water capacity, L (gal.)	2.65 (0.7)
Radiator system capacity, including engine, L (gal.)	13.2 (3.5)
Engine jacket water flow, Lpm (gpm)	62 (16.4)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	22.5 (1280)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	qty. 3 @ 406 (16)
Fan power requirements (powered by engine battery charging alternator)	12 VDC, 18 amps each

### Operation Requirements

#### Air Requirements

Radiator-cooled cooling air, m <sup>3</sup> /min. (scfm)‡	51 (1800)
Combustion air, m <sup>3</sup> /min. (cfm)	1.6 (57)
Air over engine m <sup>3</sup> /min. (cfm)	25 (883)
† Air density = 1.20 kg/m <sup>3</sup> (0.075 lbm/ft <sup>3</sup> )	

#### Fuel Consumption ‡

Natural Gas, m <sup>3</sup> /hr. (cfh) at % load	Standby Ratings
100%	11.9 (421)
75%	10.0 (355)
50%	8.2 (289)
25%	6.3 (223)
0%	4.5 (158)

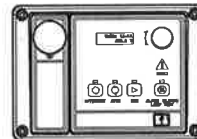
LP Gas, m <sup>3</sup> /hr. (cfh) at % load	Standby Ratings
100%	4.6 (164)
75%	3.7 (131)
50%	2.8 (99)
25%	1.9 (66)
0%	1.0 (34)

‡ Nominal fuel rating: Natural gas, 37 MJ/m<sup>3</sup> (1000 Btu/ft.<sup>3</sup>)  
LP vapor, 93 MJ/m<sup>3</sup> (2500 Btu/ft.<sup>3</sup>)

LP vapor conversion factors:

8.58 ft.<sup>3</sup> = 1 lb.  
0.535 m<sup>3</sup> = 1 kg.  
36.39 ft.<sup>3</sup> = 1 gal.

### Controller



#### APM402 Controller

Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.

- Digital display and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or serial configuration
- Controller supports Modbus® protocol
- Integrated hybrid voltage regulator with ±0.5% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-161 for additional controller features and accessories.

Modbus® is a registered trademark of Schneider Electric.

### Sound Enclosure

- Durable aluminum, sound-attenuating enclosure with quiet operation of 57 dB(A) log average @ 7 m (23 ft.) at no load.
- Internally mounted silencer.
- Fade-, scratch, and corrosion-resistant Kohler® Power Armor™ automotive-grade textured finish.
- Acoustic insulation that meets UL 94 HF1 flammability classification and repels moisture absorption.

## Standard Features

- Alternator Protection
- Aluminum Sound Enclosure with Enclosed Silencer
- Battery Rack and Cables
- Flexible Fuel Line
- Gas Fuel System (includes fuel mixer, electronic secondary gas regulator, gas solenoid valve, and flexible fuel line between the engine and the skid-mounted fuel system components)
- Integral Vibration Isolation
- Local Emergency Stop Switch
- Low Fuel Pressure Switch (with NFPA fuel module)
- Oil Drain Extension
- Operation and Installation Literature
- Standard 5-Year Limited Warranty

## Available Options

### Approvals and Listings

- ☐ CSA Certified
- ☐ UL 2200 Listing

### Controller

- ☐ 15-Relay Dry Contact Board
- ☐ Communication Products
- ☐ Input/Output Module (2 inputs, 5 outputs)
- ☐ Lockable Emergency Stop (lockout/tagout)
- ☐ Low Fuel Pressure Warning Switch
- ☐ Manual Key Switch
- ☐ Manual Speed Adjust
- ☐ Remote Annunciator Panel
- ☐ Remote Emergency Stop
- ☐ Run Relay

### Enclosure Accessories

- ☐ Enclosure Doors for 291 kph (181 mph) Wind load

### Starting Aids\*

- ☐ Block Heater, 110-120 V
- ☐ Block Heater, 220-240 V

### Oil Pan Heater\*

- ☐ Oil Pan Heater, 110-120 V
- ☐ Oil Pan Heater, 190-240 V

\* One block heater or oil pan heater is required for ambient temperatures below 0°C (32°F). At temperatures below -18°C (0°F) installation of both heaters is required.

### Electrical System

- ☐ Alternator Strip Heater
- ☐ Battery
- ☐ Battery Charger, 6 Amp
- ☐ Battery Charger, 10 Amp w/Alarms
- ☐ Battery Heater
- ☐ Temperature Compensation for 10 Amp Battery Charger

## Miscellaneous

- ☐ Certified Test Report
- ☐ Engine Fluids Added
- ☐ Maintenance Kit (filters, spark plugs, oil)
- ☐ Rated Power Factor Testing

## Literature

- ☐ General Maintenance
- ☐ NFPA 110
- ☐ Overhaul
- ☐ Production

## Warranty

- ☐ Optional Extended 5-Year/2000 Hour Comprehensive Limited Warranty

## Other Options

- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_
- ☐ \_\_\_\_\_

## Dimensions and Weights

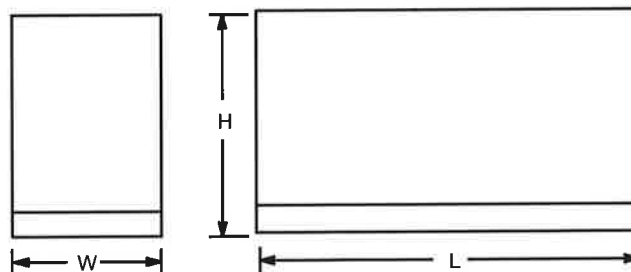
Overall Size, L x W x H, mm (in.):

2280 x 830 x 1182

(89.8 x 32.7 x 46.5)

Weight, with engine fluids, kg (lb.):

635 (1432)



NOTE: This drawing is provided for reference only and should not be used for planning. Contact your local distributor for more detailed information.

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# **ATTACHMENT 4**

## Structural Analysis Report

July 12, 2018

Site Name	CT897 Ridgefield
Infinigy Job Number	337-000
Client	Insite Wireless
Proposed Carrier	Verizon
Site Location	320 Old Stagecoach Road, Ridgefield, CT 06877 41° 19' 49.1088" N NAD83 73° 31' 0.5478" W NAD83
Structure Type	Monopole
Tower Usage Ratio	61.3%
Foundation Usage Ratio	78.6%
Overall Result	Pass

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



Aaron Estabrooks  
Structural Engineer II



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Supporting Documentation.....	3
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Final Configuration.....	5
Structure Usages.....	5
Foundation Reactions.....	5
Deflection, Twist, and Sway.....	6
Assumptions and Limitations.....	6
Calculations.....	Appended

July 12, 2018

## **Introduction**

Infinigy Engineering has been requested to perform a structural analysis on the existing Valmont Monopole. All supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The tower was analyzed using tnxTower version 8.0.2.1 tower analysis software.

