

STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
A PETITION OF CELLCO PARTNERSHIP	:	SUB-PETITION NO. 1133
D/B/A VERIZON WIRELESS FOR	:	ANDREWS ROAD
MODIFICATIONS TO AN EXISTING	:	WOLCOTT, CT
WIRELESS TELECOMMUNICATIONS	:	
FACILITY OFF ANDREWS ROAD IN	:	
WOLCOTT, CONNECTICUT	:	NOVEMBER 1, 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 off Andrews Road in Wolcott, Connecticut (the “Property”) constitutes an Eligible Facilities Request (“EFR”) under the FCC Order. Cellco has designated this site as its “Wolcott NW Facility”.

II. Factual Background

On March 26, 1981, the Council approved SNET’s Petition for Declaratory Ruling to construct the existing 80-foot lattice tower at the Property (Petition No. 67). 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 80-foot lattice tower within a fenced compound. The tower currently supports T-Mobile antennas at a height of 77 feet above ground level (“AGL”).<sup>1</sup>

Equipment associated with the existing antennas is also located within the fenced compound.

### III. Cellco’s Proposed Wolcott NW Facility

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

Cellco intends to install a total of four (4) antennas and four (4) remote radio heads (“RRHs”) on the tower at a height of 67 feet AGL. Cellco’s equipment will be located on a 9’ x 8’ concrete pad with a steel canopy structure in the northern portion of the facility compound. A 30kW diesel-fueled backup generator will be installed on a separate concrete pad adjacent to Cellco’s equipment. Power and telephone service to Cellco’s equipment will extend from the existing utility backboard. Project Plans for the Wolcott NW Facility are included in Attachment 2. Specifications for Cellco’s antennas, RRHs and backup generator are included in Attachment 3. A Structural Analysis Report confirming that the existing 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

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<sup>1</sup> Frontier Communications maintains several whip and dish antennas on the tower which, according to Everest Infrastructure Partners, the tower owner, the Frontier antennas are no longer active.

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 67-foot level on the existing 80-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 two (2) equipment cabinets 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 and the existing fenced compound.

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 modifications are consistent with the Siting Council’s approval in Petition No. 67.

B. FCC Compliance

Included in Attachment 5 are Far Field Approximation tables 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 November 1, 2019, a copy of this Sub-Petition was sent to Wolcott's Mayor, Thomas G. Dunn; David Kalinowski, Wolcott's Zoning Inspector; Raymond Mahoney, Jr., Chairman of the Wolcott Planning and Zoning Commission; SNET, the owner of the Property; and Everest Infrastructure Partners, the tower owner. Copies of the letters sent to Mayor Dunn, Mr. Kalinowski, Mr. Mahoney, SNET and Everest Infrastructure Partners are included in Attachment 6. A copy of this Sub-Petition was also sent to the owners of land that abut 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**

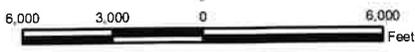


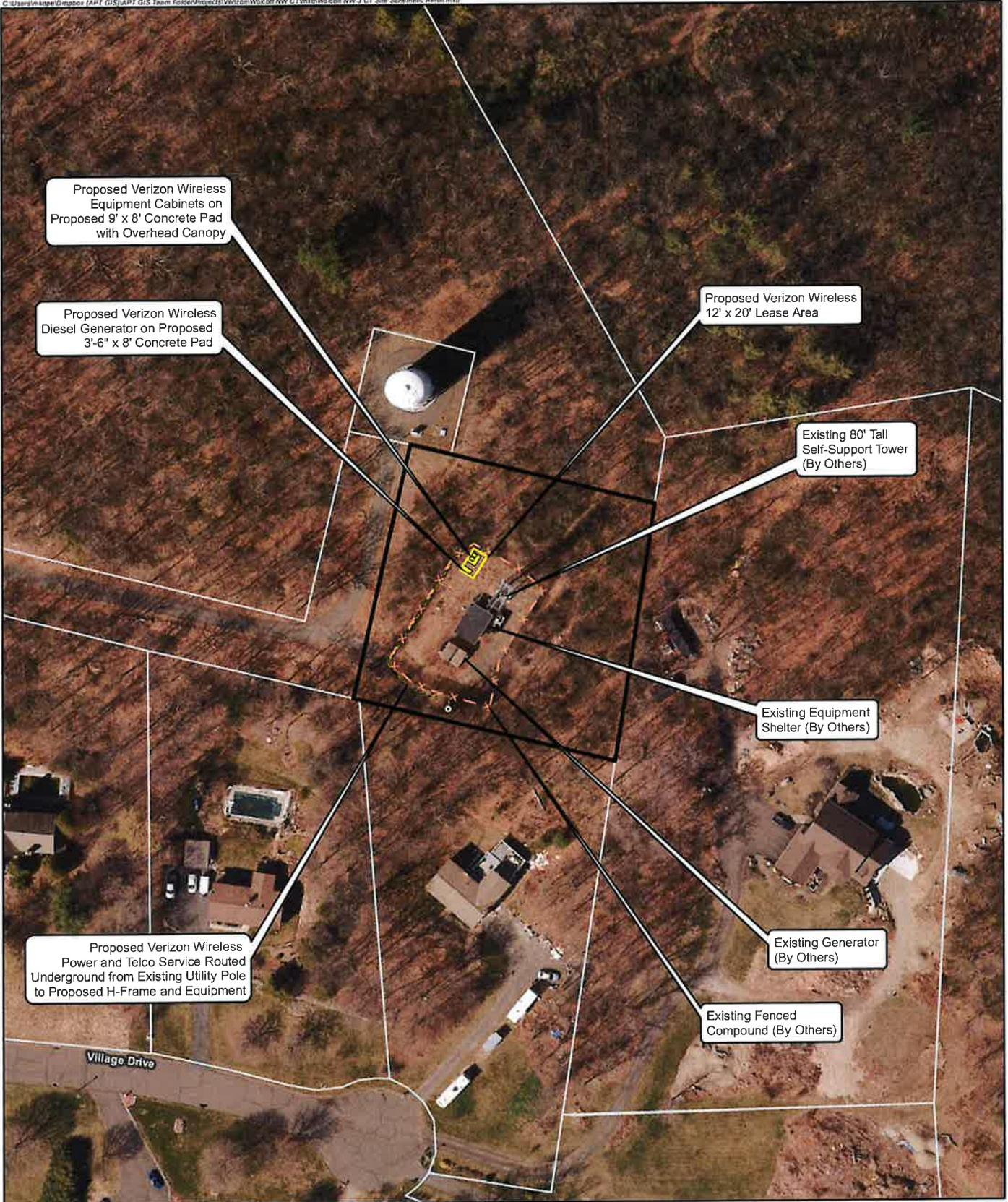
**Legend**

- ✖ Proposed Verizon Wireless Facility
- ⊠ Surrounding Verizon Wireless Facilities
- ▭ Municipal Boundary

**Site Vicinity Map**

Proposed Wireless Telecommunications Facility  
 Wolcott NW CT  
 Andrews Road  
 Wolcott, Connecticut





**Legend**

- Proposed Verizon Wireless Lease Area
- Proposed Verizon Wireless Equipment
- Proposed Verizon Wireless Power and Telco Service
- Existing Fenced Compound (By Others)
- Existing Utility Pole (By Others)
- Subject Property
- Approximate Parcel Boundary



**Site Schematic**

Proposed Wireless Telecommunications Facility  
 Wolcott NW CT  
 Andrews Road  
 Wolcott, Connecticut



# **ATTACHMENT 2**

CELLCO PARTNERSHIP

d.b.a. **verizon**

WIRELESS COMMUNICATIONS FACILITY

**WOLCOTT NW CT**  
**ANDREWS ROAD**  
**WOLCOTT, CT 06716**

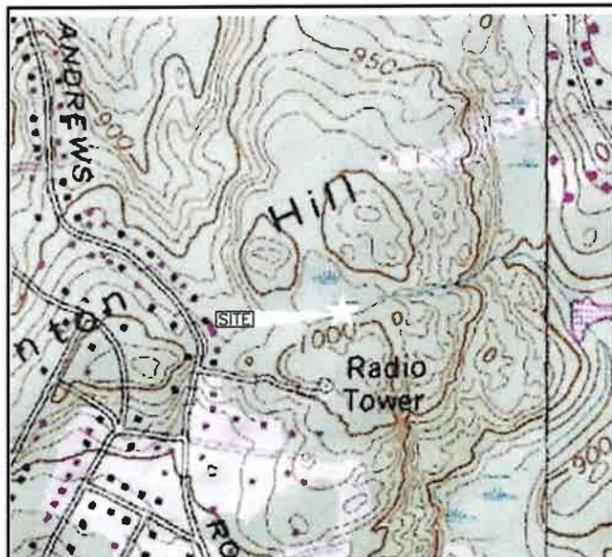
PREPARED FOR: CELLCO PARTNERSHIP D.B.A.

**verizon**

**HGD**  
**HUDSON**  
 Design Group LLC

45 BEECHWOOD DRIVE TEL: (978) 557-5553  
 N. ANDOVER, MA 01845 FAX: (978) 336-5586

*Daniel P. Hamon*  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CONNECTICUT  
 LICENSE NO. 20278



VICINITY MAP SCALE: 1 INCH=500FT

**DIRECTIONS TO SITE:**  
 HEAD NORTH ON ALEXANDER DR TOWARD BARNES INDUSTRIAL RD S  
 TURN RIGHT ONTO BARNES INDUSTRIAL RD S  
 TURN LEFT AT THE 1ST CROSS STREET ONTO CT-68 W  
 TURN RIGHT TOWARD N COLONY RD  
 TURN RIGHT ONTO N COLONY RD  
 TURN RIGHT TO MERGE ONTO CT-15 N TOWARD HARTFORD  
 TAKE EXIT 68W TO MERGE ONTO I-691 W TOWARD MERIDEN WATERBURY  
 TAKE EXIT 3 FOR CT-10 TOWARD MILLDALE/CHESHIRE  
 TURN RIGHT ONTO CT-10 N  
 CONTINUE STRAIGHT ONTO OLD TURNPIKE RD  
 TURN LEFT ONTO CT-322 W  
 SLIGHT RIGHT ONTO OLD MOUNTAIN RD  
 CONTINUE ONTO COUNTY RD  
 CONTINUE STRAIGHT ONTO CT-322 W  
 TURN LEFT TO STAY ON CT-322 W. CONTINUE STRAIGHT ONTO BEACH RD  
 TURN RIGHT ONTO ALCOTT RD  
 TURN LEFT ONTO SPINDLE HILL RD  
 TURN RIGHT ONTO ANDREWS RD  
 DRIVEWAY TO THE SITE IS ON THE RIGHT

CONSULTANT TEAM	
<b>PROJECT ENGINEER</b>	
HUDSON DESIGN GROUP, LLC 45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845 TEL: 1-(978)-557-5553 FAX: 1-(978)-336-5586	

PROJECT SUMMARY	
<b>SITE NAME:</b>	WOLCOTT NW CT
<b>SITE ADDRESS:</b>	ANDREWS ROAD WOLCOTT, CT 06716
<b>APPLICANT:</b>	CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492
<b>SITE ACQUISITION CONTACT:</b>	GREG MILANO SAI GROUP, LLC. 225 CEDAR STREET, SUITE 118 MARLBOROUGH, MA 01752 (860)707-9001
<b>LEGAL/REGULATORY COUNSEL:</b>	KENNETH C. BALDWIN ESQ. ROBINSON + COLE LLP (860)275-8345
<b>LATITUDE:</b>	N 41° 37' 03.70"
<b>LONGITUDE:</b>	W 73° 00' 16.10"

SHEET INDEX	
SHEET NO.	DESCRIPTION
T-1	TITLE SHEET
C-1	ABUTTERS PLAN
A-1	COMPOUND & ANTENNA PLANS
A-2	ELEVATIONS
A-3	FOUNDATION DETAILS

SCOPE OF WORK INFO.	
VERIZON WIRELESS IS PROPOSING TO INSTALL THE FOLLOWING IMPROVEMENTS TO THE EXISTING TELECOMMUNICATION SITE:	
<ul style="list-style-type: none"> <li>NEW PANEL ANTENNAS: (2) ANTENNA PER SECTOR WITH (2) SECTORS, FOR A TOTAL OF (4) ANTENNAS.</li> <li>NEW RRHs: (2) RRHs PER SECTOR WITH (2) SECTORS, FOR A TOTAL OF (4) RRHs</li> <li>NEW JUNCTION BOXES: (1) JUNCTION BOX IN TOTAL                              ITEMS LISTED ABOVE TO BE MOUNTED ON EXISTING TOWER.</li> <li>NEW EQUIPMENT CABINETS: (1) CABINET &amp; (1) GENERATOR ON PROPOSED CONCRETE PADS</li> <li>FINAL DEMARK LOCATION TO BE VERIFIED/DETERMINED BY UTILITY COMPANIES DURING THE CONSTRUCTION PHASE OF THE PROJECT. POWER AND TELEPHONE SERVICES WILL BE ROUTED UNDERGROUND FROM METER CENTER AND HOFFMAN BOX TO PROPOSED H-FRAME.                              ITEMS LISTED ABOVE TO BE INSTALLED WITHIN EXISTING FENCED COMPOUND.</li> </ul>	

CHECKED BY: JX

APPROVED BY: DPH

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	10/16/19	SITE ADDRESS NAME CHANGE	SLY
0	07/26/19	ISSUED FOR REVIEW	SLY

SITE NAME:  
 WOLCOTT NW CT

SITE ADDRESS:  
 ANDREWS ROAD  
 WOLCOTT, CT 06716

SHEET TITLE  
 TITLE SHEET

SHEET NUMBER  
**T-1**

**SOURCE:**

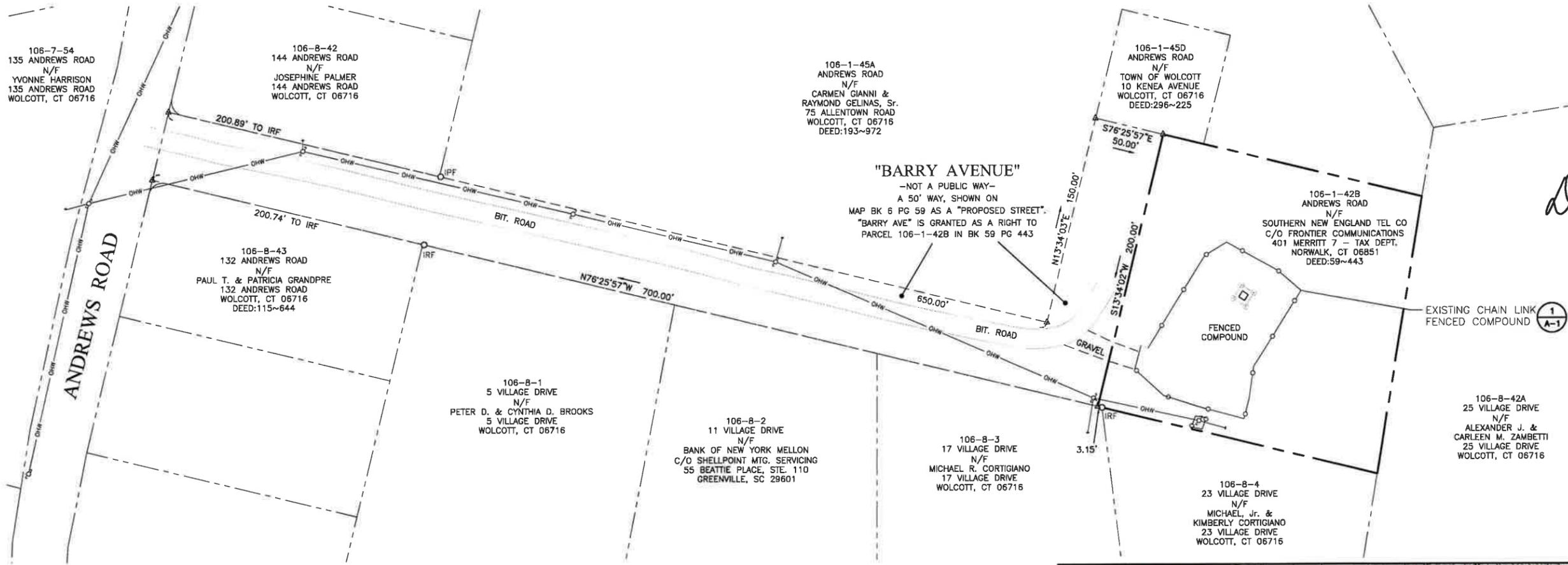
ONLINE GIS DATA MAP FROM THE TOWN OF WOLCOTT CT ASSESSORS MAP, ACCESSED ON JULY 26, 2019  
DRAWING No. C-1, ENTITLED, "ABUTTERS PLAN/EXISTING CONDITIONS SURVEY", DATED 4/7/19  
PREPARED BY NORTHEAST SURVEY CONSULTANTS

**SITE SPECIFIC NOTES:**

1. PROPERTY LINE INFORMATION IS COMPILED FROM ASSESSORS PLAN AND RECORD DOCUMENTS AND IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD BOUNDARY SURVEY, AND IS SUBJECT TO CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE. A FULL BOUNDARY SURVEY WAS NOT PERFORMED.
2. VERIFY AZIMUTHS W/ RF ENGINEER.

