Robinson+Cole

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

July 24, 2018

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification**
5 Perryridge Road, Greenwich, Connecticut

Dear Ms. Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains twelve (12) antennas at the 124-foot level of the existing 164-foot tower on the grounds of Greenwich Hospital, at 5 Perryridge Road in Greenwich (the "Property"). The tower and the Property are owned by Greenwich Hospital. Cellco's shared use of this tower was approved by the Council in 2002 (TS-VER-057-020919).[1] Cellco now intends to install three (3) new antennas (model QUAD656C0000x, 850 MHz antennas), for a total of fifteen (15) antennas, at the 124-foot level on the tower. Cellco also intends to install three (3) new remote radio heads ("RRHs") behind its antennas. Included in Attachment 1 are specifications for Cellco's new antennas and RRHs.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Peter Tesei, First Selectman for the Town of Greenwich; Katie DeLuca, Director of Planning and Zoning; and Greenwich Hospital.

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

[1] Cellco has maintained a wireless facility at the Property since 1987, with the Council's approval of Docket No. 73. At that time, Cellco maintained antennas on the roof of the hospital building. Greenwich Hospital installed the existing tower in 2002.

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's new antennas and RRHs will be attached to its existing antenna platform at the 124-foot level.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The installation of Cellco's new antennas and RRHs will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table for Cellco's modified facility is included in Attachment 2.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The tower and its foundation can support Cellco's proposed modifications. (*See* Structural Analysis Report included in Attachment 3).

A copy of the parcel map and property owner information is included in Attachment 4. A Certificate of Mailing verifying that this filing was sent to municipal officials and the owner of the Property is included in Attachment 5.

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Kenneth C. Baldwin

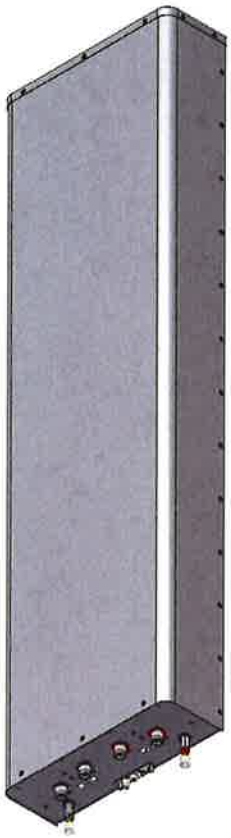
Enclosures
Copy to:
Peter Tesei, Greenwich First Selectman
Katie DeLuca, Director of Planning and Zoning
Greenwich Hospital
Tim Parks

ATTACHMENT 1

QUAD656C0000x

Twin Band | Quad Port | Panel Antenna | (2x) X-Pol | 65° / 65° | 15.0 / 15.0 dBi | Variable Tilt

- Twin band, quad-port panel antenna with variable electrical tilt
- 4x4 MIMO
- Patented internal RET actuator adds no additional length to the antenna



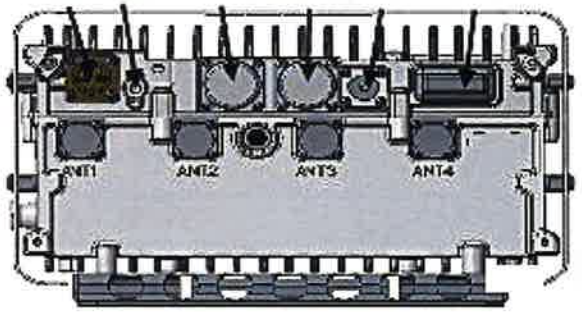
Ordering Options	Model Number
When ordering, replace "x" in the model number with one of the options listed below.	
Manual Electrical Tilt	QUAD656C0000M
Remote Electrical Tilt AISG v2.0 / 3GPP with an MDCU RET Actuator	QUAD656C0000G
Remote Electrical Tilt AISG v2.0 / 3GPP with an MDDU RET Actuator	QUAD656C0000L
Mounting bracket kits and other accessories are ordered separately.	