## **Supporting Documentation**

<b>Design Drawings:</b>	Valmont Order # 273806-P1, dated November 25, 2014
<b>Existing Loading:</b>	AT&T Exhibit A-1, dated December 18, 2014
<b>Existing Loading:</b>	Town of Ridgefield Exhibit A, dated April 12, 2016
<b>Previous SA:</b>	Infinigy Engineering, Job # 337-000, dated May 13, 2016
<b>Proposed Loading:</b>	Verizon, Exhibit A, dated July 6, 2018

## **Analysis Code Requirements**

Wind Speed	93 mph (3-Second Gust, $V_{ASD}$ ) / 120 mph (3-Second Gust, $V_{ULT}$ )
Wind Speed w/ ice	50 mph (3-Second Gust) w/ 3/4" Ice
TIA Revision	ANSI/TIA-222-G
Adopted IBC	2012 IBC
Jurisdictional Code	2016 Connecticut State Building Code
Structure Class	III
Exposure Category	B
Topographic Category	5
Calculated Crest Height	137.6 ft

## **Conclusion**

Upon reviewing the results of this analysis, it is our opinion that the structure meets the specified TIA code requirements. The tower and foundations are 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:

Aaron Estabrooks  
Structural Engineer II | **INFINIGY**  
1033 Watervliet Shaker Road, Albany, NY 12205  
(O) (518) 690-0790 | (M) (518) 944-4097  
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July 12, 2018

**Existing and Reserved Loading**

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Carrier
150.0	1	RFI BA40-41	Side Arm	(1) 7/8"	Town of Ridgefield
146.0	4	Raycap DC6-48-60-18-8F	Low Profile Platform	(2) 1/2" Fiber (3) 3/8" RET (8) 5/8" DC Power	New Cingular Wireless
	3	Ericsson RRUS-32			
	3	Ericsson RRUS-E2			
	6	Ericsson A2 Module			
	6	Ericsson RRUS-12			
	9	Ericsson RRUS-11			
	12	CCI HPA-65R-BUU-118			
126.0	3	Commscope LNX-6515DS-A1M	T-Arm	(1) 1/2" Fiber Trunk	T-Mobile
	3	Ericsson RRUS-11 B12			
	3	Ericsson RRUS-11 B4			
	3	RFS APXV18-206516S-A20			
70.0	1	Commscope VHLP3-11W-6GR	Leg	(1) EW90	Town of Ridgefield
66.0	1	Sinclair SD210R-SF2P90LDF	Side Arm	(1) 7/8"	

**To Be Removed Loading**

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Carrier
No Loads are considered To Be Removed					

**Proposed Loading**

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Carrier
136.0	9	Commscope JAHH-1D65B	Platform w/ Handrails	(2) 1-5/8" Hybrid	Verizon
	3	Alcatel Lucent RRH_2x40-700U			
	3	Alcatel Lucent RRH_2x60-PCS			
	3	Alcatel Lucent RRH_4x45-AWS			
	2	RFS DB-T1-6Z-8AB-0Z			

July 12, 2018

**Final Configuration**

Mount Height (ft)	Qty.	Appurtenance	Mount Type	Coax & Lines	Carrier
150.0	1	RFI BA40-41	Side Arm	(1) 7/8"	Town of Ridgefield
146.0	4	Raycap DC6-48-60-18-8F	Low Profile Platform	(2) 1/2" Fiber (3) 3/8" RET (8) 5/8" DC Power	New Cingular Wireless
	3	Ericsson RRUS-32			
	3	Ericsson RRUS-E2			
	6	Ericsson A2 Module			
	6	Ericsson RRUS-12			
	9	Ericsson RRUS-11			
	12	CCI HPA-65R-BUU-118			
136.0	9	Commscope JAHH-1D65B	Platform w/ Handrails	(2) 1-5/8" Hybrid	Verizon
	3	Alcatel Lucent RRH_2x40-700U			
	3	Alcatel Lucent RRH_2x60-PCS			
	3	Alcatel Lucent RRH_4x45-AWS			
	2	RFS DB-T1-6Z-8AB-0Z			
126.0	3	Commscope LNX-6515DS-A1M	T-Arm	(1) 1/2" Fiber Trunk	T-Mobile
	3	Ericsson RRUS-11 B12			
	3	Ericsson RRUS-11 B4			
	3	RFS APXV18-206516S-A20			
70.0	1	Commscope VHLP3-11W-6GR	Leg	(1) EW90	Town of Ridgefield
66.0	1	Sinclair SD210R-SF2P90LDF	Side Arm	(1) 7/8"	

Install proposed coax inside monopole.

**Structure Usages**

Pole (L2)	61.3	Pass
Base Plate	61.0	Pass
<b>RATING =</b>	<b>61.3</b>	<b>Pass</b>

July 12, 2018

**Foundation Reactions**

Reaction Data	Design Reactions	Analysis Reactions	Result
Moment (kip-ft)	6846.0	3714.1	54.3%
Shear (kip)	59.0	34.1	57.8%
Axial (kip)	57.6	45.3	78.6%

Tower base reactions are acceptable when compared to the original design reactions.

**Deflection, Twist, and Sway**

Antenna Elevation (ft)	Deflection (in)	Twist (°)	Sway (°)
136.0	14.066	0.018	1.057

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

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

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

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

**Assumptions and Limitations**

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

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

This report is an evaluation of the tower structure only and does not reflect adequacy of any existing antenna mounts, mount connections, or 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.



Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (lb)
1	32.33	18	0.2190	4.33	20.5000	28.8100	A572-65	1868.8
2	31.75	18	0.3130	5.25	27.2583	35.4300	A572-65	3330.6
3	48.25	18	0.4380	6.42	33.4528	45.8600	A572-65	8951.7
4	52.67	18	0.5000	43.3340	56.8800			14108.9
								28280.0