**LEGEND**

- PROPERTY LINE—SUBJECT PARCEL
- - - - - PROPERTY LINE—ABUTTERS
- - - - - TOWN BOUNDARY LINE
- - - - - CONTOUR LINE
- - - - - DELINEATED WETLAND LINE
- (E) BUILDING
- xxx-xx ASSESSORS MAP—BLOCK—LOT NO.
- (E) TREE LINE



*Daniel P. Hamo*

CHECKED BY: JX  
APPROVED BY: DPH

**SUBMITTALS**

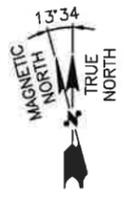
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0	07/25/19	ISSUED FOR REVIEW	SLY

SITE NAME:  
WOLCOTT NW CT

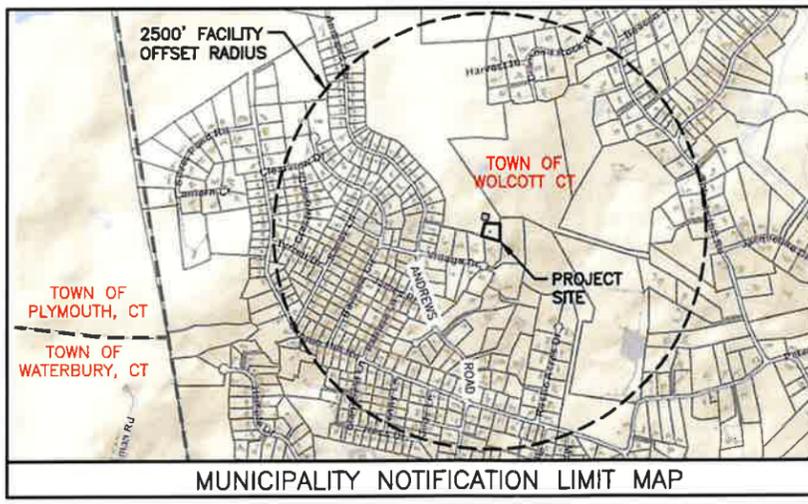
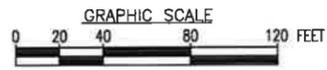
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ANDREWS ROAD  
WOLCOTT, CT 06716

SHEET TITLE  
ABUTTERS PLAN

SHEET NUMBER  
**C-1**



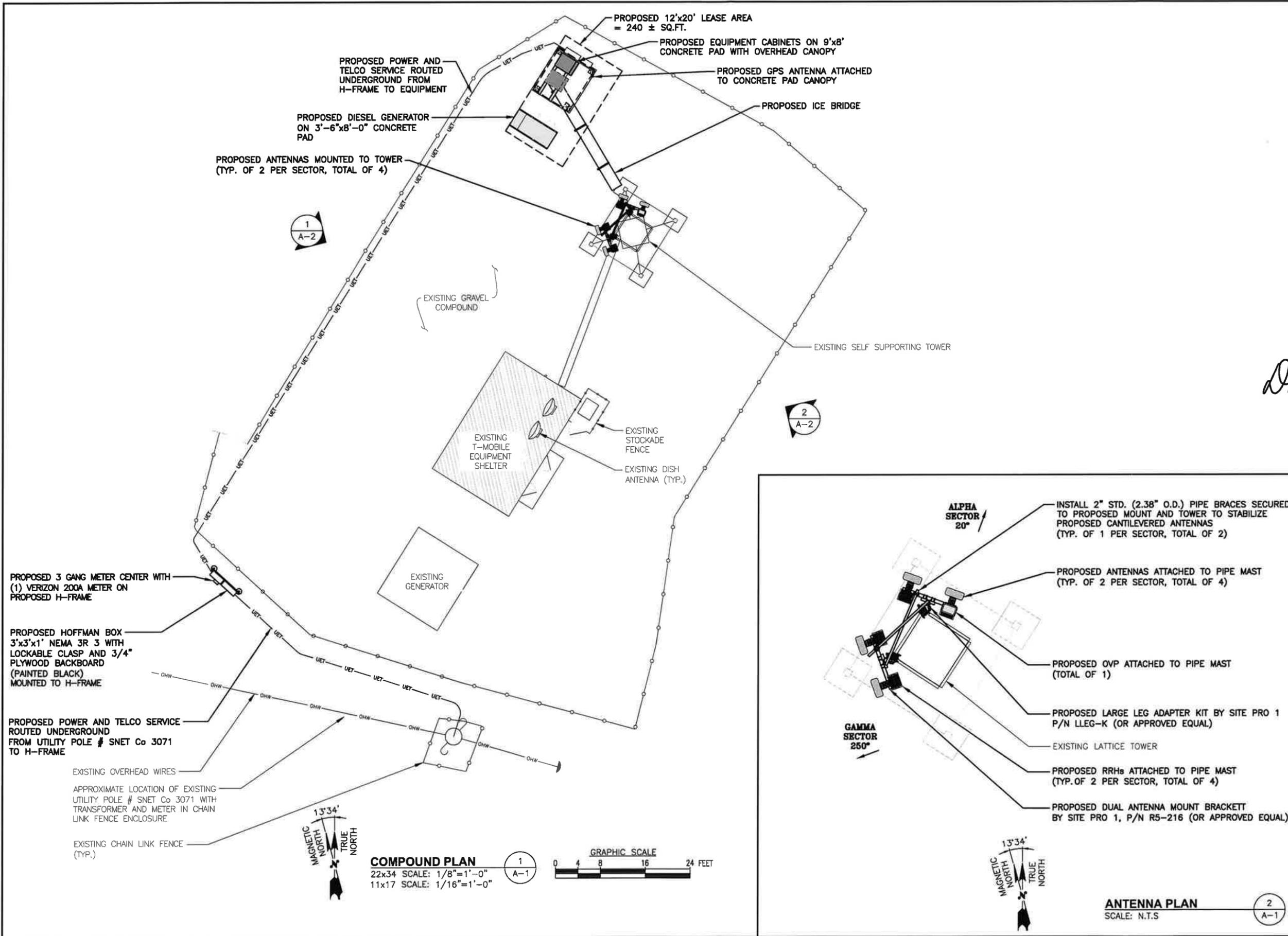
**ABUTTERS PLAN**  
22x34 SCALE: 1"=40'  
11x17 SCALE: 1"=80'



PREPARED FOR: CELLCO PARTNERSHIP D.B.A.



45 BEECHWOOD DRIVE TEL: (978) 557-5553  
N. ANDOVER, MA 01845 FAX: (978) 336-5566



**COMPOUND PLAN**  
22x34 SCALE: 1/8"=1'-0"  
11x17 SCALE: 1/16"=1'-0"

**ANTENNA PLAN**  
SCALE: N.T.S.

PREPARED FOR: CELCO PARTNERSHIP D.B.A.  
**verizon**

**HG HUDSON**  
Design Group LLC  
45 BEECHWOOD DRIVE TEL: (978) 557-5553  
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*Daniel P. Hamo*  
LICENSED PROFESSIONAL ENGINEER

CHECKED BY: JX  
APPROVED BY: DPH

**SUBMITTALS**

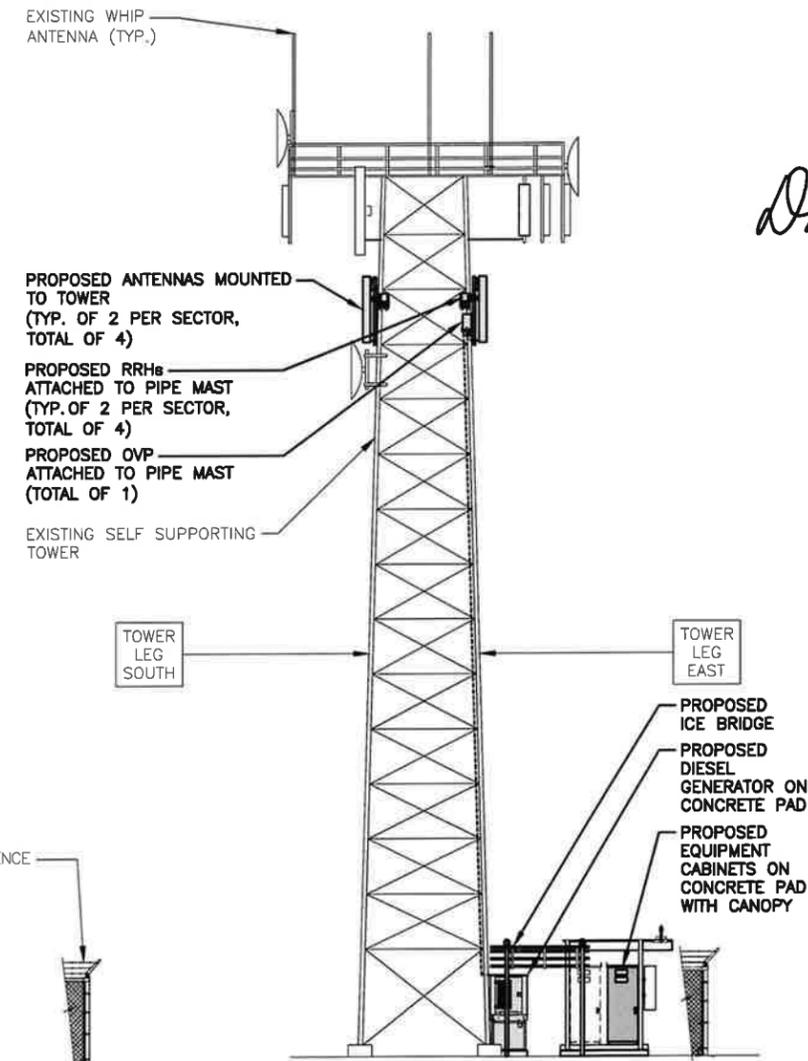
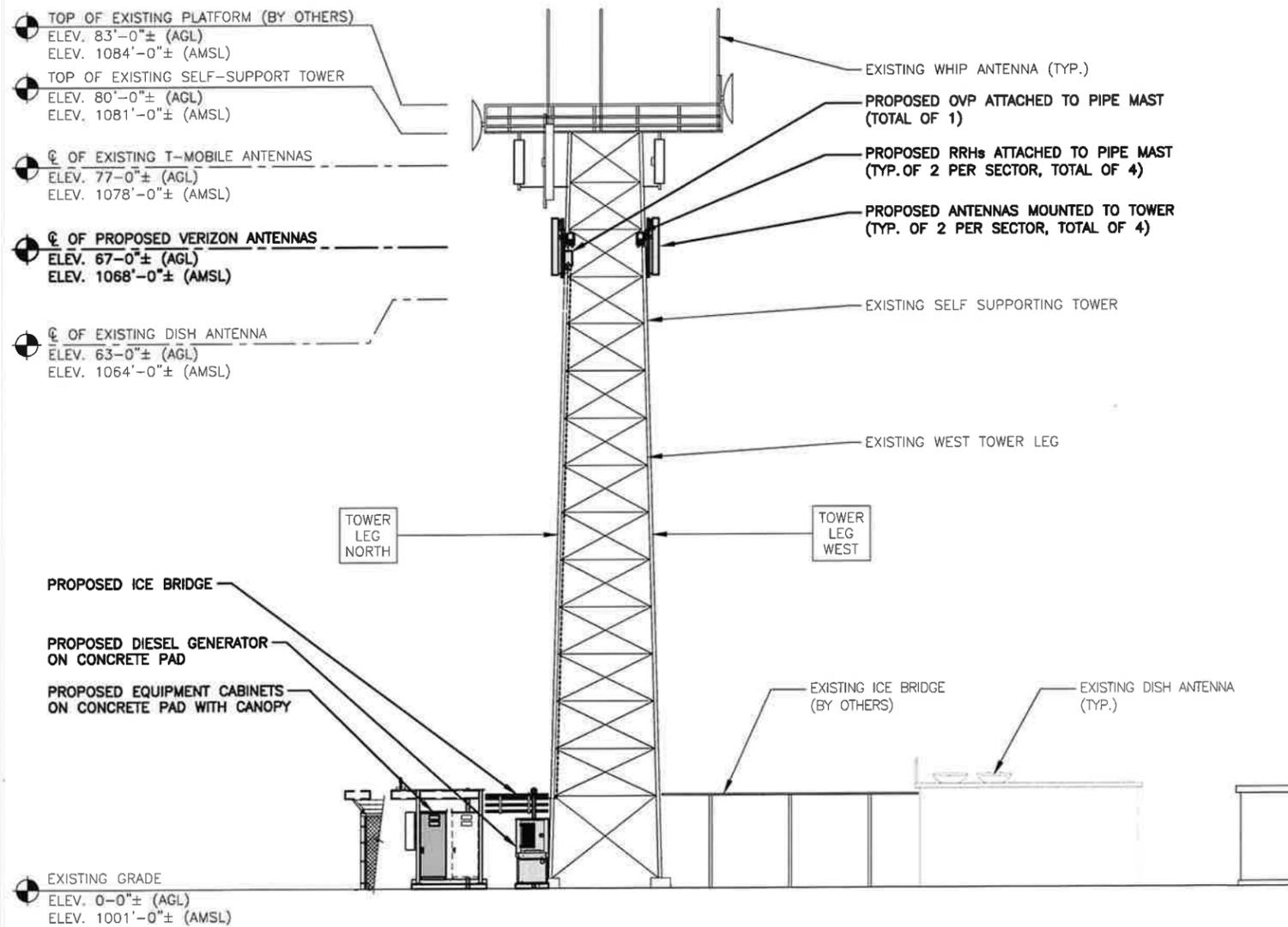
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0	07/26/19	ISSUED FOR REVIEW	SLY

SITE NAME:  
WOLCOTT NW CT  
SITE ADDRESS:  
ANDREWS ROAD  
WOLCOTT, CT 06716

SHEET TITLE  
**COMPOUND & ANTENNA PLANS**

SHEET NUMBER  
**A-1**

**NOTE:**  
AN ANALYSIS OF THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DRAWINGS ARE SUBJECT TO CHANGE PENDING OUTCOME OF A STRUCTURAL ANALYSIS.



*Daniel P. Hamon*

CHECKED BY: JX  
APPROVED BY: DPH

**SUBMITTALS**

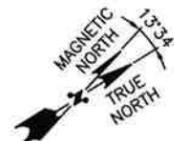
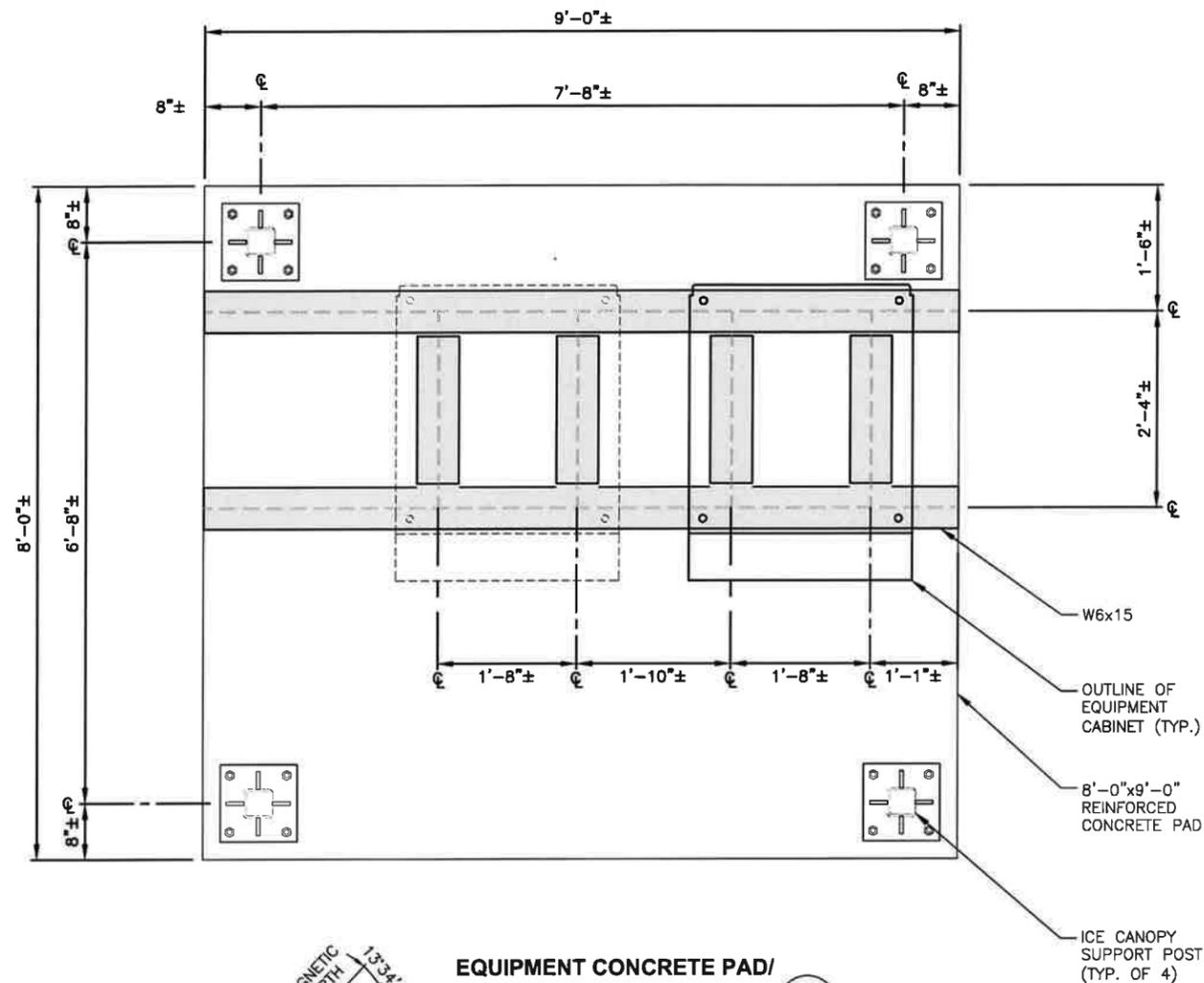
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SITE NAME:  
WOLCOTT NW CT