Electrical Characteristics		(2x) 696-900 MHz	
Frequency Bands		696-806 MHz	806-900 MHz
Polarization		(2x) ±45° (Quad-Pol)	
Horizontal Beamwidth		67°	66°
Vertical Beamwidth		13.6°	12.4°
Gain		14.5 dBi	15.0 dBi
Electrical Downtilt		0-12°	
Impedance		50Ω	
VSWR		≤ 1.5:1	
Upper Sidelobe Suppression		18 dB	18 dB
Front-to-Back Ratio		> 25 dB	> 25 dB
Inband Isolation		25 dB	
Isolation Between Bands		28 dB	
IM3 (2x20W carrier)		< -153 dBc	
Input Power		(4x) 500 W	
Total Number of Connectors		Antennas has 4 connectors located at the bottom	
Connectors Per Band	696-900 MHz	(2x) 7/16-DIN Female	
	696-900 MHz	(2x) 7/16-DIN Female	
Diplexed		No	
Lightning Protection		Direct Ground	
Operating Temperature		-40° to +60° C (-40° to +140° F)	
Mechanical Characteristics			
Dimensions (Length x Width x Depth)		1889 x 520 x 182 mm	74.4 x 20.5 x 7.2 in
Depth with Z-Brackets		227 mm	8.9 in
Weight without Mounting Brackets: MET		24.5 kg	54.0 lbs
Weight without Mounting Brackets: RET		24.8 kg	54.7 lbs
Survival Wind Speed		> 241 km/hr	> 150 mph
Wind Area	Front	0.98 m^2	10.6 ft^2
	Side	0.34 m^2	3.7 ft^2
Wind Loads (160 km/hr or 100 mph)	Front	1200 N	270 lbf
	Side	415 N	93 lbf

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

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 4 TX @ 40W]
	574W [100% RF Load at 4 TX @ 40W with SBT and AISG ON]
Antenna Ports	4 Ports, 4.3-10+
Optical Ports	2x CPRI 9.8 Gbps
ALD Control Interfaces	AISG3.0 from ANT1,2, 3, 4 and RET (Power supply ANT1 and ANT3)
Other Interfaces	External Alarm MCR-26 Serial connector (4 inputs, 1 Output) DC Circular Power Connector



Operational Temperature Range	-40°C to 55°C (with solar cover)
Dimensions (mm) Height x width x depth	337 x 295 x 165 (radio only) 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 Book Mount
Surge protection	Class II 5kA