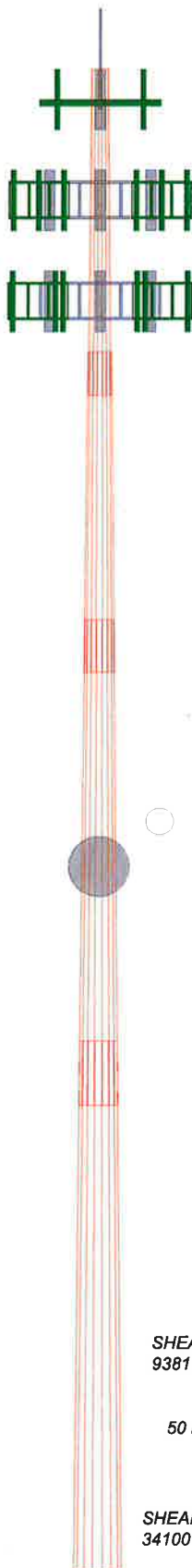
149.0 ft

116.7 ft

89.3 ft

46.3 ft

0.0 ft



## DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
BA40-41 (Town of Ridgefield)	150	(3) JAHH-1D65B (Verizon)	136
Angle Side Arm (Town of Ridgefield)	150	(3) JAHH-1D65B (Verizon)	136
(4) HPA-65R-BUU-H8 (New Cingular Wireless)	146	(3) JAHH-1D65B (Verizon)	136
(4) HPA-65R-BUU-H8 (New Cingular Wireless)	146	RRH_2x40-700U (Verizon)	136
(4) HPA-65R-BUU-H8 (New Cingular Wireless)	146	RRH_2x40-700U (Verizon)	136
(4) HPA-65R-BUU-H8 (New Cingular Wireless)	146	RRH_2x40-700U (Verizon)	136
(3) RRUS-11 (New Cingular Wireless)	146	RRH_2x60-PCS (Verizon)	136
(3) RRUS-11 (New Cingular Wireless)	146	RRH_2x60-PCS (Verizon)	136
(3) RRUS-11 (New Cingular Wireless)	146	RRH_4x45-AWS (Verizon)	136
(2) A2 Module (New Cingular Wireless)	146	RRH_4x45-AWS (Verizon)	136
(2) A2 Module (New Cingular Wireless)	146	RRH_4x45-AWS (Verizon)	136
RRUS- E2 (New Cingular Wireless)	146	DB-T1-6Z-8AB-0Z (Verizon)	136
RRUS- E2 (New Cingular Wireless)	146	DB-T1-6Z-8AB-0Z (Verizon)	136
RRUS- E2 (New Cingular Wireless)	146	RRUS 11 (Band 12) (T-Mobile)	126
(2) RRUS-12 (New Cingular Wireless)	146	RRUS 11 (Band 12) (T-Mobile)	126
(2) RRUS-12 (New Cingular Wireless)	146	RRUS 11 (Band 12) (T-Mobile)	126
(2) RRUS-12 (New Cingular Wireless)	146	APXV18-206516S-A20 (T-Mobile)	126
RRUS- 32 (New Cingular Wireless)	146	APXV18-206516S-A20 (T-Mobile)	126
RRUS- 32 (New Cingular Wireless)	146	APXV18-206516S-A20 (T-Mobile)	126
RRUS- 32 (New Cingular Wireless)	146	LNK-6515DS-A1M (T-Mobile)	126
RRUS- 32 (New Cingular Wireless)	146	LNK-6515DS-A1M (T-Mobile)	126
RRUS- 32 (New Cingular Wireless)	146	LNK-6515DS-A1M (T-Mobile)	126
RRUS- 32 (New Cingular Wireless)	146	Angle T-Arm (T-Mobile)	126
RRUS- 32 (New Cingular Wireless)	146	Angle T-Arm (T-Mobile)	126
(2) DC6-48-60-18-8F (New Cingular Wireless)	146	Angle T-Arm (T-Mobile)	126
DC6-48-60-18-8F (New Cingular Wireless)	146	RRUS 11 (Band 4) (T-Mobile)	126
DC6-48-60-18-8F (New Cingular Wireless)	146	RRUS 11 (Band 4) (T-Mobile)	126
Angle Low Profile Platform (new Cingular Wireless)	146	RRUS 11 (Band 4) (T-Mobile)	126
Pipe Platform w/ Handrails (Verizon)	136	Dish Pipe Mount (Town of Ridgefield)	70
		VHLP3-11W-6GR (Town of Ridgefield)	70
		Angle Side Arm (Town of Ridgefield)	66
		SD210R-SF2P90LDF (Town of Ridgefield)	66

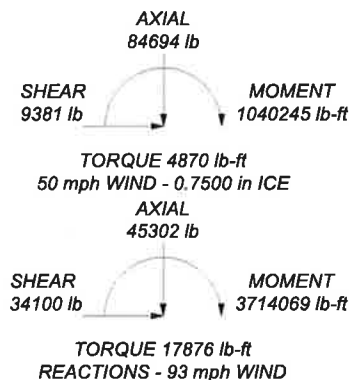
## MATERIAL STRENGTH

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

## TOWER DESIGN NOTES

1. Tower is located in Fairfield County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 93 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class III.
7. Topographic Category 5 with Crest Height of 137.60 ft
8. TOWER RATING: 61.3%

ALL REACTIONS  
ARE FACTORED



**Infinigy Engineering, PLLC**  
1033 Watervliet Shaker Road  
Albany, NY 12205  
Phone: (518) 690-0790  
FAX: (518) 690-0793

Job: **CT897 Ridgefield**

Project: **337-000**

Client: **Insite**

Code: **TIA-222-G**

Path:

Drawn by: **ATE**

Date: **07/12/18**

Scale: **N**

Dwg No.:

<b>tnxTower</b>  <b>Infinigy Engineering, PLLC</b> 1033 Watervliet Shaker Road Albany, NY 12205 Phone: (518) 690-0790 FAX: (518) 690-0793	Job	CT897 Ridgefield	Page	1 of 11
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## Tower Input Data

The tower is a monopole.

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

The following design criteria apply:

Tower is located in Fairfield County, Connecticut.

Basic wind speed of 93 mph.

Structure Class III.

Exposure Category B.

Topographic Category 5.

Crest Height 137.60 ft.

SEAW RSM-03 procedures for wind speed-up calculations are used.

Topographic Feature: Continuous Escarpment.

Slope Distance L: 1425.60 ft.

Distance from Crest x: 26.00 ft.

Nominal ice thickness of 0.7500 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

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

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

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

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

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

## Options

Consider Moments - Legs	Distribute Leg Loads As Uniform	Use ASCE 10 X-Brace Ly Rules
Consider Moments - Horizontals	Assume Legs Pinned	Calculate Redundant Bracing Forces
Consider Moments - Diagonals	√ Assume Rigid Index Plate	Ignore Redundant Members in FEA
Use Moment Magnification	√ Use Clear Spans For Wind Area	√ SR Leg Bolts Resist Compression
√ Use Code Stress Ratios	√ Use Clear Spans For KL/r	√ All Leg Panels Have Same Allowable
√ Use Code Safety Factors - Guys	√ Retension Guys To Initial Tension	Offset Girt At Foundation
Escalate Ice	Bypass Mast Stability Checks	√ Consider Feed Line Torque
Always Use Max Kz	√ Use Azimuth Dish Coefficients	√ Include Angle Block Shear Check
Use Special Wind Profile	√ Project Wind Area of Appurt.	Use TIA-222-G Bracing Resist. Exemption
√ Include Bolts In Member Capacity	√ Autocalc Torque Arm Areas	Use TIA-222-G Tension Splice Exemption
Leg Bolts Are At Top Of Section	Add IBC .6D+W Combination	Poles
√ Secondary Horizontal Braces Leg	Sort Capacity Reports By Component	√ Include Shear-Torsion Interaction
Use Diamond Inner Bracing (4 Sided)	√ Triangulate Diamond Inner Bracing	Always Use Sub-Critical Flow
SR Members Have Cut Ends	Treat Feed Line Bundles As Cylinder	Use Top Mounted Sockets
SR Members Are Concentric		Pole Without Linear Attachments
		Pole With Shroud Or No Appurtenances
		Outside and Inside Corner Radii Are
		Known