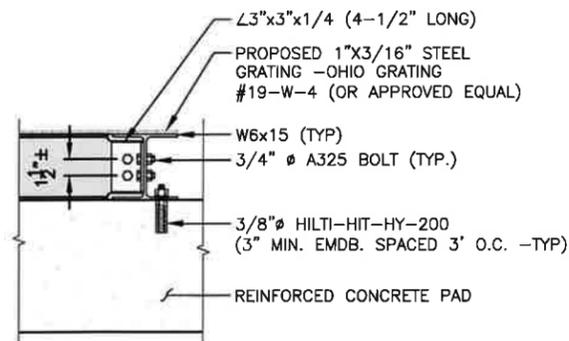
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ANDREWS ROAD  
WOLCOTT, CT 06716

SHEET TITLE  
ELEVATIONS

SHEET NUMBER  
**A-2**



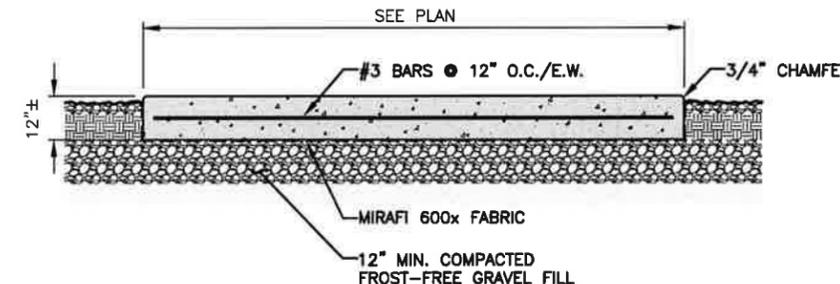
**EQUIPMENT CONCRETE PAD/  
CANOPY SUPPORT PLAN** 1  
22x34 SCALE: 1"=1'-0"  
11x17 SCALE: 1/2"=1'-0"  
GRAPHIC SCALE  
0 0.5 1 2 3 FEET



**STEEL DUNNAGE SECTION** 2  
22x34 SCALE: 1-1/2"=1'-0"  
11x17 SCALE: 3/4"=1'-0"  
GRAPHIC SCALE  
0 0'-4" 0'-8" 1'-4" 2'-0"

**FOUNDATION NOTES & CONCRETE SPECIFICATIONS:**

- FOUNDATION AREA SHALL BE EXCAVATED TO THE DEPTH AND DIMENSIONS SHOWN ON THE PLANS. EXISTING LEDGE AND ALL OTHER EXISTING UNSUITABLE MATERIAL SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE. THE SUBGRADE SHALL BE ROLLED WITH A 1-TON, VIBRATORY, WALK-BEHIND ROLLER AT A SPEED OF LESS THAN 2 FPS, 6 PASSES MINIMUM, TO PROVIDE UNYIELDING SURFACE.
- UNDERCUT SOFT OR "WEAVING" AREAS A MINIMUM OF 12 INCHES DEEP. BACKFILL UNDERCUT AREA WITH FILL MEETING THE SPECIFICATIONS OF STRUCTURAL FILL.
- CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (f'c)=4000 psi. CONCRETE TO BE AIR ENTRAINED, DESIRED AIR CONTENT TO BE 6% (PLUS OR MINUS 2%)
- REINFORCING BAR TO BE ASTM A615 GRADE 60.
- WELDED WIRE FABRIC TO CONFORM TO THE REQUIREMENTS OF ASTM A185. WIRES FOR FABRIC TO CONFORM TO THE REQUIREMENTS OF ASTM A82.
- COORDINATE WITH MANUFACTURER OF PREFABRICATED SHELTER FOR LOCATION OF ATTACHMENTS TO BASE SLAB.
- ALL REINFORCING TO HAVE MINIMUM CONCRETE COVER PER ACI SPECIFICATIONS.
- ALL CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO LATEST EDITION OF ACI 318 AND APPLICABLE STATE BUILDING CODE.



**CONCRETE PAD DETAIL** 3  
22x34 SCALE: N.T.S. A-3

PREPARED FOR: CELCO PARTNERSHIP D.B.A.

**verizon**

**HG HUDSON Design Group LLC**

45 BEECHWOOD DRIVE TEL: (978) 557-5553  
N. ANDOVER, MA 01845 FAX: (978) 336-5586



CHECKED BY: JX

APPROVED BY: DPH

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	10/16/19	SITE ADDRESS NAME CHANGE	SLY
0	07/26/19	ISSUED FOR REVIEW	SLY

SITE NAME:  
WOLCOTT NW CT  
  
SITE ADDRESS:  
ANDREWS ROAD  
WOLCOTT, CT 06716

SHEET TITLE  
FOUNDATION DETAILS

SHEET NUMBER  
**A-3**

# **ATTACHMENT 3**

# NNHH-65B-R4

8-port sector antenna, 4x 698–896 and 4x 1695–2360 MHz, 65° HPBW, 4x RETs



- Array configuration provides capability for 4T4R (4x MIMO) on Low band and High band
- Optimized SPR performance across all operating bands
- Excellent wind loading characteristics

## Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360
Gain, dBi	14.6	15.0	17.0	17.3	17.5	17.9
Beamwidth, Horizontal, degrees	66	64	58	61	63	59
Beamwidth, Vertical, degrees	11.9	10.3	7.4	6.9	6.4	5.7
Beam Tilt, degrees	2–14	2–14	2–12	2–12	2–12	2–12
USLS (First Lobe), dB	17	19	14	19	16	18
Front-to-Back Ratio at 180°, dB	30	31	35	38	37	34
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	25	25	25	25	25	25
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	-150	-150	-150	-150	-150	-150
Input Power per Port at 50°C, maximum, watts	300	300	250	250	250	200
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm					

## Electrical Specifications, BASTA\*

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2180	2300–2360
Gain by all Beam Tilts, average, dBi	14.2	14.7	16.4	16.9	17.0	17.5
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.5	±0.9	±0.4	±0.5	±0.5
Gain by Beam Tilt, average, dBi	2 °   14.2 8 °   14.2 14 °   13.9	2 °   14.7 8 °   14.8 14 °   14.3	2 °   16.5 7 °   16.6 12 °   16.1	2 °   16.7 7 °   17.0 12 °   16.7	2 °   16.8 7 °   17.1 12 °   16.7	2 °   17.2 7 °   17.8 12 °   17.3
Beamwidth, Horizontal Tolerance, degrees	±3.3	±3.1	±6.4	±3	±3.5	±5.3
Beamwidth, Vertical Tolerance, degrees	±0.8	±0.8	±0.8	±0.4	±0.7	±0.2
USLS, beampeak to 20° above beampeak, dB	17	19	14	17	15	17
Front-to-Back Total Power at 180° ± 30°, dB	21	21	30	31	27	27
CPR at Boresight, dB	21	22	16	17	18	17
CPR at Sector, dB	9	6	9	9	8	12

\* 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

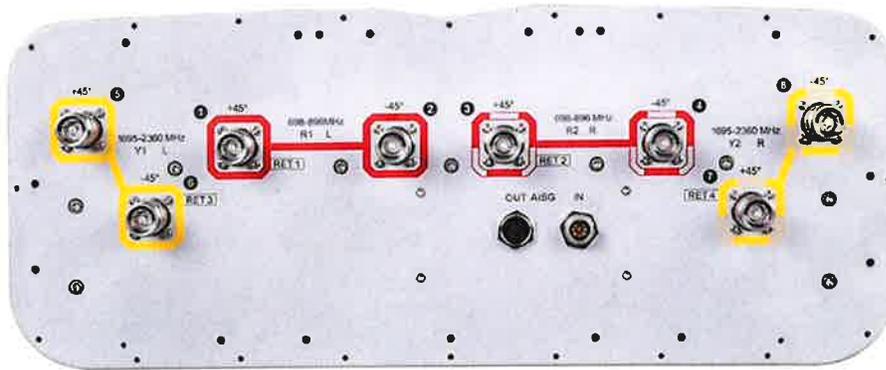


Left Bottom Right

Array	Freq (MHz)	Conns	RET (MRET)	AISG RET UID
R1	698-896	1-2	1	CPxxxxxxxxxxxxxxxxmm.1
R2	698-896	3-4	2	CPxxxxxxxxxxxxxxxxmm.2
Y1	1695-2360	5-6	3	CPxxxxxxxxxxxxxxxxmm.3
Y2	1695-2360	7-8	4	CPxxxxxxxxxxxxxxxxmm.4

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

## Port Configuration



## General Specifications

**Operating Frequency Band**

1695 – 2360 MHz | 698 – 896 MHz

# NNHH-65B-R4

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<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<b>Performance Note</b>	Outdoor usage   Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
<b>Total Input Power, maximum</b>	900 W @ 50 °C

## 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 inner conductor and 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>	154.0 lbf @ 150 km/h   685.0 N @ 150 km/h
<b>Wind Loading, lateral</b>	232.0 N @ 150 km/h   52.2 lbf @ 150 km/h
<b>Wind Loading, maximum</b>	199.9 lbf @ 150 km/h   889.0 N @ 150 km/h
<b>Effective Projected Area (EPA), frontal</b>	0.64 m <sup>2</sup>   6.89 ft <sup>2</sup>
<b>Effective Projected Area (EPA), lateral</b>	0.22 m <sup>2</sup>   2.37 ft <sup>2</sup>
<b>Wind Speed, maximum</b>	241 km/h   150 mph

## Dimensions

<b>Length</b>	1828.0 mm   72.0 in
<b>Width</b>	498.0 mm   19.6 in
<b>Depth</b>	197.0 mm   7.8 in
<b>Net Weight, without mounting kit</b>	35.6 kg   78.5 lb

## Remote Electrical Tilt (RET) Information

<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	High band (2)   Low band (2)
<b>Power Consumption, idle state, maximum</b>	1 W
<b>Power Consumption, normal conditions, maximum</b>	8 W
<b>Protocol</b>	3GPP/AISG 2.0 (Multi-RET)
<b>RET Hardware</b>	CommRET v2
<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	1 female   1 male

# NNHH-65B-R4

---

## Packed Dimensions

<b>Length</b>	2010.0 mm   79.1 in
<b>Width</b>	608.0 mm   23.9 in
<b>Depth</b>	352.0 mm   13.9 in
<b>Shipping Weight</b>	49.5 kg   109.1 lb

## Regulatory Compliance/Certifications

### Agency

RoHS 2011/65/EU

ISO 9001:2015

China RoHS SJ/T 11364-2014

### Classification

Compliant by Exemption

Designed, manufactured and/or distributed under this quality management system

Above Maximum Concentration Value (MCV)



## Included Products

BSAMNT-3 — 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

# 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

# SAMSUNG

## Dual-Band Radio Unit 700/850MHz (B13/B5) RFV01U-D2A

Samsung's RFV01U-D2A 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.



### 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

The RFV01U-D2A RU targets dual-band support across Band 13 (700MHz) and Band 5 (850MHz), making it an ideal product for broad coverage footprints across multiple common low-end, long-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.

### Key Technical Specifications

Duplex Type: FDD

Operating Frequencies:

B13: DL(746-756MHz)/UL(777-787MHz)

B5: DL(869-894MHz)/UL(824-849MHz)

Instantaneous Bandwidth: 10MHz(B13) + 25MHz(B5)

RF Chain: 4T4R/2T4R/2T2R

Output Power: Total 320W

DU-RU Interface: CPRI (10Gbps)

Dimensions: 380 x 380 x 207mm (29.9L)

Weight: 31.9kg

Input Power: -48V DC

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

Cooling: Natural convection

**SD030** | **2.4L** | **30 kW**  
**INDUSTRIAL DIESEL GENERATOR SET**  
 EPA Certified Stationary Emergency

**STANDBY POWER RATING**

30 kW, 38 kVA, 60 Hz

**PRIME POWER RATING\***

27 kW, 34 kVA, 60 Hz

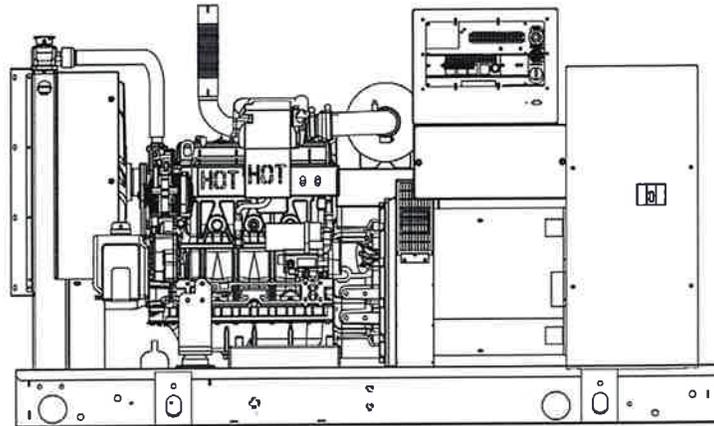


Image used for illustration purposes only



\*Built in the USA using domestic and foreign parts

\*EPA Certified Prime ratings are not available in the U.S. or its Territories.

\*\*Certain options or customization may not hold certification valid.

**CODES AND STANDARDS**

Generac products are designed to the following standards:



UL2200, UL508, UL142, UL498



NFPA70, 99, 110, 37



NEC700, 701, 702, 708



ISO9001, 8528, 3046, 7637,  
 Pluses #2b, 4



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41

**POWERING AHEAD**

For over 50 years, Generac has led the industry with innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac's gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial application under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

**STANDARD FEATURES**

**ENGINE SYSTEM**

**General**

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel flexible exhaust connection
- Critical Exhaust Silencer (enclosed only)
- Factory Filled Oil
- Radiator Duct Adapter (open set only)

**Fuel System**

- Fuel lockoff solenoid
- Primary fuel filter

**Cooling System**

- Closed Coolant Recovery System
- UV/Ozone resistant hoses
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene glycol antifreeze
- 120 VAC Coolant Heater

**Engine Electrical System**

- Battery charging alternator
- Battery cables
- Battery tray
- Solenoid activated starter motor
- Rubber-booted engine electrical connections

**ALTERNATOR SYSTEM**

- U/2200 GENprotect™
- 12 leads (3-phase, non 600 V)
- Class H insulation material
- Vented rotor
- 2/3 pitch
- Skewed stator
- Auxiliary voltage regulator power winding
- Amortisseur winding
- Brushless Excitation
- Sealed Bearings
- Automated manufacturing (winding, insertion, lacing, varnishing)
- Rotor dynamically spin balanced (get tolerance)
- Full load capacity alternator
- Protective thermal switch

**GENERATOR SET**

- Internal Genset Vibration Isolation
- Separation of circuits - high/low voltage
- Separation of circuits - multiple breakers
- Silencer Heat Shield
- Wrapped Exhaust Piping
- Silencer housed in discharge hood (enclosed only)
- Standard Factory Testing
- 2 Year Limited Warranty (Standby rated Units)
- 1 Year Limited Warranty (Prime rated Units)
- Silencer mounted in the discharge hood (enclosed only)

**ENCLOSURE (IF SELECTED)**

- Rust-proof fasteners with nylon washers to protect finish
- High performance sound-absorbing material
- Gasketed doors
- Stamped air-intake louvers
- Air discharge hoods for radiator-upward pointing
- Stainless steel lift off door hinges
- Stainless steel lockable handles
- Rhino Coat™ - Textured polyester powder coat

**TANKS (IF SELECTED)**

- UL 142
- Double wall
- Vents
- Sloped top
- Sloped bottom
- Factory pressure tested (2 psi)
- Rupture basin alarm
- Fuel level
- Check valve in supply and return lines
- Rhino Coat™ - Textured polyester powder coat
- Stainless hardware

**CONTROL SYSTEM**



**Control Panel**

- Digital H Control Panel - Dual 4x20 Display
- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable PLC
- RS-232/485
- All-Phase Sensing DVR
- Full System Status
- Utility Monitoring
- Low Fuel Pressure Indication
- 2-Wire Start Compatible
- Power Output (kW)

- Power Factor
- kW Hours, Total & Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus protocol
- Predictive Maintenance algorithm
- Sealed Boards
- Password parameter adjustment protection