NOKIA

ATTACHMENT 2

	General	Power	Density					
Site Name: Greenwich Relo								
Tower Height: 164Ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*Eversource	1	250	116.5	937		0.6247	0.11%	
*Eversource	1	250	116.5	154		0.2000	11.55%	
*Eversource	1	250	112	37		0.2000	8.78%	
*AT&T-UMTS	2	414	134	850	0.0182	0.5667	0.32%	
*AT&T-LTE	2	487	134	700	0.0214	0.4667	0.46%	
*AT&T-LTE	2	546	134	850	0.0240	0.5667	0.42%	
*AT&T-PCS-LTE	4	971	134	1900	0.0853	1.0000	0.85%	
*AT&T-WCS-LTE	4	917	134	2300	0.0805	1.0000	0.81%	
*AT&T-LTE	4	736	134	700	0.0646	0.4667	1.38%	
*AT&T-AWS-LTE	4	1181	134	2100	0.1037	1.0000	1.04%	
*AT&T-LTE	2	627	134	700	0.0275	0.4667	0.59%	
*MW to Bruce	1	4878	160	17960	0.0740	1.0000	0.74%	
*MW to PD	1	122	160	18762	0.0018	1.0000	0.02%	
*MW to Putnam	1	4878	160	17500	0.0740	1.0000	0.74%	
*Trunked System	1	148	164	886.7875	0.0021	0.5912	0.04%	
*Trunked System	1	148	164	867.0625	0.0021	0.5780	0.04%	
*Trunked System	1	148	164	868.15	0.0021	0.5788	0.04%	
*Trunked System	1	148	164	868.4	0.0021	0.5789	0.04%	
*Trunked System	1	148	164	868.7	0.0021	0.5791	0.04%	
*Trunked System	1	148	164	868.7	0.0021	0.5791	0.04%	
*Mutual Aid	1	218	155	866.0125	0.0035	0.5773	0.06%	
*Mutual Aid	1	218	155	866.5125	0.0035	0.5777	0.06%	
*CMED	1	150	151	463	0.0026	0.3087	0.08%	
*Fire Paging	1	100	125	164.175	0.0025	0.2000	0.13%	
*SP Hotline	1	100	110	154.175	0.0033	0.2000	0.17%	
*Sprint	3	69	155	1900	0.0034	1.0000	0.03%	
*Sprint	1	39	155	850	0.0006	0.5667	0.01%	
*Sprint	2	69	155	2500	0.0022	1.0000	0.02%	
*Clearwire	2	153	154	2496	0.0050	1.0000	0.05%	
*Clearwire	1	211	154	11 GHz	0.0035	1.0000	0.03%	
*T-Mobile	6	1706	144	1900/2100	0.1933	1.0000	1.93%	
*T-Mobile	1	865	144	700	0.0163	0.4667	0.35%	
*Nextel	12	100	113	851	0.0377	0.5673	0.66%	
*Sprint	3	562	154	2657	0.0277	1.0000	0.28%	
VZW PCS	**1**	**4511**	**124**	**0.1055**	**1970**	**1.0000**	**10.55%**	
VZW Cellular	**3**	**341**	**124**	**0.0239**	**869**	**0.5793**	**4.13%**	
VZW Cellular	**1**	**3085**	**124**	**0.0721**	**880**	**0.5866**	**12.30%**	
VZW AWS	**1**	**7251**	**124**	**0.1696**	**2145**	**1.0000**	**16.96%**	
VZW 700	**1**	**2062**	**124**	**0.0482**	**746**	**0.4973**	**9.70%**	
								85.53%
* Source: Siting Council								

QUAD656C0000x

Twin Band | Quad Port | Panel Antenna | (2x) X-Pol | 65° / 65° | 15.0 / 15.0 dBi | Variable Tilt

Electrical Downtilt Control		
Electrical downtilt for each band can be controlled separately. Tilt indicator(s) are covered by removable transparent cap(s).		
Manual Electrical Tilt (MET) Control	A colored knob at the end of the tilt indicator allows change of the tilt without need of a tool. The knob color is identical to the corresponding connector ring color. To access the knob, remove the cap by turning it counter-clockwise. It is re-installed by opposite rotation. Do not remove the transparent cap(s) from the antenna.	
Remote Electrical Tilt (RET) Control	The remote control of the electrical tilt is managed by either a Multi-Device Control Unit (MDCU) or a Multi-Device Dual Unit (MDDU) inserted in the bottom of the antenna. A single actuator individually controls the tilt of each band (no need for daisy chain cables between the bands). This module does not add any additional length to the antenna. For RET control, the transparent caps must be in place and locked. The tilt angle indicators always remain visible and the antenna still has manual tilt control (manual override).	
RET Actuator	Select one of the following RET actuators when ordering this antenna.	
	Multi-Device Control Unit (MCDU)	The MDCU is an electronic module that allows the remote control of the electrical downtilt (RET) in Amphenol antennas with factory embedded motors. The MDCU is factory installed. Refer to ordering options.
	Multi-Device Dual Unit (MDDU)	The MDDU allows two separate RET Controllers to independently drive the RETs in Amphenol antennas with factory installed motors (for antenna sharing). The MDDU is factory installed. Refer to ordering options.
Important Installation Instructions	In order to operate RET control, the transparent caps covering the tilt adjustment indicators must be engaged and locked. Do not cut them from the antenna.	
	Do not install the antenna with the connectors facing upward.	