## Tapered Pole Section Geometry

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Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	149.00-116.67	32.33	4.33	18	20.5000	28.8100	0.2190	0.8760	A572-65 (65 ksi)
L2	116.67-89.25	31.75	5.25	18	27.2583	35.4300	0.3130	1.2520	A572-65 (65 ksi)
L3	89.25-46.25	48.25	6.42	18	33.4528	45.8600	0.4380	1.7520	A572-65 (65 ksi)
L4	46.25-0.00	52.67		18	43.3340	56.8800	0.5000	2.0000	A572-65 (65 ksi)

### Tapered Pole Properties

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	I/Q in <sup>2</sup>	w in	w/t
L1	20.7825	14.0974	732.5826	7.1998	10.4140	70.3459	1466.1291	7.0501	3.2226	14.715
	29.2207	19.8738	2052.4686	10.1498	14.6355	140.2392	4107.6379	9.9388	4.6851	21.393
L2	28.7630	26.7691	2455.4840	9.5656	13.8472	177.3270	4914.1989	13.3871	4.2466	13.567
	35.9283	34.8874	5435.5179	12.4665	17.9984	301.9994	10878.1881	17.4470	5.6848	18.162
L3	35.2721	45.8975	6320.3829	11.7202	16.9940	371.9183	12649.0823	22.9531	5.1168	11.682
	46.4999	63.1462	16459.5229	16.1248	23.2969	706.5119	32940.7036	31.5791	7.3005	16.668
L4	45.6012	67.9775	15757.2224	15.2061	22.0137	715.7929	31535.1786	33.9952	6.7468	13.494
	57.6803	89.4751	35932.6785	20.0149	28.8950	1243.5587	71912.6381	44.7460	9.1309	18.262

Tower Elevation ft	Gusset Area (per face) ft <sup>2</sup>	Gusset Thickness in	Gusset Grade	Adjust. Factor A <sub>f</sub>	Adjust. Factor A <sub>r</sub>	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 149.00-116.67				1	1	1			
L2 116.67-89.25				1	1	1			
L3 89.25-46.25				1	1	1			
L4 46.25-0.00				1	1	1			

### Monopole Base Plate Data

#### Base Plate Data

Base plate is square	
Base plate is grouted	
Anchor bolt grade	A615
Anchor bolt size	2.2500 in
Number of bolts	22
Embedment length	54.0000 in
f <sub>c</sub>	4 ksi
Grout space	2.0000 in
Base plate grade	A572-50
Base plate thickness	3.5000 in
Bolt circle diameter	64.2500 in
Outer diameter	70.2500 in
Inner diameter	55.5000 in

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	Client	Insite	Designed by	ATE

Base Plate Data	
Base plate type	Plain Plate

### Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		$C_A A_A$ ft <sup>2</sup> /ft	Weight plf
7/8" (Town of Ridgfield)	A	No	Inside Pole	149.00 - 5.00	1	No Ice	0.00	0.54
						1/2" Ice	0.00	0.54
						1" Ice	0.00	0.54
1/2" Fiber (new cingular wireless)	A	No	Inside Pole	146.00 - 5.00	2	No Ice	0.00	0.09
						1/2" Ice	0.00	0.09
						1" Ice	0.00	0.09
3/8" RET (new cingular wireless)	A	No	Inside Pole	146.00 - 5.00	3	No Ice	0.00	0.08
						1/2" Ice	0.00	0.08
						1" Ice	0.00	0.08
5/8" DC Power (new cingular wireless)	A	No	Inside Pole	146.00 - 5.00	8	No Ice	0.00	0.40
						1/2" Ice	0.00	0.40
						1" Ice	0.00	0.40
7/8" (Town of Ridgfield)	A	No	Inside Pole	66.00 - 5.00	1	No Ice	0.00	0.54
						1/2" Ice	0.00	0.54
						1" Ice	0.00	0.54
EW90 (Town of Ridgfield)	A	No	Inside Pole	70.00 - 5.00	1	No Ice	0.00	0.32
						1/2" Ice	0.00	0.32
						1" Ice	0.00	0.32
1/2" Fiber Trunk (T-Mobile)	A	No	Inside Pole	126.00 - 5.00	1	No Ice	0.00	0.57
						1/2" Ice	0.00	0.57
						1" Ice	0.00	0.57
***								
1-5/8" Hybrid (Verizon)	A	No	Inside Pole	136.00 - 5.00	2	No Ice	0.00	1.00
						1/2" Ice	0.00	1.00
						1" Ice	0.00	1.00

### Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	$A_R$ ft <sup>2</sup>	$A_F$ ft <sup>2</sup>	$C_A A_A$ In Face ft <sup>2</sup>	$C_A A_A$ Out Face ft <sup>2</sup>	Weight lb
L1	149.00-116.67	A	0.000	0.000	0.000	0.000	167.40
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L2	116.67-89.25	A	0.000	0.000	0.000	0.000	184.30
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L3	89.25-46.25	A	0.000	0.000	0.000	0.000	307.31
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00
L4	46.25-0.00	A	0.000	0.000	0.000	0.000	312.76
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00

### Feed Line/Linear Appurtenances Section Areas - With Ice



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	<b>Client</b>	Insite	<b>Designed by</b>	ATE

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A <sub>R</sub> ft <sup>2</sup>	A <sub>F</sub> ft <sup>2</sup>	C <sub>AA</sub> In Face ft <sup>2</sup>	C <sub>AA</sub> Out Face ft <sup>2</sup>	Weight lb
L1	149.00-116.67	A	2.290	0.000	0.000	0.000	0.000	167.40
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L2	116.67-89.25	A	2.247	0.000	0.000	0.000	0.000	184.30
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L3	89.25-46.25	A	2.172	0.000	0.000	0.000	0.000	307.31
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00
L4	46.25-0.00	A	1.970	0.000	0.000	0.000	0.000	312.76
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.00

### Feed Line Center of Pressure

Section	Elevation ft	CP <sub>X</sub> in	CP <sub>Z</sub> in	CP <sub>X</sub> Ice in	CP <sub>Z</sub> Ice in
L1	149.00-116.67	0.0000	0.0000	0.0000	0.0000
L2	116.67-89.25	0.0000	0.0000	0.0000	0.0000
L3	89.25-46.25	0.0000	0.0000	0.0000	0.0000
L4	46.25-0.00	0.0000	0.0000	0.0000	0.0000

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

### Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K <sub>a</sub> No Ice	K <sub>a</sub> Ice
---------------	----------------------	-------------	-------------------------	--------------------------	-----------------------