- Single point ground
- 15 channel data logging
- 0.2 msec high speed data logging
- Alarm information automatically comes up on the display

**Alarms**

- Oil Pressure (Pre-programmable Low Pressure Shutdown)
- Coolant Temperature (Pre-programmed High Temp Shutdown)
- Coolant Level (Pre-programmed Low Level Shutdown)
- Low Fuel Pressure Alarm
- Engine Speed (Pre-programmed Over speed Shutdown)
- Battery Voltage Warning
- Alarms & warnings time and date stamped
- Alarms & warnings for transient and steady state conditions
- Snap shots of key operation parameters during alarms & warnings
- Alarms and warnings spelled out (no alarm codes)

**CONFIGURABLE OPTIONS**

**ENGINE SYSTEM**

**General**

- Oil Make-Up System
- Oil Heater
- Industrial Exhaust Silencer

**Fuel Electrical System**

- Flexible fuel lines
- Primary fuel filter

**Engine Electrical System**

- 10A UL battery charger
- 2.5A UL battery charger
- Battery Warmer

**ALTERNATOR SYSTEM**

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical coating
- Permanent Magnet Excitation

**CIRCUIT BREAKER OPTONS**

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breaker

**GENERATOR SET**

- Gen-Link Communications Software (English Only)
- 8 Load Position Load Center
- 2 Year Extended Warranty
- 5 Year Warranty
- 5 Year Extended Warranty

**ENCLOSURE**

- Weather Protected
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Steel Enclosure
- Aluminum Enclosure
- 150 MPH Wind Kit
- 12 VDC Enclosure Lighting Kit
- 120 VAC Enclosure Lighting Kit
- AC/DC Enclosure Lighting Kit
- Door Alarm Switch

**TANKS (Size on Last page)**

- Electrical Fuel Level
- Mechanical Fuel Level
- 54 Gal (204.4 L) Usable Capacity
- 132 Gal (499.7 L) Usable Capacity
- 211 Gal (798.7 L) Usable Capacity
- 300 Gal (1135.6 L) Usable Capacity
- 8" Vent Extension
- 13" Vent Extension
- 19" Vent Extension

**CONTROL SYSTEM**

- 21-Light Remote Annunciator
- Remote Relay Panel (8 or 16)
- Oil Temperature Sender with Indication Alarm
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- Remote Communication - Modem
- Remote Communication - Ethernet
- 10A Run Relay
- Ground Fault Indication and Protection Functions

**ENGINEERED OPTIONS**

**ENGINE SYSTEM**

- Coolant heater ball valves
- Block Heaters
- Fluid containment pans

**ALTERNATOR SYSTEM**

- 3rd Breaker Systems

**CONTROL SYSTEM**

- Spare inputs (x4) / outputs (x4) - H Panel Only
- Battery Disconnect Switch

**GENERATOR SET**

- Special Testing
- IBC Seismic Certification

**ENCLOSURE**

- Motorized Dampers
- Door switched for intrusion alert
- Enclosure ambient heaters

**TANKS**

- Overfill Protection Valve
- UL2085 Tank
- ULC S-601 Tank
- Stainless Steel Tank
- Special Fuel Tanks (MIDEQ and FL DEP/DERM, etc.)
- Vent Extensions

**RATING DEFINITIONS**

Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

Prime - Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications. Power ratings in accordance with ISO 8528-1, Second Edition

**SD030 | 2.4L | 30 kW**  
**INDUSTRIAL DIESEL GENERATOR SET**  
 EPA Certified Stationary Emergency



**APPLICATION AND ENGINEERING DATA**

**ENGINE SPECIFICATIONS**

General

Make	Generac
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emissions Data Sheet
Cylinder #	4
Type	In-Line
Displacement - L (cu in)	2.4 (146.46)
Bore - mm (in)	90 (3.54)
Stroke - mm (in)	94 (3.70)
Compression Ratio	21.3:1
Intake Air Method	Turbocharged
Cylinder Head Type	Cast Iron
Piston Type	Aluminium

Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	+/- 0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full Flow
Crankcase Capacity - L (qts)	6.2 (6.52)

Cooling System

Cooling System Type	Closed Recovery
Water Pump	Pre-Lubed, Self Sealing
Fan Type	Pusher
Fan Speed (rpm)	2698
Fan Diameter mm (in)	560 (22)
Coolant Standard Wattage	1500
Coolant Heater Standard Voltage	120 VAC

Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specifications	ASTM
Fuel Filtering (microns)	5
Fuel Injection	Distribution Injection Pump
Fuel Pump Type	Engine Driven Gear
Injector Type	Mechanical
Fuel Supply Line mm (in)	7.94 (0.31)
Fuel Return Line mm (in)	7.94 (0.31)

Engine Electrical System

System Voltage	12 VDC
Battery Charging Alternator	Std
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative

**ALTERNATOR SPECIFICATIONS**

Standard Model	390
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5%
Telephone Interference Factor (TIF)	<50

Standard Excitation	Synchronous
Bearings	Single Sealed Cartridge
Coupling	Direct, Flexible Disc
Load Capacity - Standby	100%
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%

**SD030 | 2.4L | 30 kW**  
**INDUSTRIAL DIESEL GENERATOR SET**  
 EPA Certified Stationary Emergency



**OPERATING DATA**

**POWER RATINGS**

		Standby
Single-Phase 120/240 VAC @1.0pf	30 kW	Amps: 125
Three-Phase 120/208 VAC @0.8pf	30 kW	Amps: 104
Three-Phase 120/240 VAC @0.8pf	30 kW	Amps: 90
Three-Phase 277/480 VAC @0.8pf	30 kW	Amps: 46
Three-Phase 346/600 VAC @0.8pf	30 kW	Amps: 36

**STARTING CAPABILITIES (sKVA)**

sKVA vs. Voltage Dip

Alternator	kW	480 VAC						208/240 VAC					
		10%	15%	20%	25%	30%	35%	10%	15%	20%	25%	30%	35%
Standard	35	24	36	48	60	72	84	18	27	36	45	54	63
Upsize 1	40	27	41	54	68	81	95	20	31	41	51	61	71
Upsize 2	50	34	52	69	86	103	120	26	39	52	65	77	90

**FUEL CONSUMPTION RATES\***

Fuel Pump Lift - ft (m)		Diesel - gph (lph)	
		Percent Load	gph (lph)
3 (1)		25%	0.92 (3.5)
		50%	1.45 (5.5)
Total Fuel Pump Flow (Combustion + Return)		75%	1.96 (7.4)
4.5 gph		100%	2.74 (10.4)

\* Fuel supply installation must accommodate fuel consumption rates at 100% load.

**COOLING**

		Standby
Coolant Flow per Minute	gpm (lpm)	10 (38)
Coolant System Capacity	gal (L)	2.8 (10.95)
Heat Rejection to Coolant	BTU/hr	111,000
Inlet Air	cfm (m3/hr)	4,500 (7647)
Max. Operating Radiator Air Temp	F° (C°)	122 (50)
Max. Ambient Temperature (before derate)	F° (C°)	104 (40)
Maximum Radiator Backpressure	in H <sub>2</sub> O	0.5

**COMBUSTION AIR REQUIREMENTS**

		Standby
Flow at Rated Power	cfm (m3/min)	90 (2.55)

**ENGINE**

		Standby
Rated Engine Speed	rpm	1800
Horsepower at Rated kW**	hp	49
Piston Speed	ft/min (m/min)	1110 (338)
BMEP	psi	153

**EXHAUST**

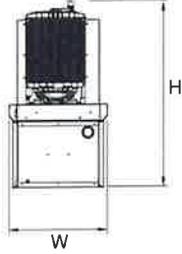
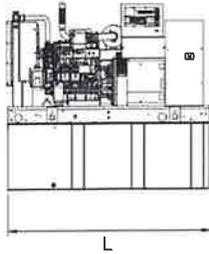
		Standby
Exhaust Flow (Rated Output)	cfm (m <sup>3</sup> /min)	230 (391)
Max. Backpressure (Post Silencer)	inHg (Kpa)	1.5 (5.1)
Exhaust Temp (Rated Output)	°F (°C)	850 (454)
Exhaust Outlet Size (Open Set)	mm (in)	63.5 (2.5)

\*\* Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

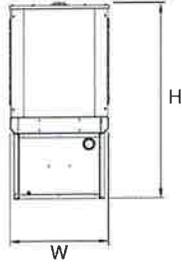
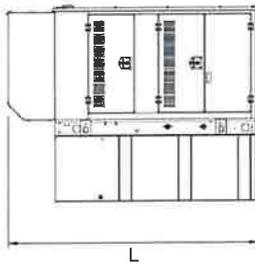
**SD030** | **2.4L** | **30 kW**  
**INDUSTRIAL DIESEL GENERATOR SET**  
 EPA Certified Stationary Emergency

**DIMENSIONS AND WEIGHTS\***



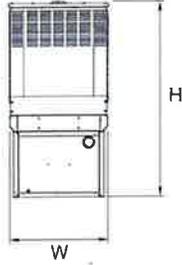
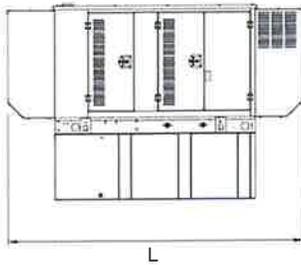
**OPEN SET**

RUN TIME HOURS	USABLE CAPACITY GAL (L)	L x W x H in (mm)	WT lbs (kg) - Tank & Open Set	
NO TANK	-	76 (1930.4) x 38 (914.4) x 46 (1168.4)	2060 (934)	
20	54 (204.4)	76 (1930.4) x 38 (914.4) x 59 (1498.6)	2540 (1152)	
48	132 (499.7)	76 (1930.4) x 38 (914.4) x 71 (1803.4)	2770 (1257)	
77	211 (798.7)	76 (1930.4) x 38 (914.4) x 83 (2108.2)	2979 (1351)	
109	300 (1135.6)	93 (2362.2) x 38 (914.4) x 87 (2209.8)	3042 (1380)	



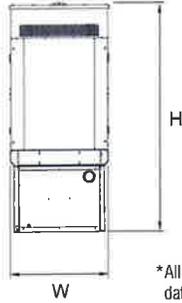
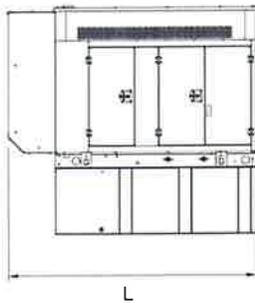
**STANDARD ENCLOSURE**

RUN TIME HOURS	USABLE CAPACITY GAL (L)	L x W x H in (mm)	WT lbs (kg) - Enclosure Only	
			Steel	Aluminum
NO TANK	-	95 (2413) x 38 (965.2) x 50 (1270)		
20	54 (204.4)	95 (2413) x 38 (965.2) x 63 (1600.2)	302 (137)	191 (87)
48	132 (499.7)	95 (2413) x 38 (965.2) x 75 (1905)		
77	211 (798.7)	95 (2413) x 38 (965.2) x 87 (2209.8)		
109	300 (1135.6)	95 (2413) x 38 (965.2) x 91 (2311.4)		



**LEVEL 1 ACOUSTIC ENCLOSURE**

RUN TIME HOURS	USABLE CAPACITY GAL (L)	L x W x H in (mm)	WT lbs (kg) - Enclosure Only	
			Steel	Aluminum
NO TANK	-	113 (2870.2) x 38 (965.2) x 50 (1270)		
20	54 (204.4)	113 (2870.2) x 38 (965.2) x 63 (1600.2)	455 (206)	288 (131)
48	132 (499.7)	113 (2870.2) x 38 (965.2) x 75 (1905)		
77	211 (798.7)	113 (2870.2) x 38 (965.2) x 87 (2209.8)		
109	300 (1135.6)	113 (2870.2) x 38 (965.2) x 91 (2311.4)		



**LEVEL 2 ACOUSTIC ENCLOSURE**

RUN TIME HOURS	USABLE CAPACITY GAL (L)	L x W x H in (mm)	WT lbs (kg) - Enclosure Only	
			Steel	Aluminum
NO TANK	-	95 (2413) x 38 (965.2) x 62 (1574.8)		
20	54 (204.4)	95 (2413) x 38 (965.2) x 75 (1905)	460 (209)	291 (132)
48	132 (499.7)	95 (2413) x 38 (965.2) x 87 (2209.8)		
77	211 (798.7)	95 (2413) x 38 (965.2) x 99 (2514.6)		
109	300 (1135.6)	95 (2413) x 38 (965.2) x 103 (2616.2)		

\*All measurements are approximate and for estimation purposes only. Sound dBA can be found on the sound data sheet. Enclosure Only weight is added to Tank & Open Set weight to determine total weight.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Dimensions and weights are for preliminary purposes only. Please consult a Generac Power Systems Industrial Dealer for detailed installation drawings.

# **ATTACHMENT 4**



## Structural Analysis of an 80 ft Self-Supporting Tower

**Site Number: Everest Site# 701770**

**Site Name: Wolcott  
County: New Haven  
Location: Wolcott, CT**



12 Industrial Way  
Salem, NH 03079

**October 2019**



October 23, 2019

Anne McGuinness  
SAI Group  
12 Industrial Way  
Salem, NH 03079

RE: Everest Site# 701770 – Wolcott  
Andrews Road, Wolcott, CT

Anne:

We have completed the structural analysis of the subject tower and **have found it to be adequate within the scope of this analysis to support the proposed antenna loading.** The tower was analyzed according to the code wind and ice parameters outlined in the *Code Requirements Table* following this letter.

The subject tower is an 80' self-supporting tower consisting of all-bolted sections with angle legs and bracing. Tower face dimensions range from 6'1" at the top to 10'7" at the base. Foundation details are based on the geotechnical report prepared by our office in December 2017 and dispersive wave foundation results prepared by FDH on July 2013.

The loading used in the analysis consisted of the existing antennas/lines as well as the following for VZW at 77':

- (4) proposed SitePro1 R5-216 mount brackets
- (2) proposed SitePro1 LLEG-K leg adapter kits
- (4) proposed CommScope NNHH-65B-R4 antennas
- (2) proposed B2/B66A RRHBR049 units
- (2) proposed B5/B13 RRHBR04C
- (1) proposed Raycap RVZDC-6627-PF-48 OVP box
- (2) proposed hybrid fiber cables

The proposed hybrid lines are to be located as shown on drawing E-7.

Note: This analysis assumes the two existing dishes will remain on the tower. If one of them is to be removed, that will improve the tower performance.

The results of the analysis showed all tower and foundation elements to be loaded within allowable limits with a maximum stress rating of 64.8%. We recommend a post-construction inspection be completed by an engineer to document that tower-mounted equipment has been placed in compliance with the requirements of this analysis. For a detailed listing of tower performance, please see page 7 of the calculations.

We appreciate the opportunity to provide our professional services to SAI Group and Verizon Wireless, and if you have any questions concerning this analysis, please contact us.

Sincerely,

ARMOR TOWER, INC.