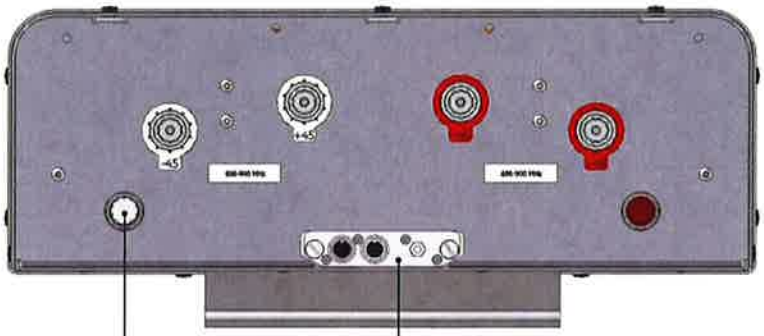
Mounting Options	Part Number	Image	Fits Pipe Diameter	Weight
All mounting bracket kits are ordered separately unless otherwise indicated. Select from the options listed below.				
3-Point Mounting and Downtilt Bracket Kit	36210008		40-115 mm 1.6-4.5 in	6.9 kg 15.2 lbs

Configuration Options
This antenna model **cannot** be used with Amphenol's UNICELL 3-sector antenna enclosures.

QUAD656C0000x

Twin Band | Quad Port | Panel Antenna | (2x) X-Pol | 65° / 65° | 15.0 / 15.0 dBi | Variable Tilt

Bottom View of Antenna

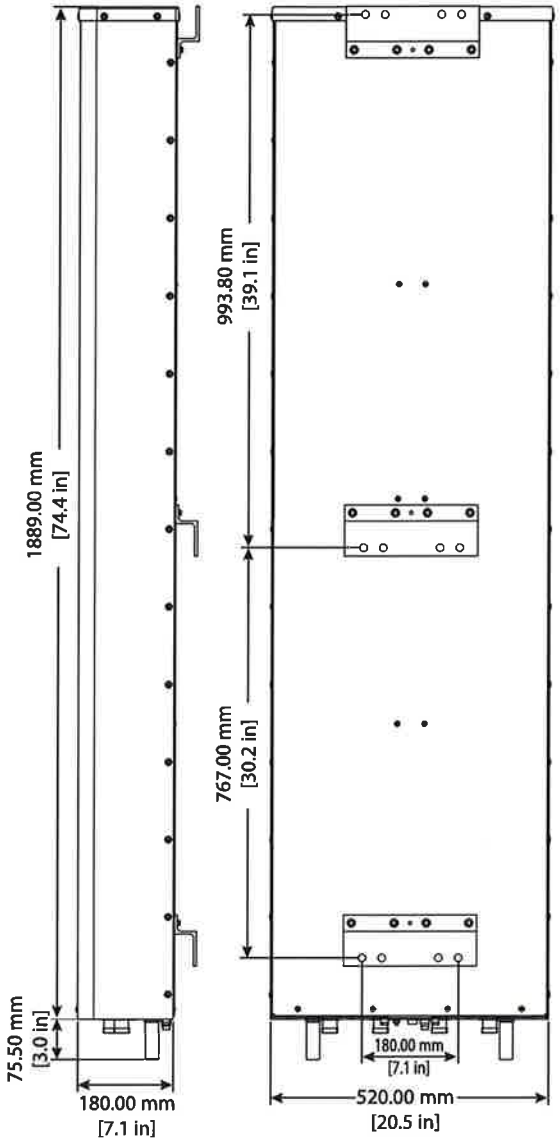


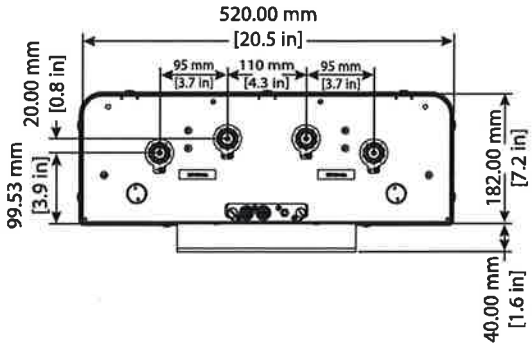
Location of the MDCU or MDDU for RET Control *(MDCU shown)*

Tilt indicators covered by transparent caps.
Manual adjustment is accessed by removing the caps.
Knob colors are the same as the connectors.