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment  °	Placement  ft	C <sub>AA</sub> Front  ft <sup>2</sup>	C <sub>AA</sub> Side  ft <sup>2</sup>	Weight  lb
BA40-41 (Town of Ridgefield)	A	From Leg	4.00 0.00 0.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice	3.85 6.50 7.20	31.97 69.13 113.93
Angle Side Arm (Town of Ridgefield)	A	From Leg	3.00 0.00 0.00	0.0000	150.00	No Ice 1/2" Ice 1" Ice	0.82 1.10 1.40	150.00 230.00 310.00
***								
(4) HPA-65R-BUU-H8 (New Cingular Wireless)	A	From Leg	4.00 0.00	0.0000	146.00	No Ice 1/2" Ice	9.66 10.13	51.00 113.99

<b>tnxTower</b>  <b>Infinigy Engineering, PLLC</b> 1033 Watervliet Shaker Road Albany, NY 12205 Phone: (518) 690-0790 FAX: (518) 690-0793	<b>Job</b>	CT897 Ridgefield	<b>Page</b>	5 of 11
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	<b>Client</b>	Insite	<b>Designed by</b>	ATE

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight lb
(4) HPA-65R-BUU-H8 (New Cingular Wireless)	B	From Leg	0.00 4.00 0.00 0.00	0.0000	146.00	1" Ice No Ice 1/2" Ice 1" Ice	10.61 9.66 10.13 10.61	7.38 6.45 6.91 7.38	183.38 51.00 113.99 183.38
(4) HPA-65R-BUU-H8 (New Cingular Wireless)	C	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	9.66 10.13 10.61	6.45 6.91 7.38	51.00 113.99 183.38
(3) RRUS-11 (New Cingular Wireless)	A	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	3.79 4.04 4.29	1.46 1.63 1.81	55.00 80.77 109.98
(3) RRUS-11 (New Cingular Wireless)	B	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	3.79 4.04 4.29	1.46 1.63 1.81	55.00 80.77 109.98
(3) RRUS-11 (New Cingular Wireless)	C	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	3.79 4.04 4.29	1.46 1.63 1.81	55.00 80.77 109.98
(2) A2 Module (New Cingular Wireless)	A	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	1.60 1.76 1.92	0.38 0.47 0.57	21.20 31.53 44.07
(2) A2 Module (New Cingular Wireless)	B	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	1.60 1.76 1.92	0.38 0.47 0.57	21.20 31.53 44.07
(2) A2 Module (New Cingular Wireless)	C	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	1.60 1.76 1.92	0.38 0.47 0.57	21.20 31.53 44.07
RRUS- E2 (New Cingular Wireless)	A	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	3.40 3.63 3.86	1.82 2.09 2.38	76.98 108.45 144.12
RRUS- E2 (New Cingular Wireless)	B	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	3.40 3.63 3.86	1.82 2.09 2.38	76.98 108.45 144.12
RRUS- E2 (New Cingular Wireless)	C	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	3.40 3.63 3.86	1.82 2.09 2.38	76.98 108.45 144.12
(2) RRUS-12 (New Cingular Wireless)	A	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	3.15 3.36 3.59	1.29 1.44 1.60	50.00 73.22 99.64
(2) RRUS-12 (New Cingular Wireless)	B	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	3.15 3.36 3.59	1.29 1.44 1.60	50.00 73.22 99.64
(2) RRUS-12 (New Cingular Wireless)	C	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	3.15 3.36 3.59	1.29 1.44 1.60	50.00 73.22 99.64
RRUS- 32 (New Cingular Wireless)	A	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	2.69 2.91 3.14	1.92 2.23 2.56	67.30 93.17 123.05
RRUS- 32 (New Cingular Wireless)	B	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	2.69 2.91 3.14	1.92 2.23 2.56	67.30 93.17 123.05
RRUS- 32 (New Cingular Wireless)	C	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	2.69 2.91 3.14	1.92 2.23 2.56	67.30 93.17 123.05
(2) DC6-48-60-18-8F (new Cingular Wireless)	A	From Leg	4.00 0.00 0.00	0.0000	146.00	No Ice 1/2" Ice 1" Ice	2.90 3.13 3.37	2.90 3.13 3.37	32.80 60.76 92.36
DC6-48-60-18-8F (New Cingular Wireless)	B	From Leg	4.00 0.00	0.0000	146.00	No Ice 1/2" Ice	2.90 3.13	2.90 3.13	32.80 60.76

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Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight lb
			0.00			1" Ice	3.37	3.37	92.36
DC6-48-60-18-8F (New Cingular Wireless)	C	From Leg	4.00	0.0000	146.00	No Ice	2.90	2.90	32.80
			0.00			1/2" Ice	3.13	3.13	60.76
			0.00			1" Ice	3.37	3.37	92.36
Angle Low Profile Platform (new Cingular Wireless)	A	From Leg	3.00	0.0000	146.00	No Ice	26.10	26.10	1500.00
			0.00			1/2" Ice	31.60	31.60	1700.00
			0.00			1" Ice	37.10	37.10	1900.00
***									
Dish Pipe Mount (Town of Ridgefield)	A	From Leg	0.50	0.0000	70.00	No Ice	1.94	1.94	54.66
			0.00			1/2" Ice	2.46	2.46	80.59
			0.00			1" Ice	2.85	2.85	110.49
***									
SD210R-SF2P90LDF (Town of Ridgefield)	A	From Leg	4.00	0.0000	66.00	No Ice	27.00	27.00	37.00
			0.00			1/2" Ice	27.64	27.64	346.98
			0.00			1" Ice	28.28	28.28	668.04
Angle Side Arm (Town of Ridgefield)	A	From Leg	3.00	0.0000	66.00	No Ice	0.82	6.23	150.00
			0.00			1/2" Ice	1.10	8.47	230.00
			0.00			1" Ice	1.40	10.20	310.00
***									
APXV18-206516S-A20 (T-Mobile)	A	From Leg	4.00	0.0000	126.00	No Ice	3.76	2.60	15.00
			0.00			1/2" Ice	4.11	2.94	38.02
			0.00			1" Ice	4.47	3.29	65.52
APXV18-206516S-A20 (T-Mobile)	B	From Leg	4.00	0.0000	126.00	No Ice	3.76	2.60	15.00
			0.00			1/2" Ice	4.11	2.94	38.02
			0.00			1" Ice	4.47	3.29	65.52
APXV18-206516S-A20 (T-Mobile)	C	From Leg	4.00	0.0000	126.00	No Ice	3.76	2.60	15.00
			0.00			1/2" Ice	4.11	2.94	38.02
			0.00			1" Ice	4.47	3.29	65.52
LNx-6515DS-A1M (T-Mobile)	A	From Leg	4.00	0.0000	126.00	No Ice	11.45	7.70	63.00
			0.00			1/2" Ice	12.06	8.29	128.87
			0.00			1" Ice	12.69	8.89	202.41
LNx-6515DS-A1M (T-Mobile)	B	From Leg	4.00	0.0000	126.00	No Ice	11.45	7.70	63.00
			0.00			1/2" Ice	12.06	8.29	128.87
			0.00			1" Ice	12.69	8.89	202.41
LNx-6515DS-A1M (T-Mobile)	C	From Leg	4.00	0.0000	126.00	No Ice	11.45	7.70	63.00
			0.00			1/2" Ice	12.06	8.29	128.87
			0.00			1" Ice	12.69	8.89	202.41
Angle T-Arm (T-Mobile)	A	From Leg	3.00	0.0000	126.00	No Ice	12.90	4.39	250.00
			0.00			1/2" Ice	15.30	6.00	314.00
			0.00			1" Ice	17.70	7.61	378.00
Angle T-Arm (T-Mobile)	B	From Leg	3.00	0.0000	126.00	No Ice	12.90	4.39	250.00
			0.00			1/2" Ice	15.30	6.00	314.00
			0.00			1" Ice	17.70	7.61	378.00
Angle T-Arm (T-Mobile)	C	From Leg	3.00	0.0000	126.00	No Ice	12.90	4.39	250.00
			0.00			1/2" Ice	15.30	6.00	314.00
			0.00			1" Ice	17.70	7.61	378.00
RRUS 11 (Band 4) (T-Mobile)	A	From Leg	4.00	0.0000	126.00	No Ice	2.57	1.07	44.00
			0.00			1/2" Ice	2.76	1.21	63.57
			0.00			1" Ice	2.97	1.36	86.08
RRUS 11 (Band 4) (T-Mobile)	B	From Leg	4.00	0.0000	126.00	No Ice	2.57	1.07	44.00
			0.00			1/2" Ice	2.76	1.21	63.57
			0.00			1" Ice	2.97	1.36	86.08
RRUS 11 (Band 4) (T-Mobile)	C	From Leg	4.00	0.0000	126.00	No Ice	2.57	1.07	44.00
			0.00			1/2" Ice	2.76	1.21	63.57
			0.00			1" Ice	2.97	1.36	86.08
RRUS 11 (Band 12) (T-Mobile)	A	From Leg	4.00	0.0000	126.00	No Ice	2.52	1.07	55.00
			0.00			1/2" Ice	2.72	1.21	74.32