Koussaila Ait Oumessaoud  
Structural Design Engineer II

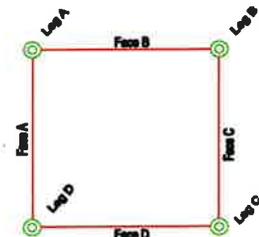


## CODE REQUIREMENTS

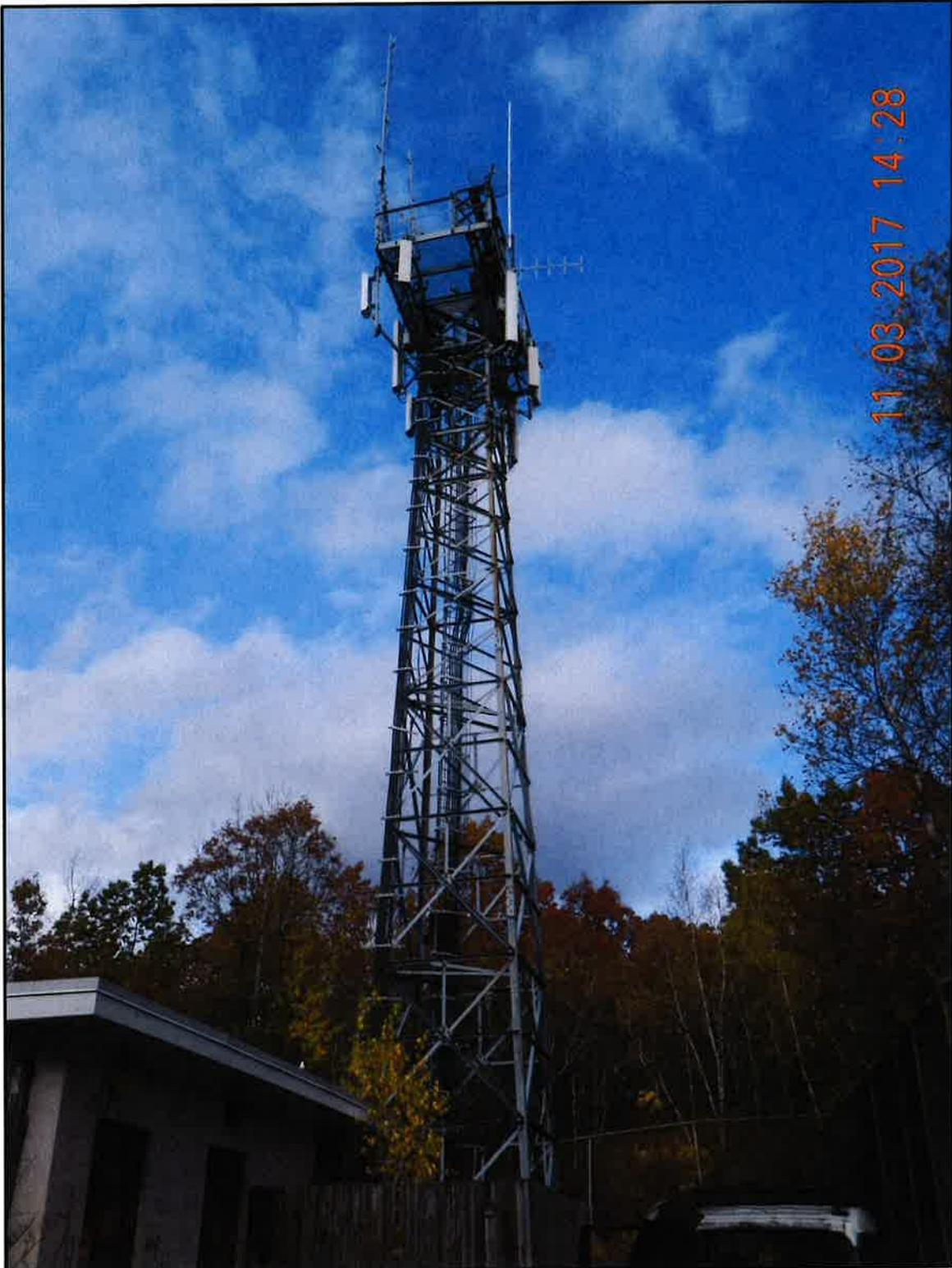
<b>Governing code:</b>	CT State Building Code
<b>Code basis:</b>	2015 IBC
<b>Referenced standard:</b>	ANSI/TIA 222-G-2
<b>Basic wind speed: (3-sec. gust):</b>	$V_{ult}/V_{asd}$ : 120 mph/93 mph with no ice 50 mph with 3/4" concurrent ice
	Nominal design wind speed conversion for TIA 222 considerations based on IBC 1609.3.1
<b>County of site location:</b>	<b>New Haven</b>
<b>ASCE 7 Special wind region:</b>	No
<b>Structure/Risk Category:</b>	II
<b>Exposure Category:</b>	B
<b>Topographic Category:</b>	1 - no topographic escalation
<b>Crest Height:</b>	0 ft

## PRIMARY ASSUMPTIONS CONSIDERED IN THIS PROJECT

1. Leg A is assumed to be oriented west.
2. Allowable steel stresses are defined by AISC-LRFD-99/360-16 and all welds conform to AWS D1.1 specifications.
3. It is the client's responsibility to check with local authorities or the tower owner if a greater wind or ice loading is required to be considered in the analysis.
4. If reserved antennas/feed lines by other carriers or the tower owner are to be considered in this analysis, it is the responsibility of Verizon Wireless and its affiliates to provide this information.
5. Any deviation from the analyzed antenna loading will require a re-analysis of the tower for verification of structural integrity. This analysis has considered the proposed feed lines to be located as shown on drawing E-7.
6. This analysis assumes all tower members are galvanized adequately to prevent corrosion of the steel and that all tower members are in "like new" condition with no physical deterioration. This analysis also assumes the tower has been maintained properly per TIA 222-G Annex J recommended inspection and maintenance procedures for tower owners and is in a plumb condition. Armor Tower has not completed a condition assessment of the tower. Site observations indicate an adequately galvanized tower.
7. No accounting for residual stresses due to incorrect tower erection can be made. This analysis assumes all bolts are appropriately tightened providing necessary connection continuity and that the installation of the tower was performed by a qualified tower erector.
8. Foundation details are based on the geotechnical report prepared by our office on December 2017 and dispersive wave foundation results prepared by FDH on July 2013.
9. No conclusions, expressed or implied, shall indicate that Armor Tower has made an evaluation of the original design, materials, fabrication, or potential installation or erection deficiencies. Any information contrary to that assumed for the purpose of preparing this analysis could alter the findings and conclusions stated herein.



10. Tower member sizes and geometry are based on a tower mapping completed by this office in December 2017. Existing antenna loading is based on a previous analysis by this office dated December 2017. Proposed equipment was outlined in a collocation app dated May 2019.
11. The investigation of the load carrying capacities of the antenna supporting frames/mounts is outside the scope of this analysis. Antenna mount certification can be completed under separate contract.



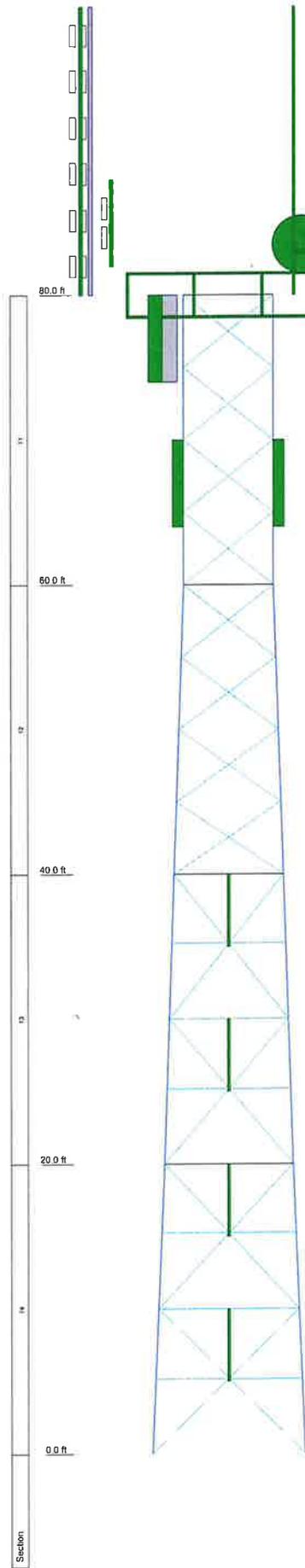
9 North Main Street, 2<sup>nd</sup> Floor, Cortland, NY 13045  
(607)591-5381 Fax: (866)870-0840 [www.ArmorTower.com](http://www.ArmorTower.com)

**DESIGNED APPURTENANCE LOADING**

TYPE	ELEVATION	TYPE	ELEVATION
2 5'ODx20' Omni (E)	90	ETW190VS12UB (E-T-Mobile)	77
20' Dipole (E)	90	ETW190VS12UB (E-T-Mobile)	77
20' Dipole (E)	90	(2) NNHH-65B-R4 w. Mtg Pipe (P-Delta-VZW)	67
10' Dipole (E)	85		
Yagi (E)	83	(2) NNHH-65B-R4 w. Mtg Pipe (P-Gamma-VZW)	67
Top Platform - WoicobNW (E)	80	AWS(B66)/PCS(B2) Dual Band RRH (P-Delta-VZW)	67
4 FT DISH	80	AWS(B66)/PCS(B2) Dual Band RRH (P-Delta-VZW)	67
4 FT DISH	80	AWS(B66)/PCS(B2) Dual Band RRH (P-Delta-VZW)	67
Ericsson AIR21 B4A/B2P w. Mtg Pipe (E-T-Mobile)	77	RVZDC-6627-PF-48 (12Circuit OVP) (P-Delta-VZW)	67
Ericsson AIR21 B4A/B2P w. Mtg Pipe (E-T-Mobile)	77	700(B13)/B50(B5) Dual Band RRH (P-Delta-VZW)	67
Ericsson AIR21 B4A/B2P w. Mtg Pipe (E-T-Mobile)	77	700(B13)/B50(B5) Dual Band RRH (P-Delta-VZW)	67
Ericsson AIR21 B2A/B4P w. Mtg Pipe (E-T-Mobile)	77	(4) R5-216 Mount Bracket (P-VZW)	67
Ericsson AIR21 B2A/B4P w. Mtg Pipe (E-T-Mobile)	77	L2 1/2x2x1/4 @ 5ft Vert. (E)	37.5
Ericsson AIR21 B2A/B4P w. Mtg Pipe (E-T-Mobile)	77	L2 1/2x2x1/4 @ 5ft Vert. (E)	37.5
Ericsson AIR21 B2A/B4P w. Mtg Pipe (E-T-Mobile)	77	L2 1/2x2x1/4 @ 5ft Vert. (E)	37.5
APXVAARR24_43-U-NA20 w. Mtg Pipe (E-T-Mobile)	77	L2 1/2x2x1/4 @ 5ft Vert. (E)	27.5
APXVAARR24_43-U-NA20 w. Mtg Pipe (E-T-Mobile)	77	L2 1/2x2x1/4 @ 5ft Vert. (E)	27.5
APXVAARR24_43-U-NA20 w. Mtg Pipe (E-T-Mobile)	77	L2 1/2x2x1/4 @ 5ft Vert. (E)	27.5
APXVAARR24_43-U-NA20 w. Mtg Pipe (E-T-Mobile)	77	L2 1/2x2x1/4 @ 5ft Vert. (E)	27.5
Ericsson Radio 4449 B12/B71 (E-T-Mobile)	77	L2 1/2x2x1/4 @ 5ft Vert. (E)	17.5
Ericsson Radio 4449 B12/B71 (E-T-Mobile)	77	L2 1/2x2x1/4 @ 5ft Vert. (E)	17.5
Ericsson Radio 4449 B12/B71 (E-T-Mobile)	77	L2 1/2x2x1/4 @ 5ft Vert. (E)	17.5
Ericsson Radio 4449 B12/B71 (E-T-Mobile)	77	L2 1/2x2x1/4 @ 5ft Vert. (E)	17.5
ETW190VS12UB (E-T-Mobile)	77	L2 1/2x2x1/4 @ 5ft Vert. (E)	7.5
		L2 1/2x2x1/4 @ 5ft Vert. (E)	7.5

**TOWER DESIGN NOTES**

1. Tower designed for Exposure B to the TIA-222-G Standard.
2. Tower designed for a 120 mph basic wind in accordance with the TIA-222-G Standard.
3. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 80 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0'
7. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
8. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
9. Welds are fabricated with ER-70S-6 electrodes.
10. (E)xisting or (P)roposed.
11. TOWER RATING: 64.8%

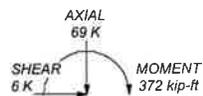


ALL REACTIONS ARE FACTORED

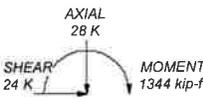
MAX. CORNER REACTIONS AT BASE:

DOWN: 97 K  
SHEAR: 13 K

UPLIFT: -85 K  
SHEAR: 11 K



TORQUE 3 kip-ft  
50 mph WIND - 0.7500 in ICE

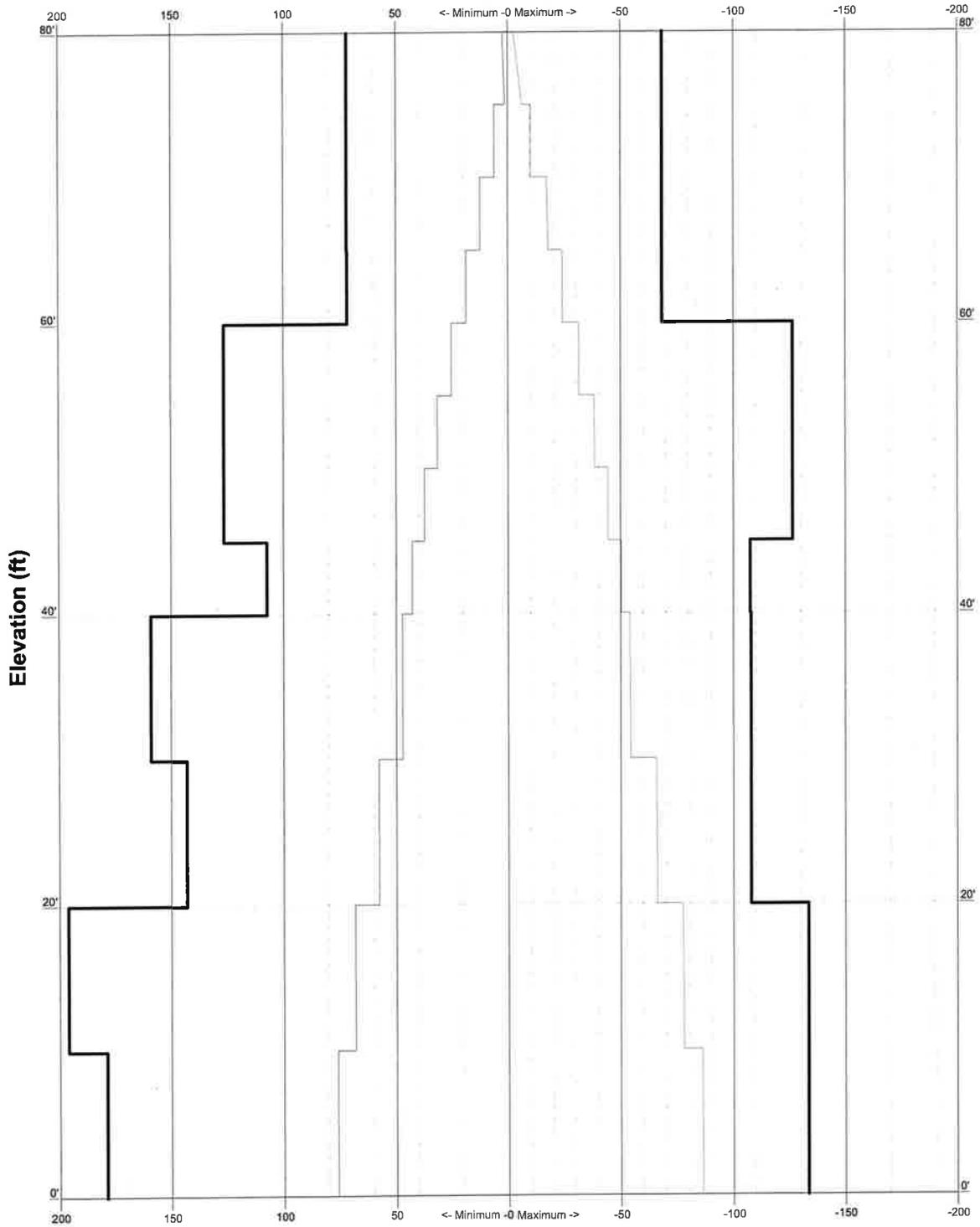


TORQUE 6 kip-ft  
REACTIONS - 120 mph WIND

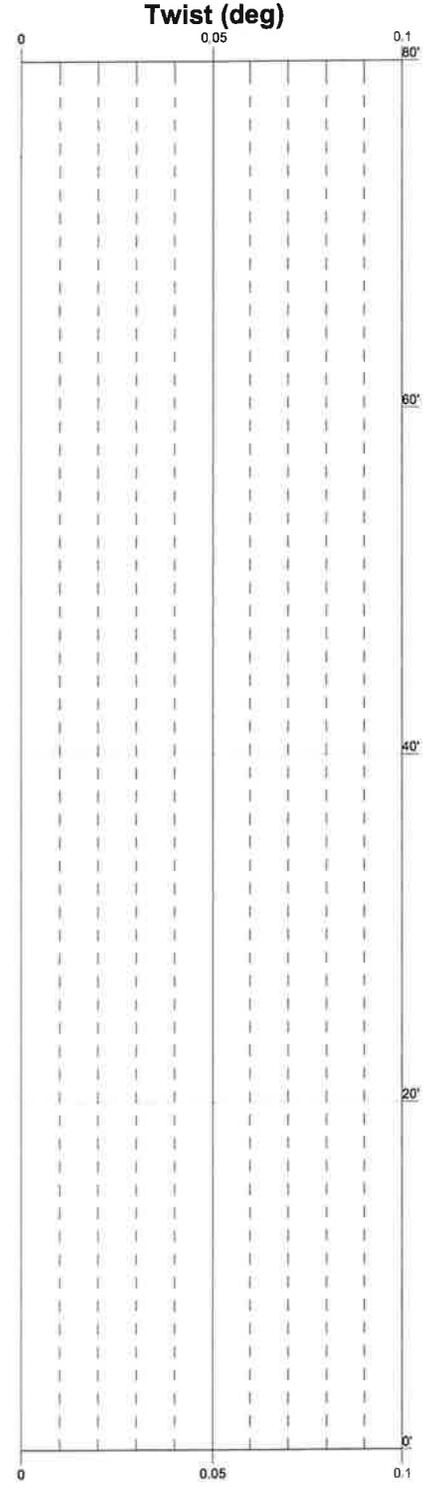
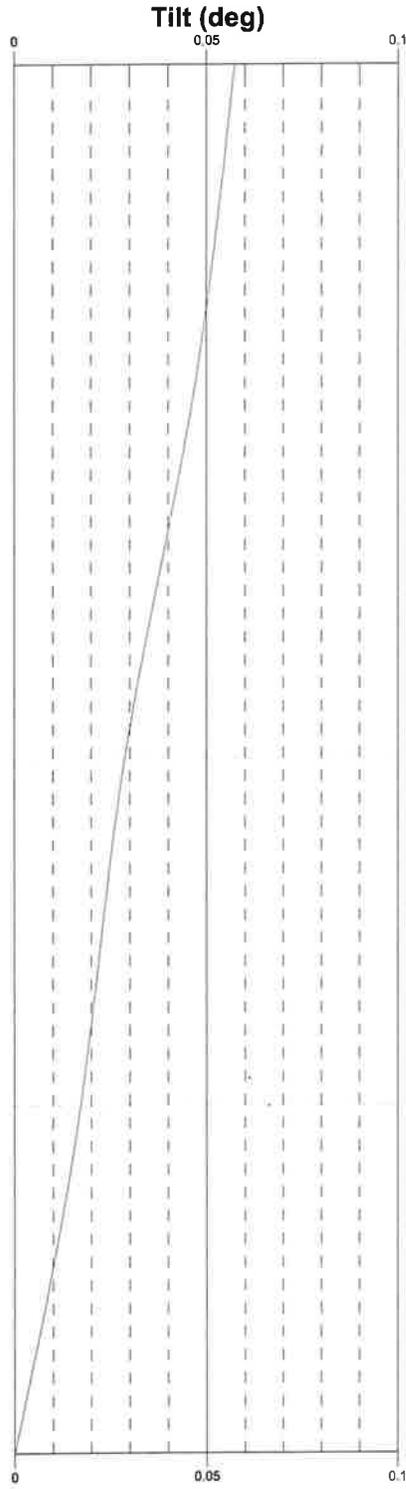
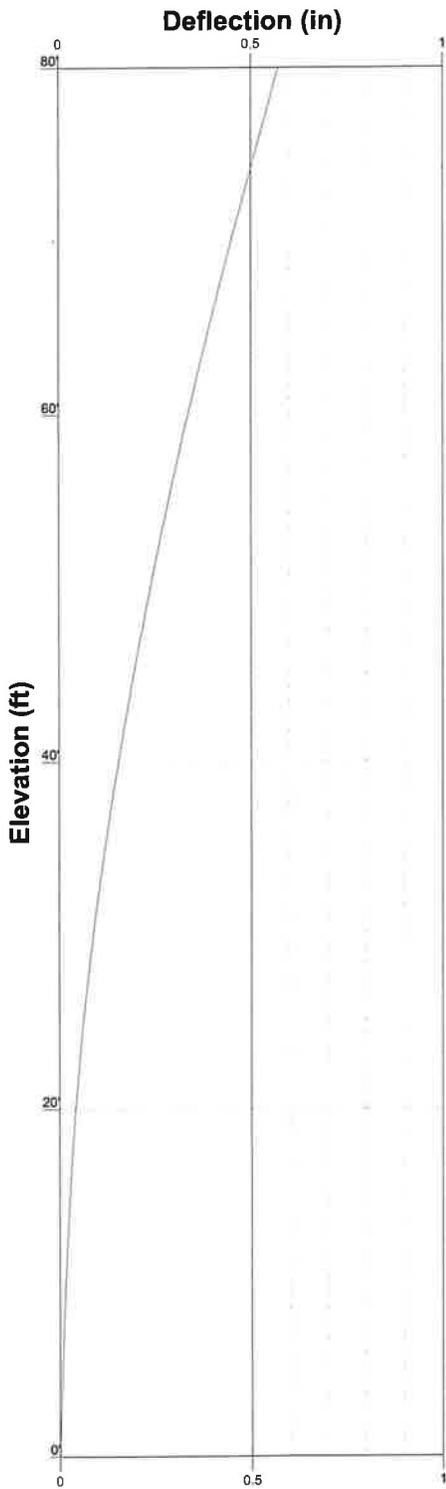
<b>ARMOR TOWER</b> Armor Tower, Inc. 9 N Main St Cortland, NY 13045 Phone: (607) 591-5381 FAX: (866) 870-0840	Job: <b>80' Self-Supporting Tower Analysis</b>
	Project: <b>VZW-Everest Site # 701770</b>
	Client: <b>SAI Group</b> Drawn by: <b>KAO</b> App'd:
	Code: <b>TIA-222-G</b> Date: <b>10/21/19</b> Scale: <b>NTS</b>
	Path:

**TIA-222-G - 120 mph/50 mph 0.7500 in Ice Exposure B**

**Leg Capacity** ——— **Leg Compression (K)**



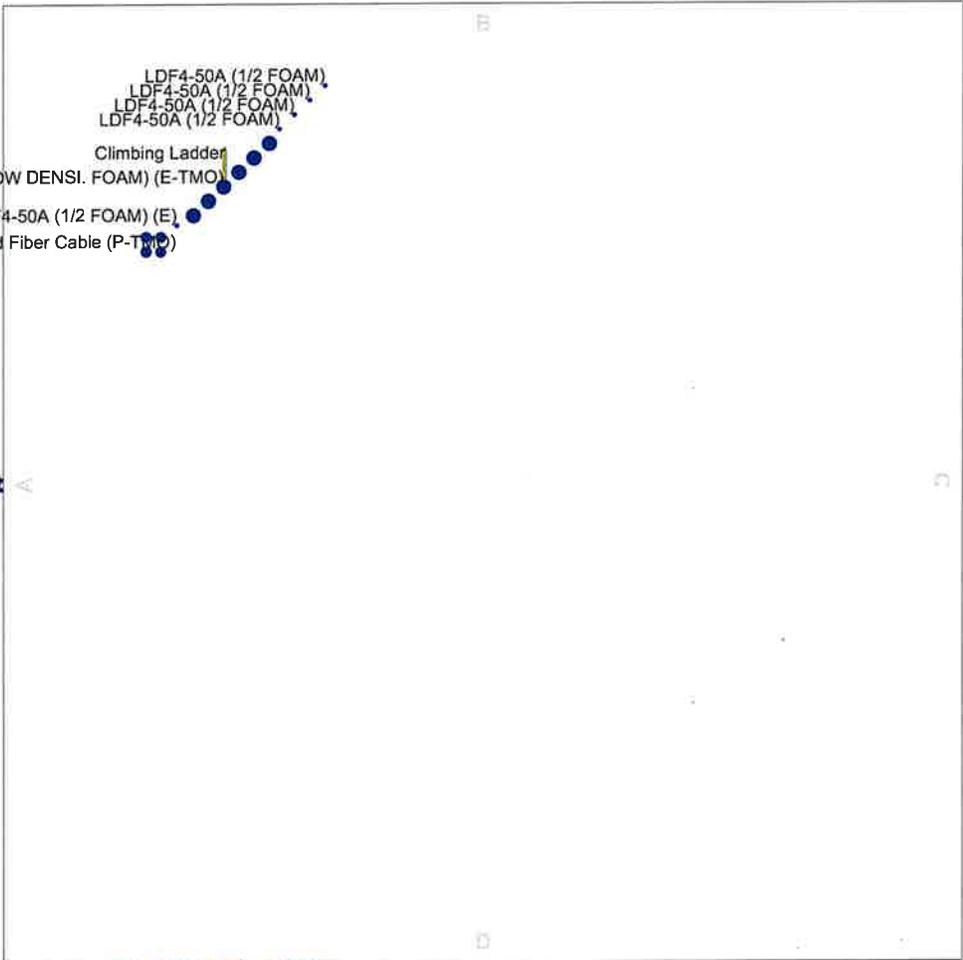
	<b>Armor Tower, Inc.</b> 9 N Main St Cortland, NY 13045 Phone: (607) 591-5381 FAX: (866) 870-0840		
	<b>Job: 80' Self-Supporting Tower Analysis</b>		
	Project:	<b>VZW-Everest Site # 701770</b>	
	Client:	SAI Group	Drawn by: KAO
	Code:	TIA-222-G	Date: 10/21/19
Path:		Scale: NTS	
		Dwg No: E-3	



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	<b>Job: 80' Self-Supporting Tower Analysis</b>			
	<b>Project: VZW-Everest Site # 701770</b>			
	Client: SAI Group	Drawn by: KAO	App'd:	
	Code: TIA-222-G	Date: 10/21/19	Scale: NTS	
Path:	Dwg No. E-5			

# Feed Line Plan

— Round     
 — Flat     
 — App In Face     
 — App Out Face



(6) AVA7-50 (1-5/8 LOW DENS. FOAM) (E-TMO)  
 (2) 1-5/8" hybridflex cables (P-VZW)

	<b>Armor Tower, Inc.</b>		
	9 N Main St		
	Cortland, NY 13045		
	Phone: (607) 591-5381		
	FAX: (866) 870-0840		
<b>Job: 80' Self-Supporting Tower Analysis</b>			
Project: <b>VZW-Everest Site # 701770</b>			
Client: SAI Group	Drawn by: KAO	App'd:	
Code: TIA-222-G	Date: 10/21/19	Scale: NTS	
Path:			Dwg No. E-7

 <b>Armor Tower, Inc.</b> 9 N Main St Cortland, NY 13045 Phone: (607) 591-5381 FAX: (866) 870-0840	<b>Job</b>	80' Self-Supporting Tower Analysis	<b>Page</b>	1 of 8
	<b>Project</b>	VZW-Everest Site # 701770	<b>Date</b>	20:11:59 10/21/19
	<b>Client</b>	SAI Group	<b>Designed by</b>	KAO

## Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 45 deg - No Ice
5	0.9 Dead+1.0 Wind 45 deg - No Ice
6	1.2 Dead+1.0 Wind 90 deg - No Ice
7	0.9 Dead+1.0 Wind 90 deg - No Ice
8	1.2 Dead+1.0 Wind 135 deg - No Ice
9	0.9 Dead+1.0 Wind 135 deg - No Ice
10	1.2 Dead+1.0 Wind 180 deg - No Ice
11	0.9 Dead+1.0 Wind 180 deg - No Ice
12	1.2 Dead+1.0 Wind 225 deg - No Ice
13	0.9 Dead+1.0 Wind 225 deg - No Ice
14	1.2 Dead+1.0 Wind 270 deg - No Ice
15	0.9 Dead+1.0 Wind 270 deg - No Ice
16	1.2 Dead+1.0 Wind 315 deg - No Ice
17	0.9 Dead+1.0 Wind 315 deg - No Ice
18	1.2 Dead+1.0 Ice+1.0 Temp
19	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
20	1.2 Dead+1.0 Wind 45 deg+1.0 Ice+1.0 Temp
21	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
22	1.2 Dead+1.0 Wind 135 deg+1.0 Ice+1.0 Temp
23	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
24	1.2 Dead+1.0 Wind 225 deg+1.0 Ice+1.0 Temp
25	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
26	1.2 Dead+1.0 Wind 315 deg+1.0 Ice+1.0 Temp
27	Dead+Wind 0 deg - Service
28	Dead+Wind 45 deg - Service
29	Dead+Wind 90 deg - Service
30	Dead+Wind 135 deg - Service
31	Dead+Wind 180 deg - Service
32	Dead+Wind 225 deg - Service
33	Dead+Wind 270 deg - Service
34	Dead+Wind 315 deg - Service

## Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	80 - 60	0.571	32	0.0565	0.0022
T2	60 - 40	0.336	32	0.0470	0.0019
T3	40 - 20	0.155	32	0.0313	0.0011
T4	20 - 0	0.042	32	0.0152	0.0005

## Critical Deflections and Radius of Curvature - Service Wind

 <p><b>Armor Tower, Inc.</b> 9 N Main St Cortland, NY 13045 Phone: (607) 591-5381 FAX: (866) 870-0840</p>	<b>Job</b>	80' Self-Supporting Tower Analysis	<b>Page</b>	2 of 8
	<b>Project</b>	VZW-Everest Site # 701770	<b>Date</b>	20:11:59 10/21/19
	<b>Client</b>	SAI Group	<b>Designed by</b>	KAO

Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
90'	2.5"ODx20' Omni	32	0.571	0.0565	0.0022	285453
85'	10' Dipole	32	0.571	0.0565	0.0022	285453
83'6"	4 FT DISH	32	0.571	0.0565	0.0022	285453
83'	Yagi	32	0.571	0.0565	0.0022	285453
80'	Top Platform - WolcottNW	32	0.571	0.0565	0.0022	285453
77'	Ericsson AIR21 B4A/B2P w. Mtg Pipe	32	0.534	0.0553	0.0022	285453
67'	(2) NNHH-65B-R4 w. Mtg Pipe	32	0.414	0.0509	0.0020	109789
37'6"	L2 1/2x2x1/4 @ 5ft Vert.	32	0.137	0.0292	0.0010	72189
27'6"	L2 1/2x2x1/4 @ 5ft Vert.	32	0.075	0.0211	0.0007	60129
17'6"	L2 1/2x2x1/4 @ 5ft Vert.	32	0.034	0.0132	0.0004	61462
7'6"	L2 1/2x2x1/4 @ 5ft Vert.	32	0.011	0.0056	0.0002	142302

### Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	80 - 60	2.256	12	0.2218	0.0089
T2	60 - 40	1.329	12	0.1850	0.0075
T3	40 - 20	0.615	12	0.1239	0.0045
T4	20 - 0	0.168	12	0.0601	0.0019

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

Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
90'	2.5"ODx20' Omni	12	2.256	0.2218	0.0089	74297
85'	10' Dipole	12	2.256	0.2218	0.0089	74297
83'6"	4 FT DISH	12	2.256	0.2218	0.0089	74297
83'	Yagi	12	2.256	0.2218	0.0089	74297
80'	Top Platform - WolcottNW	12	2.256	0.2218	0.0089	74297
77'	Ericsson AIR21 B4A/B2P w. Mtg Pipe	12	2.110	0.2172	0.0088	74297
67'	(2) NNHH-65B-R4 w. Mtg Pipe	12	1.638	0.2002	0.0082	28576
37'6"	L2 1/2x2x1/4 @ 5ft Vert.	12	0.543	0.1157	0.0041	18287
27'6"	L2 1/2x2x1/4 @ 5ft Vert.	12	0.300	0.0835	0.0027	15198
17'6"	L2 1/2x2x1/4 @ 5ft Vert.	12	0.135	0.0524	0.0016	15517
7'6"	L2 1/2x2x1/4 @ 5ft Vert.	12	0.044	0.0223	0.0006	35926

### Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T1	80	Leg	A307	6.06	17.89	0.339	1	Bolt DS
		Diagonal	A307	2.15	8.95	0.241	1	Bolt Shear

 <b>Armor Tower, Inc.</b> 9 N Main St Cortland, NY 13045 Phone: (607) 591-5381 FAX: (866) 870-0840	<b>Job</b> 80' Self-Supporting Tower Analysis	<b>Page</b> 3 of 8
	<b>Project</b> VZW-Everest Site # 701770	<b>Date</b> 20:11:59 10/21/19
	<b>Client</b> SAI Group	<b>Designed by</b> KAO

Section No.	Elevation ft	Component Type	Bolt Grade	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load Allowable	Allowable Ratio	Criteria
T2	60	Top Girt	A325N	0.07	11.15	0.006	1	Member Block Shear
		Leg	A307	8.39	17.89	0.469	1	Bolt DS
		Diagonal	A307	1.80	8.95	0.202	1	Bolt Shear
T3	40	Top Girt	A325N	0.07	17.89	0.004	1	Bolt Shear
		Leg	A307	8.26	17.89	0.462	1	Bolt DS
		Diagonal	A307	3.60	8.95	0.402	1	Bolt Shear
		Horizontal	A307	2.61	8.95	0.292	1	Bolt Shear
T4	20	Secondary Horizontal	A307	0.17	8.95	0.019	1	Bolt Shear
		Top Girt	A325N	1.37	10.47	0.131	1	Member Block Shear
		Leg	A307	8.65	17.89	0.484	1	Bolt DS
		Diagonal	A307	3.87	8.95	0.433	1	Bolt Shear
		Horizontal	A307	3.02	8.95	0.338	1	Bolt Shear
		Secondary Horizontal	A307	0.20	8.95	0.022	1	Bolt Shear
		Top Girt	A325N	2.32	10.47	0.221	1	Member Block Shear

### Compression Checks

### Leg Design Data (Compression)

Section No.	Elevation ft	L ft	L <sub>n</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio P <sub>u</sub> / φP <sub>n</sub>
T1	80 - 60	20'	5'	76.1 K=1.00	2.8600	-24.24	68.29	0.355 <sup>1</sup>
T2	60 - 40	20'1/4"	5'1/8"	61.1 K=1.00	4.7500	-50.35	126.43	0.398 <sup>1</sup>
T3	40 - 20	20'1/4"	10'1/8"	101.8 K=1.00	5.7500	-66.06	107.95	0.612 <sup>1</sup>
T4	20 - 0	20'3/8"	10'1/4"	101.9 K=1.00	7.1100	-86.51	133.41	0.648 <sup>1</sup>