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	Insite	ATE

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight lb
RRUS 11 (Band 12) (T-Mobile)	B	From Leg	0.00 4.00 0.00 0.00	0.0000	126.00	1" Ice No Ice 1/2" Ice 1" Ice	2.92 2.52 2.72 2.92	1.36 1.07 1.21 1.36	96.56 55.00 74.32 96.56
RRUS 11 (Band 12) (T-Mobile)	C	From Leg	4.00 0.00 0.00	0.0000	126.00	No Ice 1/2" Ice 1" Ice	2.52 2.72 2.92	1.07 1.21 1.36	55.00 74.32 96.56
***									
Pipe Platform w/ Handrails (Verizon)	C	None		0.0000	136.00	No Ice 1/2" Ice 1" Ice	27.20 34.20 41.20	27.20 34.20 41.20	2000.00 2400.00 2800.00
(3) JAHH-1D65B (Verizon)	A	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	9.11 9.58 10.05	5.98 6.44 6.91	63.00 121.08 185.45
(3) JAHH-1D65B (Verizon)	B	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	9.11 9.58 10.05	5.98 6.44 6.91	63.00 121.08 185.45
(3) JAHH-1D65B (Verizon)	C	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	9.11 9.58 10.05	5.98 6.44 6.91	63.00 121.08 185.45
RRH_2x40-700U (Verizon)	A	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	1.93 2.10 2.28	1.05 1.19 1.33	50.00 66.85 86.39
RRH_2x40-700U (Verizon)	B	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	1.93 2.10 2.28	1.05 1.19 1.33	50.00 66.85 86.39
RRH_2x40-700U (Verizon)	C	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	1.93 2.10 2.28	1.05 1.19 1.33	50.00 66.85 86.39
RRH_2x60-PCS (Verizon)	A	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	3.50 3.76 4.03	2.10 2.34 2.58	50.00 74.31 102.31
RRH_2x60-PCS (Verizon)	B	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	3.50 3.76 4.03	2.10 2.34 2.58	50.00 74.31 102.31
RRH_2x60-PCS (Verizon)	C	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	3.50 3.76 4.03	2.10 2.34 2.58	50.00 74.31 102.31
RRH_4x45-AWS (Verizon)	A	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	2.38 2.59 2.81	1.37 1.54 1.73	64.00 81.77 102.51
RRH_4x45-AWS (Verizon)	B	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	2.38 2.59 2.81	1.37 1.54 1.73	64.00 81.77 102.51
RRH_4x45-AWS (Verizon)	C	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	2.38 2.59 2.81	1.37 1.54 1.73	64.00 81.77 102.51
DB-T1-6Z-8AB-0Z (Verizon)	A	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	4.80 5.07 5.35	2.00 2.19 2.39	45.00 81.13 121.22
DB-T1-6Z-8AB-0Z (Verizon)	B	From Leg	4.00 0.00 0.00	0.0000	136.00	No Ice 1/2" Ice 1" Ice	4.80 5.07 5.35	2.00 2.19 2.39	45.00 81.13 121.22

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## Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft <sup>2</sup>	Weight lb
VHLP3-11W-6GR (Town of Ridgefield)	A	Paraboloid w/Shroud (HP)	From Leg	1.00 0.00 0.00	0.0000		70.00	3.00	No Ice 7.07 1/2" Ice 7.47 1" Ice 7.86	67.90 106.25 144.59

## Load Combinations

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



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

### Maximum Tower Deflections - Service Wind

<i>Section No.</i>	<i>Elevation ft</i>	<i>Horz. Deflection in</i>	<i>Gov. Load Comb.</i>	<i>Tilt °</i>	<i>Twist °</i>
L1	149 - 116.667	17.093	50	1.1400	0.0251
L2	121 - 89.2503	10.824	50	0.9419	0.0109
L3	94.5003 - 46.2503	6.286	49	0.6688	0.0062
L4	52.667 - 0	1.861	49	0.3308	0.0027

### Critical Deflections and Radius of Curvature - Service Wind

<i>Elevation ft</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection in</i>	<i>Tilt °</i>	<i>Twist °</i>	<i>Radius of Curvature ft</i>
150.00	BA40-41	50	17.093	1.1400	0.0251	27134
146.00	(4) HPA-65R-BUU-H8	50	16.387	1.1215	0.0233	27134
136.00	Pipe Platform w/ Handrails	50	14.066	1.0574	0.0177	10436
126.00	APXV18-206516S-A20	50	11.858	0.9843	0.0128	5898
70.00	VHLP3-11W-6GR	49	3.305	0.4544	0.0040	6543
66.00	SD210R-SF2P90LDF	49	2.923	0.4245	0.0037	6544