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

 <p><b>Armor Tower, Inc.</b> 9 N Main St Cortland, NY 13045 Phone: (607) 591-5381 FAX: (866) 870-0840</p>	<b>Job</b>	80' Self-Supporting Tower Analysis	<b>Page</b>	4 of 8
	<b>Project</b>	VZW-Everest Site # 701770	<b>Date</b>	20:11:59 10/21/19
	<b>Client</b>	SAI Group	<b>Designed by</b>	KAO

### Diagonal Design Data (Compression)

Section No.	Elevation ft	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	80 - 60	7'11-9/32"	3'9-1/8"	91.8 K=1.00	1.1900	-4.31	24.74	0.174 <sup>1</sup> ✓
T2	60 - 40	8'10-13/16"	4'3-19/32"	121.8 K=1.00	1.0600	-3.61	15.73	0.229 <sup>1</sup> ✓
T3	40 - 20	13'2-1/32"	6'5-17/32"	131.0 K=1.00	1.4400	-7.20	18.91	0.381 <sup>1</sup> ✓
T4	20 - 0	14'2-7/8"	7'23/32"	143.8 K=1.00	1.7800	-7.75	19.45	0.398 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Horizontal Design Data (Compression)

Section No.	Elevation ft	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T3	40 - 20	8'2-5/8"	7'8-5/8"	188.6 K=1.00	1.1900	-4.30	7.56	0.569 <sup>1</sup> ✓
T4	20 - 0	9'8-5/8"	9'2-5/8"	112.7 K=0.50	1.1900	-5.02	19.76	0.254 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Secondary Horizontal Design Data (Compression)

Section No.	Elevation ft	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T3	40 - 20	8'6-19/32"	8'19/32"	125.5 K=1.00	1.1900	-0.35	16.82	0.021 <sup>1</sup> ✓
T4	20 - 0	10'1-5/16"	9'7-5/16"	150.0 K=1.00	1.1900	-0.34	11.95	0.029 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

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	<b>Project</b> VZW-Everest Site # 701770	<b>Date</b> 20:11:59 10/21/19
	<b>Client</b> SAI Group	<b>Designed by</b> KAO

### Top Girt Design Data (Compression)

Section No.	Elevation ft	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio P <sub>u</sub> / φP <sub>n</sub>
T1	80 - 60	6'2-1/32'	5'10-3/32'	118.3 K=1.00	1.4400	-0.18	22.33	0.008 <sup>1</sup> ✓
T2	60 - 40	6'2-1/32'	5'10-3/32'	122.6 K=1.00	3.6000	-0.13	52.84	0.003 <sup>1</sup> ✓
T3	40 - 20	7'6-3/8"	7'1-7/16"	173.9 K=1.00	1.1900	-2.33	8.89	0.262 <sup>1</sup> ✓
T4	20 - 0	8'10-13/16"	8'4-13/16"	205.3 K=1.00	1.1900	-3.93	6.38	0.616 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Inner Bracing Design Data (Compression)

Section No.	Elevation ft	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio P <sub>u</sub> / φP <sub>n</sub>
T1	80 - 60	8'8-5/8"	8'4-11/16"	716.1 K=1.00	0.2485	-0.01	0.11	0.116 <sup>1</sup> ✓
T2	60 - 40	8'8-5/8"	8'4-11/16"	716.1 K=1.00	0.2485	-0.02	0.11	0.139 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Tension Checks

### Leg Design Data (Tension)

Section No.	Elevation ft	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio P <sub>u</sub> / φP <sub>n</sub>
T1	80 - 60	20'	5'	48.8	1.6528	18.65	71.90	0.259 <sup>1</sup> ✓
T2	60 - 40	20'1/4"	5'1/8"	39.0	2.9063	42.94	126.42	0.340 <sup>1</sup> ✓
T3	40 - 20	20'1/4"	10'1/8"	64.6	3.6563	57.91	159.05	0.364 <sup>1</sup> ✓
T4	20 - 0	20'3/8"	10'1/4"	65.3	4.5122	76.14	196.28	0.388 <sup>1</sup> ✓

 <b>Armor Tower, Inc.</b> 9 N Main St Cortland, NY 13045 Phone: (607) 591-5381 FAX: (866) 870-0840	<b>Job</b> 80' Self-Supporting Tower Analysis	<b>Page</b> 6 of 8
	<b>Project</b> VZW-Everest Site # 701770	<b>Date</b> 20:11:59 10/21/19
	<b>Client</b> SAI Group	<b>Designed by</b> KAO

<sup>1</sup>  $P_u / \phi P_n$  controls

### Diagonal Design Data (Tension)

Section No.	Elevation ft	L ft	$L_u$ ft	KI/r	A in <sup>2</sup>	$P_u$ K	$\phi P_n$ K	Ratio $\frac{P_u}{\phi P_n}$
T1	80 - 60	7'11-9/32"	3'9-1/8"	58.6	0.7284	4.21	31.69	0.133 <sup>1</sup> ✓
T2	60 - 40	8'10-13/16"	4'3-19/32"	87.2	0.6309	3.59	27.45	0.131 <sup>1</sup> ✓
T3	40 - 20	13'2-1/32"	6'5-17/32"	83.4	0.9159	6.39	39.84	0.160 <sup>1</sup> ✓
T4	20 - 0	14'2-7/8"	7'23/32"	91.8	1.1299	6.80	49.15	0.138 <sup>1</sup> ✓

<sup>1</sup>  $P_u / \phi P_n$  controls

### Horizontal Design Data (Tension)

Section No.	Elevation ft	L ft	$L_u$ ft	KI/r	A in <sup>2</sup>	$P_u$ K	$\phi P_n$ K	Ratio $\frac{P_u}{\phi P_n}$
T3	40 - 20	8'2-5/8"	7'8-5/8"	120.4	0.7284	5.22	31.69	0.165 <sup>1</sup> ✓
T4	20 - 0	9'8-5/8"	9'2-5/8"	143.9	0.7284	6.05	31.69	0.191 <sup>1</sup> ✓

<sup>1</sup>  $P_u / \phi P_n$  controls

### Secondary Horizontal Design Data (Tension)

Section No.	Elevation ft	L ft	$L_u$ ft	KI/r	A in <sup>2</sup>	$P_u$ K	$\phi P_n$ K	Ratio $\frac{P_u}{\phi P_n}$
T3	40 - 20	8'6-19/32"	8'19/32"	125.5	0.7284	0.30	31.69	0.010 <sup>1</sup> ✓
T4	20 - 0	9'3-15/32"	8'9-15/32"	137.2	0.7284	0.35	31.69	0.011 <sup>1</sup> ✓

<sup>1</sup>  $P_u / \phi P_n$  controls

 <b>Armor Tower, Inc.</b> 9 N Main St Cortland, NY 13045 Phone: (607) 591-5381 FAX: (866) 870-0840	<b>Job</b> 80' Self-Supporting Tower Analysis	<b>Page</b> 7 of 8
	<b>Project</b> VZW-Everest Site # 701770	<b>Date</b> 20:11:59 10/21/19
	<b>Client</b> SAI Group	<b>Designed by</b> KAO

### Top Girt Design Data (Tension)

Section No.	Elevation ft	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T1	80 - 60	6'2-1/32"	5'10-3/32"	75.3	0.9159	0.14	39.84	0.004 <sup>1</sup> ✓
T2	60 - 40	6'2-1/32"	5'10-3/32"	122.6	2.4939	0.07	108.49	0.001 <sup>1</sup> ✓
T3	40 - 20	7'6-3/8"	7'1-7/16"	111.1	0.7284	2.74	31.69	0.086 <sup>1</sup> ✓
T4	20 - 0	8'10-13/16"	8'4-13/16"	131.1	0.7284	4.63	31.69	0.146 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Inner Bracing Design Data (Tension)

Section No.	Elevation ft	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
T2	60 - 40	8'8-5/8"	8'4-11/16"	716.1	0.2485	0.01	11.18	0.001 <sup>1</sup> ✓
T3	40 - 20	10'7-13/16"	10'2-7/8"	873.6	0.2485	0.13	11.18	0.011 <sup>1</sup> ✓
T4	20 - 0	12'7-3/32"	12'1-3/32"	1031.5	0.2485	0.27	11.18	0.024 <sup>1</sup> ✓

<sup>1</sup> P<sub>u</sub> / φP<sub>n</sub> controls

### Section Capacity Table

Section No.	Elevation ft	Component Type	Critical Element	P K	φP <sub>allow</sub> K	% Capacity	Pass Fail
T1	80 - 60	Leg	1	-24.24	68.29	35.5	Pass
T2	60 - 40	Leg	43	-50.35	126.43	39.8	Pass
T3	40 - 20	Leg	85	-66.06	107.95	61.2	Pass
T4	20 - 0	Leg	123	-86.51	133.41	64.8	Pass
T1	80 - 60	Diagonal	13	-4.31	24.74	17.4	Pass
T2	60 - 40	Diagonal	59	-3.61	15.73	22.9	Pass
T3	40 - 20	Diagonal	96	-7.20	18.91	38.1	Pass
T4	20 - 0	Diagonal	134	-7.75	19.45	40.2 (b)	Pass
T3	40 - 20	Horizontal	105	-4.30	7.56	39.8	Pass
T4	20 - 0	Horizontal	143	-5.02	19.76	43.3 (b)	Pass
						56.9	Pass
						25.4	Pass
						33.8 (b)	

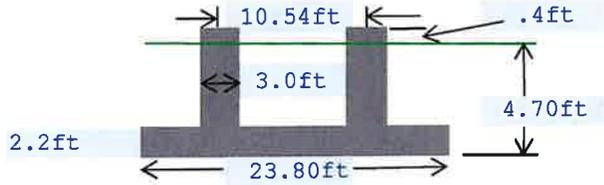
 <b>Armor Tower, Inc.</b> 9 N Main St Cortland, NY 13045 Phone: (607) 591-5381 FAX: (866) 870-0840	<b>Job</b>	80' Self-Supporting Tower Analysis	<b>Page</b>	8 of 8
	<b>Project</b>	VZW-Everest Site # 701770	<b>Date</b>	20:11:59 10/21/19
	<b>Client</b>	SAI Group	<b>Designed by</b>	KAO

Section No.	Elevation ft	Component Type	Critical Element	P K	$\sigma P_{allow}$ K	% Capacity	Pass Fail
T3	40 - 20	Secondary Horizontal	109	-0.35	16.82	2.1	Pass
T4	20 - 0	Secondary Horizontal	148	-0.34	11.95	2.9	Pass
T1	80 - 60	Top Girt	7	-0.18	22.33	0.8	Pass
T2	60 - 40	Top Girt	50	-0.13	52.84	0.3	Pass
						0.4 (b)	
T3	40 - 20	Top Girt	93	-2.33	8.89	26.2	Pass
T4	20 - 0	Top Girt	131	-3.93	6.38	61.6	Pass
T1	80 - 60	Inner Bracing	6	-0.01	0.11	11.6	Pass
T2	60 - 40	Inner Bracing	47	-0.02	0.11	13.9	Pass
T3	40 - 20	Inner Bracing	90	0.13	11.18	1.1	Pass
T4	20 - 0	Inner Bracing	128	0.27	11.18	2.4	Pass
						<b>Summary</b>	
						Leg (T4)	64.8 Pass
						Diagonal (T4)	43.3 Pass
						Horizontal (T3)	56.9 Pass
						Secondary Horizontal (T4)	2.9 Pass
						Top Girt (T4)	61.6 Pass
						Inner Bracing (T2)	13.9 Pass
						Bolt Checks	48.4 Pass
						<b>RATING =</b>	<b>64.8 Pass</b>

**SS Tower Pad & 4Pier Calculations**

**Applied Factored Loads:**

OTM: 1344 kip-ft  
 Uplift: 85 kip  
 DownLoad: 97 kip  
 ΣDeadLoad: 28.00 kip  
 Shear: 24.00 kip



Pier Depth: 2.5 ft  
 Total Moment: 1622 kip-ft

Client: SAI Group  
 Project: VZW (Everest Site:701770)  
 10/23/19 10:08

Specific Gravity: 2.65  
 Soil Unit Weight: 110 lb/ft<sup>3</sup>  
 Submerged Unit Wt: 62.00 lb/ft<sup>3</sup>  
 Concrete Unit Wt: 150 lb/ft<sup>3</sup>  
 Concrete f`c: 3000 psi  
 Rebar Fy: 60000 psi

Σ Concr Vol: 50.0 cuyd  
 Depth to Water: 5 ft

**OTM Safety Factor:** 0.75 TIA-G 9.4.1  
 Add Toe at Base of Pad? No

Toe: 0

**Bearing Pressure:** φs: 0.75  
 Soil Type @ Bearing Location: Sand  
 SPT-N @ Bearing Location: 50

fb(max): 1314 psf  
 Fb: 9000 psf  
 14.6% Loaded

**Overturning Moment Capacity:**  
 3654 kip ft

59.2% Loaded  
 Global Check:  
**OK**

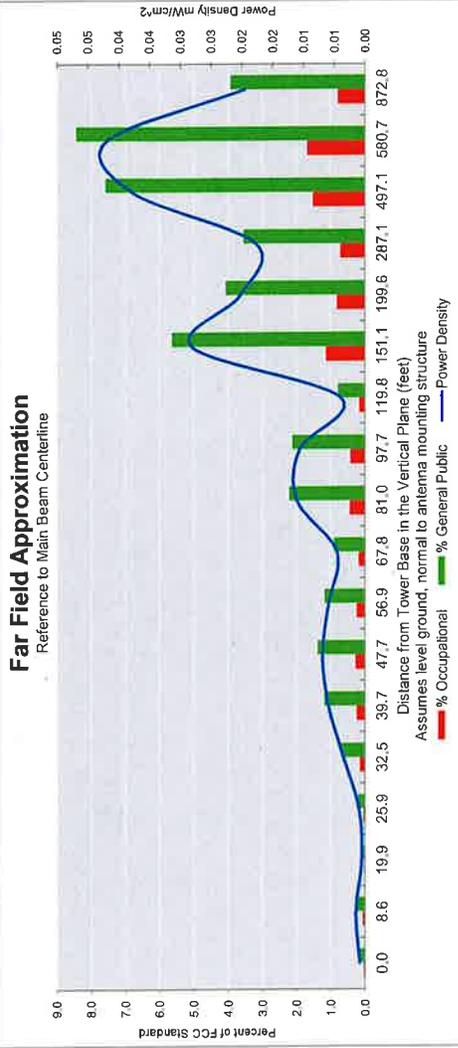
Foundation Design per ACI 318-08, TIA 222-G

# **ATTACHMENT 5**

Far Field Approximation  
with downtilt variation

**Estimated Radiated Emission  
Single Emitter Far Field Model  
Dipole/Wire/Yagi Antenna Types**

Location:	WOLCOTT NW CT
Site #:	
Date:	07/22/19
Name:	Ziad Cheiban
File Name:	
Operating Freq. (MHz):	746.0
Antenna Height (ft):	64.0
Antenna Gain (dBi):	14.6
Antenna Size (in.):	72.0
Downtilt (degrees):	2.0
Feedline Loss (dB):	0.0
ERP (W):	2370.8
No. of Channels:	1



Calc Angle	90.0	82.0	72.0	62.0	52.0	47.0	42.0	37.0	32.0	27.0	22.0	17.0	12.0	7.0	6.0	4.0		
Solve for r, dx to antenna	61.0	61.6	64.2	66.3	69.1	72.8	77.4	83.4	91.2	101.4	115.2	134.4	162.9	208.7	293.5	500.8	874.9	
Distance from Antenna Structure Base in Horizontal plane	0.0	8.6	19.9	25.9	32.5	39.7	47.7	56.9	67.8	81.0	97.7	119.8	151.1	199.6	287.1	497.1	872.8	
Angle from Main Beam (reference to horizontal plane)	90	80	70	65	60	55	50	45	40	35	30	25	20	15	10	5	4	
dB down from centerline (referenced to centerline)	36.76	34.35	38.52	35.34	29.54	26.8	25.59	25.63	25.99	24.21	20.29	23.24	13.03	12.3	9.92	2	0.2	0
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm²)	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.02	0.02	0.04	0.04	0.02
Percent of Occupational Standard	0.0	0.1	0.0	0.1	0.2	0.3	0.2	0.2	0.4	0.4	0.2	1.1	0.8	0.7	1.5	1.7	0.8	0.8
Percent of General Population Standard	0.2	0.3	0.1	0.2	0.7	1.2	1.4	1.2	0.9	2.2	2.1	0.8	5.7	4.1	3.6	7.6	8.4	3.9

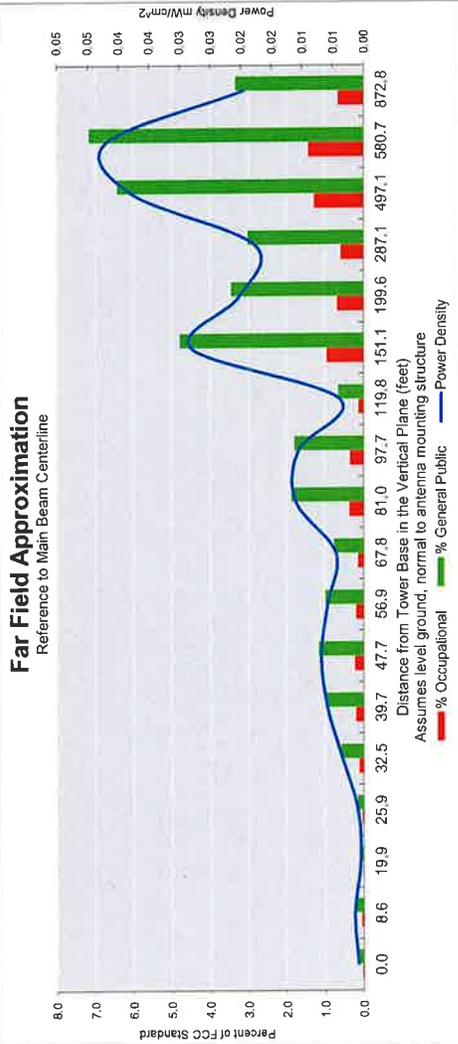
Antenna Type: **NNHH-65B-R4**  
Max%: **8.45%**

Far Field Approximation  
with downtilt variation

**Estimated Radiated Emission  
Single Emitter Far Field Model  
Dipole/Wire/Yagi Antenna Types**



Location:	WOLCOTT NW CT
Site #:	
Date:	07/22/19
Name:	Ziad Cheiban
File Name:	
Operating Freq. (MHz):	880.0
Antenna Height (ft):	64.0
Antenna Gain (dBi):	14.6
Antenna Size (in.):	72.0
Downtilt (degrees):	2.0
Feedline Loss (dB):	0.0
ERP (W):	2370.6
No. of Channels:	1



Calc Angle	90.0	82.0	72.0	67.0	62.0	57.0	52.0	47.0	42.0	37.0	32.0	27.0	22.0	17.0	12.0	7.0	6.0	4.0
Solve for r, dx to antenna	61.0	61.6	64.2	66.3	69.1	72.8	77.4	83.4	91.2	101.4	115.2	134.4	162.9	208.7	293.5	500.8	583.9	874.9
Distance from Antenna Structure Base in Horizontal plane	0.0	8.6	19.9	25.9	32.5	39.7	47.7	56.9	67.8	81.0	97.7	119.8	151.1	199.6	287.1	497.1	580.7	872.8
Angle from Main Beam (reference to horizontal plane)	90	80	70	65	60	55	50	45	40	35	30	25	20	15	10	5	4	2
dB down from centerline (referenced to centerline)	36.76	34.35	38.52	35.34	29.54	26.8	25.59	25.63	25.99	21.21	20.29	23.24	13.03	12.3	9.92	2	0.2	0
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm²)	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.02	0.02	0.04	0.04	0.02
Percent of Occupational Standard	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.1	1.0	0.7	0.6	1.3	1.4	0.7
Percent of General Population Standard	0.1	0.2	0.1	0.2	0.6	1.0	1.2	1.0	0.8	1.9	1.8	0.7	4.8	3.5	3.0	6.4	7.2	3.3

Antenna Type: NNHH-65B-R4

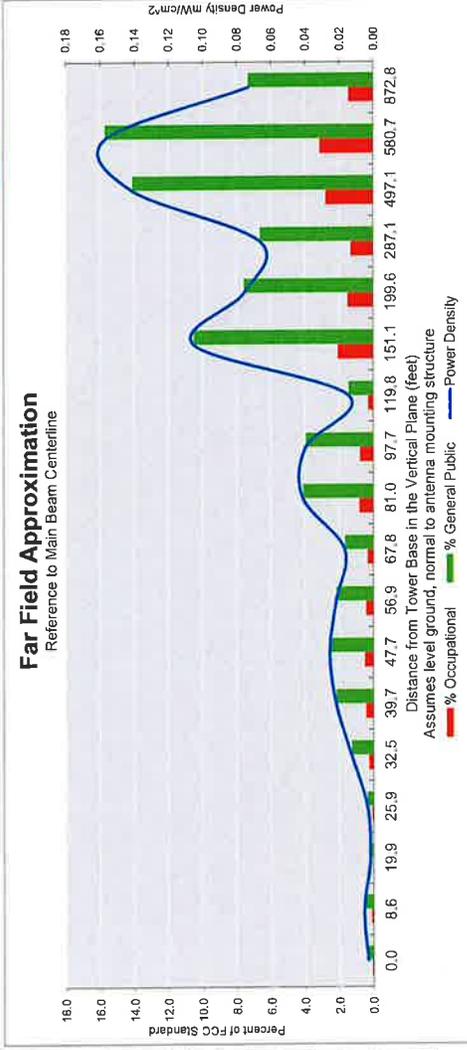
Max%: 7.16%

Far Field Approximation  
with downtilt variation

Estimated Radiated Emission  
Single Emitter Far Field Model  
Dipole/Wire/Yagi Antenna Types



Location:	WOLCOTT NW CT
Site #:	
Date:	07/22/19
Name:	Ziad Cheiban
File Name:	
Operating Freq. (MHz):	1970.0
Antenna Height (ft):	64.0
Antenna Gain (dBi):	17.5
Antenna Size (in.):	72.0
Downtilt (degrees):	2.0
Feedline Loss (dB):	0.0
ERP (W):	4548.0
No. of Channels:	1



Calc Angle	90.0	82.0	72.0	67.0	62.0	57.0	52.0	47.0	42.0	37.0	32.0	27.0	22.0	17.0	12.0	7.0	6.0	5.0	4.0
Solve for r, dx to antenna	61.0	61.6	64.2	66.3	69.1	72.8	77.4	83.4	91.2	101.4	115.2	134.4	162.9	208.7	293.5	500.8	583.9	874.9	874.9
Distance from Antenna Structure Base in Horizontal plane	0.0	8.6	19.9	25.9	32.5	39.7	47.7	56.9	67.8	81.0	97.7	119.8	151.1	199.6	287.1	497.1	580.7	872.8	872.8
Angle from Main Beam (reference to horizontal plane)	90	80	70	65	60	55	50	45	40	35	30	25	20	15	10	5	4	4	2
dB down from centerline (referenced to centerline)	36.76	34.35	38.52	35.34	29.54	26.8	25.59	25.63	25.99	21.21	20.29	23.24	13.03	12.3	9.92	2	0.2	0	0
Reflection Coefficient (1 to 4, 2.5G typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm²)	0.00	0.01	0.00	0.00	0.01	0.02	0.03	0.02	0.02	0.04	0.04	0.01	0.11	0.08	0.07	0.14	0.16	0.07	0.07
Percent of Occupational Standard	0.1	0.1	0.0	0.1	0.3	0.4	0.5	0.4	0.3	0.8	0.8	0.3	2.1	1.5	1.3	2.8	3.1	1.5	1.5
Percent of General Population Standard	0.3	0.5	0.2	0.4	1.3	2.2	2.6	2.2	1.7	4.1	4.0	1.5	10.5	7.6	6.6	14.1	15.7	7.3	7.3

Antenna Type: NHHH-65B-R4

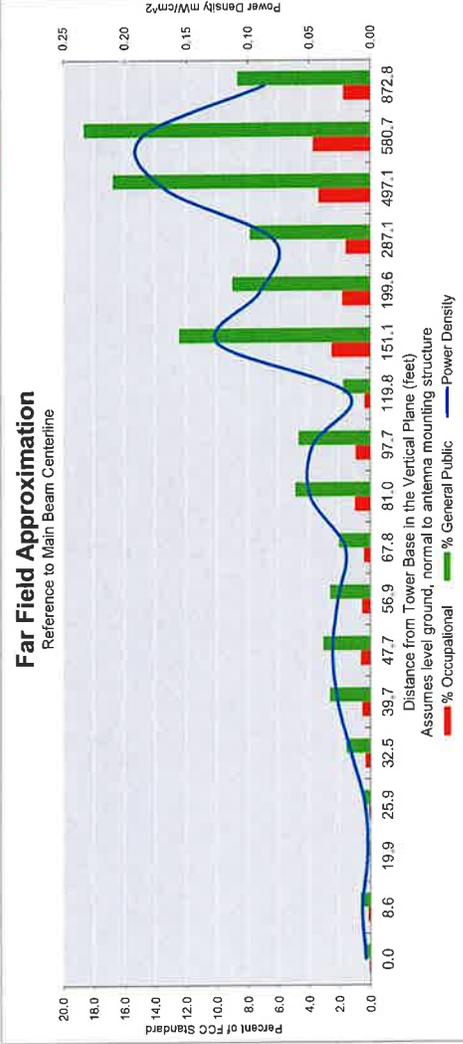
Max%: 15.72%

Far Field Approximation  
with downtilt variation

**Estimated Radiated Emission  
Single Emitter Far Field Model  
Dipole/Wire/Yagi Antenna Types**



Location:	WOLCOTT NW CT
Site #:	
Date:	07/22/19
Name:	Ziad Cheibani
File Name:	
Operating Freq. (MHz):	2145.0
Antenna Height (ft):	64.0
Antenna Gain (dB):	17.9
Antenna Size (in.):	72.0
Downtilt (degrees):	2.0
Feedline Loss (dB):	0.0
ERP (W):	4919.0
No. of Channels:	1



Calc Angle	90.0	82.0	72.0	67.0	62.0	57.0	52.0	47.0	42.0	37.0	32.0	27.0	22.0	17.0	12.0	7.0	6.0	4.0
Solve for r, dk to antenna	61.0	61.6	64.2	66.3	69.1	72.8	77.4	83.4	91.2	101.4	115.2	134.4	162.9	208.7	293.5	500.8	583.9	874.9
Distance from Antenna Structure Base in Horizontal plane	0.0	8.6	19.9	25.9	32.5	39.7	47.7	56.9	67.8	81.0	97.7	119.8	151.1	199.6	287.1	497.1	580.7	872.8
Angle from Main Beam, (reference to horizontal plane)	90	80	70	65	60	55	50	45	40	35	30	25	20	15	10	5	4	2
dB down from centerline (referenced to centerline)	36.76	34.35	38.52	35.34	29.54	26.8	25.59	25.63	25.99	21.21	20.29	23.24	13.03	12.3	9.92	2	0.2	0
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm²)	0.00	0.01	0.00	0.00	0.02	0.03	0.03	0.03	0.02	0.05	0.05	0.02	0.12	0.09	0.08	0.17	0.19	0.09
Percent of Occupational Standard	0.1	0.1	0.0	0.1	0.3	0.5	0.6	0.5	0.4	1.0	0.9	0.3	2.5	1.8	1.6	3.3	3.7	1.7
Percent of General Population Standard	0.4	0.6	0.2	0.4	1.5	2.6	3.1	2.6	2.0	4.9	4.7	1.7	12.5	9.0	7.9	16.7	18.6	8.7

Antenna Type: NNHH-65B-R4  
Max%: 18.64%

# ATTACHMENT 6

November 1, 2019

*Via Certificate of Mailing*

Thomas G. Dunn, Mayor  
Town of Wolcott  
10 Kenea Avenue  
Wolcott, CT 06716

Re: **Proposed Modifications to a Telecommunications Facility off Andrews Road in Wolcott, Connecticut**

Dear Mayor Dunn:

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 80-foot lattice tower off Andrews Road in Wolcott, Connecticut (the “Property”). Cellco intends to install four (4) antennas and four (4) remote radio heads on the tower at the 67-foot level. Equipment associated with Cellco’s antennas and an emergency back-up generator will be installed on the ground within the existing fenced 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.

**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.**

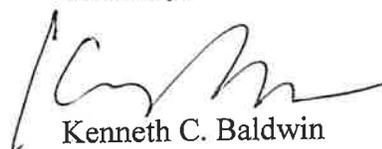
19912370-v1

# Robinson + Cole

Thomas G. Dunn, Mayor  
November 1, 2019  
Page 2

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

Sincerely,



Kenneth C. Baldwin

KCB/kmd  
Attachment

November 1, 2019

*Via Certificate of Mailing*

David Kalinowski, Zoning Inspector  
Town of Wolcott  
10 Kenea Avenue  
Wolcott, CT 06716

Re: **Proposed Modifications to a Telecommunications Facility off Andrews Road in Wolcott, Connecticut**

Dear Mr. Kalinowski:

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 80-foot lattice tower off Andrews Road in Wolcott, Connecticut (the “Property”). Cellco intends to install four (4) antennas and four (4) remote radio heads on the tower at the 67-foot level. Equipment associated with Cellco’s antennas and an emergency back-up generator will be installed on the ground within the existing fenced 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.

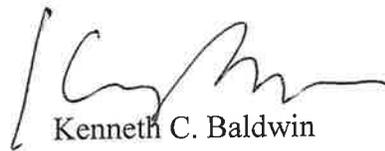
19981095-v1

David Kalinowski, Zoning Inspector  
November 1, 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

KCB/kmd  
Attachment

November 1, 2019

*Via Certificate of Mailing*

Raymond Mahoney, Jr., Chairman  
Planning and Zoning Commission  
Town of Wolcott  
10 Kenea Avenue  
Wolcott, CT 06716

Re: **Proposed Modifications to a Telecommunications Facility off Andrews Road in Wolcott, Connecticut**

Dear Mr. Mahoney:

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 80-foot lattice tower off Andrews Road in Wolcott, Connecticut (the “Property”). Cellco intends to install four (4) antennas and four (4) remote radio heads on the tower at the 67-foot level. Equipment associated with Cellco’s antennas and an emergency back-up generator will be installed on the ground within the existing fenced 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.

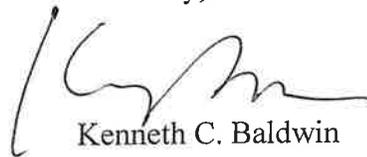
19912395-v1

Raymond Mahoney, Jr., Chairman  
November 1, 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

KCB/kmd  
Attachment

November 1, 2019

*Via Certificate of Mailing*

SNET  
c/o Frontier Communications  
Tax Department  
401 Merritt 7  
Norwalk, CT 06851

Re: **Proposed Modifications to a Telecommunications Facility off Andrews Road in Wolcott, Connecticut**

Dear Sir or Madam:

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 80-foot lattice tower off Andrews Road in Wolcott, Connecticut (the “Property”). Cellco intends to install four (4) antennas and four (4) remote radio heads on the tower at the 67-foot level. Equipment associated with Cellco’s antennas and an emergency back-up generator will be installed on the ground within the existing fenced 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.

19912420-v1

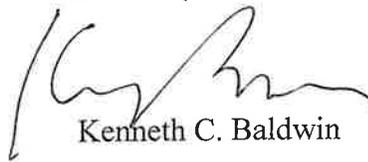
# Robinson + Cole

SNET c/o Frontier Communications  
November 1, 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', written over a light blue horizontal line.

Kenneth C. Baldwin

KCB/kmd  
Attachment

November 1, 2019

*Via Certificate of Mailing*

EIP Communications I, LLC  
Two Allegheny Center  
Nova Tower 2, Suite 703  
Pittsburgh, PA 15212  
Attn: Legal Department/701770 (Andrews Rd Tower)

Re: **Proposed Modifications to a Telecommunications Facility off Andrews Road in Wolcott, Connecticut**

Dear Sir or Madam:

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 80-foot lattice tower off Andrews Road in Wolcott, Connecticut (the “Property”). Cellco intends to install four (4) antennas and four (4) remote radio heads on the tower at the 67-foot level. Equipment associated with Cellco’s antennas and an emergency back-up generator will be installed on the ground within the existing fenced 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.

19987074-v1

# Robinson+Cole

EIP Communications I, LLC  
November 1, 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

KCB/kmd  
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

November 1, 2019

*Via Certificate of Mailing*

«Name\_and\_Address»

**Re: Proposed Modifications to a Telecommunications Facility off Andrews Road in Wolcott, 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 80-foot lattice tower off Andrews Road in Wolcott, Connecticut (the “Property”). Cellco intends to install four (4) antennas and four (4) remote radio heads on the tower at the 67-foot level. Equipment associated with Cellco’s antennas and an emergency back-up generator will be installed on the ground within the existing fenced 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.**

November 1, 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". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kenneth C. Baldwin

Attachment

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

**ABUTTING PROPERTY OWNERS**

**ANDREWS ROAD  
WOLCOTT, CONNECTICUT**

	<b>Property Address</b>	<b>Owner's and Mailing Address</b>
1.	Andrews Road	Carmen Gianni and Raymond Gelinas, Sr. 75 Allentown Road Wolcott, CT 06716
2.	25 Village Drive	Alexander and Carleen Zambetti 25 Village Drive Wolcott, CT 06716
3.	23 Village Drive	Kimberly and Michael Cortigiano, Jr. 23 Village Drive Wolcott, CT 06716
4.	17 Village Drive	Michael Cortigiano 17 Village Drive Wolcott, CT 06716
5.	17 Village Drive	Bank of New York Mellon c/o Shellpoint Mtg Servicing 55 Beattie Place, Suite 110 Greenville, SC 29601
6.	5 Village Drive	Peter and Cynthia Brooks 5 Village Drive Wolcott, CT 06716
7.	132 Andrews Road	Paul and Patricia Grandpre 132 Andrews Road Wolcott, CT 06716
8.	135 Andrews Road	Yvonne Harrison 135 Andrews Road Wolcott, CT 06716
9.	144 Andrews Road	Josephine Palmer 144 Andrews Road Wolcott, CT 06716