### Maximum Tower Deflections - Design Wind

<i>Section No.</i>	<i>Elevation ft</i>	<i>Horz. Deflection in</i>	<i>Gov. Load Comb.</i>	<i>Tilt °</i>	<i>Twist °</i>
L1	149 - 116.667	83.498	22	5.4387	0.1237
L2	121 - 89.2503	53.234	22	4.6077	0.0539
L3	94.5003 - 46.2503	30.998	22	3.2919	0.0305
L4	52.667 - 0	9.186	22	1.6329	0.0135

### Critical Deflections and Radius of Curvature - Design Wind

<i>Elevation ft</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection in</i>	<i>Tilt °</i>	<i>Twist °</i>	<i>Radius of Curvature ft</i>
150.00	BA40-41	22	83.498	5.4387	0.1237	6126

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Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
146.00	(4) HPA-65R-BUU-H8	22	80.102	5.3670	0.1150	6126
136.00	Pipe Platform w/ Handrails	22	68.918	5.1126	0.0871	2355
126.00	APXV18-206516S-A20	22	58.251	4.7999	0.0634	1329
70.00	VHLP3-11W-6GR	22	16.307	2.2411	0.0198	1333
66.00	SD210R-SF2P90LDF	22	14.423	2.0939	0.0182	1333

### Base Plate Design Data

Plate Thickness	Number of Anchor Bolts	Anchor Bolt Size	Actual Allowable Ratio Bolt Tension	Actual Allowable Ratio Bolt Compression	Actual Allowable Ratio Plate Stress	Actual Allowable Ratio Stiffener Stress	Controlling Condition	Ratio
in		in	lb	lb	ksi	ksi		
3.5000	22	2.2500	122781.36	126897.76	18.799		Bolt T	0.61
			201288.96	334139.67	45.000			✓
			0.61	0.38	0.42			

### Compression Checks

### Pole Design Data

Section No.	Elevation	Size	L	L <sub>u</sub>	Kl/r	A	P <sub>u</sub>	φP <sub>n</sub>	Ratio P <sub>u</sub> /φP <sub>n</sub>
	ft		ft	ft		in <sup>2</sup>	lb	lb	
L1	149 - 116.667 (1)	TP28.81x20.5x0.219	32.33	149.00	183.3	19.0996	-10257.90	128420.00	0.080
L2	116.667 - 89.2503 (2)	TP35.43x27.2583x0.313	31.75	149.00	149.2	33.5450	-14412.70	340599.00	0.042
L3	89.2503 - 46.2503 (3)	TP45.86x33.4528x0.438	48.25	149.00	115.1	60.8523	-25478.60	1038320.00	0.025
L4	46.2503 - 0 (4)	TP56.88x43.334x0.5	52.67	149.00	89.3	89.4751	-45280.40	2532460.00	0.018

### Pole Bending Design Data

Section No.	Elevation	Size	M <sub>ux</sub>	φM <sub>ux</sub>	Ratio M <sub>ux</sub> /φM <sub>ux</sub>	M <sub>uy</sub>	φM <sub>uy</sub>	Ratio M <sub>uy</sub> /φM <sub>uy</sub>
	ft		lb-ft	lb-ft		lb-ft	lb-ft	
L1	149 - 116.667 (1)	TP28.81x20.5x0.219	381285.83	750611.67	0.508	0.00	750611.67	0.000
L2	116.667 - 89.2503 (2)	TP35.43x27.2583x0.313	966858.33	1694158.33	0.571	0.00	1694158.33	0.000
L3	89.2503 - 46.2503 (3)	TP45.86x33.4528x0.438	2050433.33	4060708.33	0.505	0.00	4060708.33	0.000
L4	46.2503 - 0 (4)	TP56.88x43.334x0.5	3714066.67	7454024.67	0.498	0.00	7454024.67	0.000

<b>tnxTower</b>  <b>Infinigy Engineering, PLLC</b> 1033 Watervliet Shaker Road Albany, NY 12205 Phone: (518) 690-0790 FAX: (518) 690-0793	<b>Job</b>	CT897 Ridgefield	<b>Page</b>	11 of 11
	<b>Project</b>	337-000	<b>Date</b>	10:14:57 07/12/18
	<b>Client</b>	Insite	<b>Designed by</b>	ATE

### Pole Shear Design Data

Section No.	Elevation ft	Size	Actual $V_u$ lb	$\phi V_n$ lb	Ratio $\frac{V_u}{\phi V_n}$	Actual $T_u$ lb-ft	$\phi T_n$ lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	149 - 116.667 (1)	TP28.81x20.5x0.219	20962.80	664304.00	0.032	8289.85	1504866.67	0.006
L2	116.667 - 89.2503 (2)	TP35.43x27.2583x0.313	23251.40	1221690.00	0.019	8267.14	3397191.67	0.002
L3	89.2503 - 46.2503 (3)	TP45.86x33.4528x0.438	29059.10	2260510.00	0.013	15623.92	8143600.00	0.002
L4	46.2503 - 0 (4)	TP56.88x43.334x0.5	34095.10	3217940.00	0.011	15608.83	14946249.33	0.001

### Pole Interaction Design Data

Section No.	Elevation ft	Ratio $P_u$ $\phi P_n$	Ratio $M_{ux}$ $\phi M_{nx}$	Ratio $M_{uy}$ $\phi M_{ny}$	Ratio $V_u$ $\phi V_n$	Ratio $T_u$ $\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	149 - 116.667 (1)	0.080	0.508	0.000	0.032	0.006	0.589 ✓	1.000	4.8.2 ✓
L2	116.667 - 89.2503 (2)	0.042	0.571	0.000	0.019	0.002	0.613 ✓	1.000	4.8.2 ✓
L3	89.2503 - 46.2503 (3)	0.025	0.505	0.000	0.013	0.002	0.530 ✓	1.000	4.8.2 ✓
L4	46.2503 - 0 (4)	0.018	0.498	0.000	0.011	0.001	0.516 ✓	1.000	4.8.2 ✓

### Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	$\phi P_{allow}$ lb	% Capacity	Pass Fail
L1	149 - 116.667	Pole	TP28.81x20.5x0.219	1	-10257.90	128420.00	58.9	Pass
L2	116.667 - 89.2503	Pole	TP35.43x27.2583x0.313	2	-14412.70	340599.00	61.3	Pass
L3	89.2503 - 46.2503	Pole	TP45.86x33.4528x0.438	3	-25478.60	1038320.00	53.0	Pass
L4	46.2503 - 0	Pole	TP56.88x43.334x0.5	4	-45280.40	2532460.00	51.6	Pass
							Summary	
							Pole (L2)	61.3 Pass
							Base Plate	61.0 Pass
							<b>RATING =</b>	<b>61.3 Pass</b>

# **ATTACHMENT 5**





# **ATTACHMENT 6**

January 23, 2019

*Via Certificate of Mailing*

Rudy Marconi, First Selectman  
Town of Ridgefield  
400 Main Street  
Ridgefield, CT 06877

Re: **Proposed Modifications to a Telecommunications Facility at 320 Old Stagecoach Road in Ridgefield, Connecticut**

Dear Mr. Marconi:

This firm represents Cellco Partnership d/b/a Verizon Wireless ("Cellco"). Today, Cellco filed a Sub-Petition for Declaratory Ruling ("Sub-Petition") with the Connecticut Siting Council ("Council") seeking approval to install antennas and related equipment on the existing 150-foot monopole tower at 320 Old Stagecoach Road in Ridgefield, Connecticut (the "Property"). Cellco intends to install nine (9) antennas and nine (9) remote radio heads on a platform at the 136-foot level on the tower. Equipment associated with Cellco's antennas and an emergency back-up generator will be installed within the facility compound.

As presented in the Sub-Petition, the proposed facility modifications constitute an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14-153). A copy of the full Sub-Petition is attached for your review. Landowners whose property abuts the Property were also sent notice of this filing along with a copy of the Sub-Petition.

15346652-v1

# Robinson + Cole

Rudy Marconi, First Selectman  
January 23, 2019  
Page 2

**Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the attached Sub-Petition.**

Please contact me if you have any questions regarding this proposal.

Sincerely,



Kenneth C. Baldwin

Attachment

January 23, 2019

*Via Certificate of Mailing*

Rebecca Mucchetti, Chair  
Planning and Zoning Commission  
Town of Ridgefield  
400 Main Street  
Ridgefield, CT 06877

Re: **Proposed Modifications to a Telecommunications Facility at 320 Old Stagecoach Road in Ridgefield, Connecticut**

Dear Ms. Mucchetti:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Sub-Petition for Declaratory Ruling (“Sub-Petition”) with the Connecticut Siting Council (“Council”) seeking approval to install antennas and related equipment on the existing 150-foot monopole tower at 320 Old Stagecoach Road in Ridgefield, Connecticut (the “Property”). Cellco intends to install nine (9) antennas and nine (9) remote radio heads on a platform at the 136-foot level on the tower. Equipment associated with Cellco’s antennas and an emergency back-up generator will be installed within the facility compound.

As presented in the Sub-Petition, the proposed facility modifications constitute an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14-153). A copy of the full Sub-Petition is attached for your review. Landowners whose property abuts the Property were also sent notice of this filing along with a copy of the Sub-Petition.

18835188-v1

# Robinson + Cole

Rebecca Mucchetti, Chair  
January 23, 2019  
Page 2

**Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the attached Sub-Petition.**

Please contact me if you have any questions regarding this proposal.

Sincerely,



Kenneth C. Baldwin

Attachment



280 Trumbull Street  
Hartford, CT 06103-3597  
Main (860) 275-8200  
Fax (860) 275-8299  
kbaldwin@rc.com  
Direct (860) 275-8345

Also admitted in Massachusetts

January 23, 2019

*Via Certificate of Mailing*

Insite Towers, LLC  
301 N. Fairfax Street, Suite 101  
Alexandria, VA 22314

Re: **Proposed Modifications to a Telecommunications Facility at 320 Old Stagecoach Road in Ridgefield, Connecticut**

Dear Sir or Madam:

This firm represents Celco Partnership d/b/a Verizon Wireless (“Celco”). Today, Celco filed a Sub-Petition for Declaratory Ruling (“Sub-Petition”) with the Connecticut Siting Council (“Council”) seeking approval to install antennas and related equipment on the existing 150-foot monopole tower at 320 Old Stagecoach Road in Ridgefield, Connecticut (the “Property”). Celco intends to install nine (9) antennas and nine (9) remote radio heads on a platform at the 136-foot level on the tower. Equipment associated with Celco’s antennas and an emergency back-up generator will be installed within the facility compound.

As presented in the Sub-Petition, the proposed facility modifications constitute an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14-153). A copy of the full Sub-Petition is attached for your review. Landowners whose property abuts the Property were also sent notice of this filing along with a copy of the Sub-Petition.

15346691-v1

# Robinson + Cole

Insite Towers, LLC  
January 23, 2019  
Page 2

**Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the attached Sub-Petition.**

Please contact me if you have any questions regarding this proposal.

Sincerely,

A handwritten signature in black ink, appearing to read 'K. Baldwin', with a stylized flourish at the end.

Kenneth C. Baldwin

Attachment

# **ATTACHMENT 7**

KENNETH C. BALDWIN

280 Trumbull Street  
Hartford, CT 06103-3597  
Main (860) 275-8200  
Fax (860) 275-8299  
kbaldwin@rc.com  
Direct (860) 275-8345

Also admitted in Massachusetts

January 23, 2019

***Via Certificate of Mailing***

«Name\_and\_Address»

**Re: Proposed Telecommunications Facility at 320 Old Stagecoach Road in Ridgefield, Connecticut**

Dear «Salutation»:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Sub-Petition for Declaratory Ruling (“Sub-Petition”) with the Connecticut Siting Council (“Council”) seeking approval to install antennas and related equipment on the existing 150-foot monopole tower at 320 Old Stagecoach Road in Ridgefield, Connecticut (the “Property”). Cellco intends to install nine (9) antennas and nine (9) remote radio heads on a platform at the 136-foot level on the tower. Equipment associated with Cellco’s antennas and an emergency back-up generator will be installed within the facility compound.

As presented in the Sub-Petition, the proposed facility improvements at the Property constitute an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14-153). A copy of the full Sub-Petition is attached for your review.

**Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the Sub-Petition.**

January 23, 2019

Page 2

This notice is being sent to you because you are listed as an owner of land that abuts the Property. If you have any questions regarding the Sub-Petition, the Council's process for reviewing the Sub-Petition or the details of the filing itself, please feel free to contact me at the number listed above. You may also contact the Council directly at 860-827-2935.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth C. Baldwin", with a stylized, flowing script.

Kenneth C. Baldwin

Attachment



**CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS**

**ABUTTING PROPERTY OWNERS**

**320 OLD STAGECOACH ROAD  
RIDGEFIELD, CONNECTICUT**

	<b>Property Address</b>	<b>Owner's and Mailing Address</b>
1.	310 Old Stagecoach Road	Harry Manchester 310 Old Stagecoach Road Ridgefield, CT 06877
2.	Ledges Road	Town of Ridgefield Conservation Commission 400 Main Street Ridgefield, CT 06877
3.	Ledges Road	Town of Ridgefield Conservation Commission 400 Main Street Ridgefield, CT 06877
4.	Seth Low Mountain Road	Town of Ridgefield Conservation Commission 400 Main Street Ridgefield, CT 06877
5.	2 Aspen Ledges Road	Michael M. and Margaret L. Dow 2 Aspen Ledges Road Ridgefield, CT 06877
6.	7 Aspen Ledges Road	Harold J. Wright 7 Aspen Ledges Road Ridgefield, CT 06877