In order to operate RET control, the transparent caps covering the tilt adjustment indicators must be engaged and locked. Do not cut them from the antenna.

Dimensions

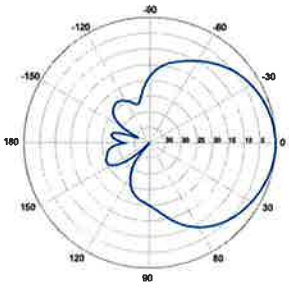




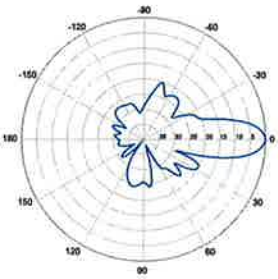
QUAD656C0000x

Twin Band | Quad Port | Panel Antenna | (2x) X-Pol | 65° / 65° | 15.0 / 15.0 dBi | Variable Tilt

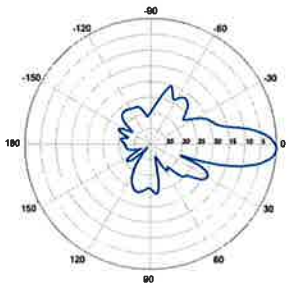
696-900 MHz



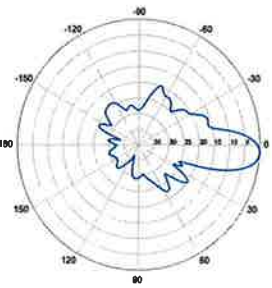
Horizontal | 750 MHz



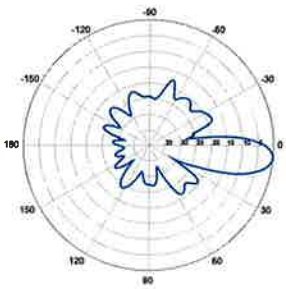
0° | Vertical | 750 MHz



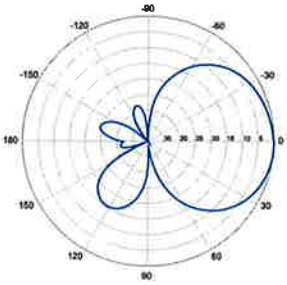
2° | Vertical | 750 MHz



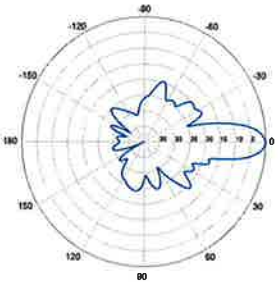
4° | Vertical | 750 MHz



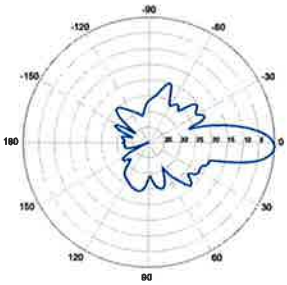
6° | Vertical | 750 MHz



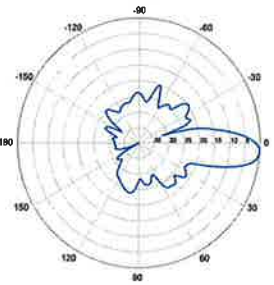
Horizontal | 850 MHz



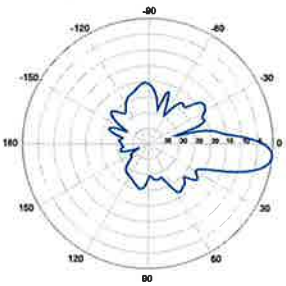
0° | Vertical | 850 MHz



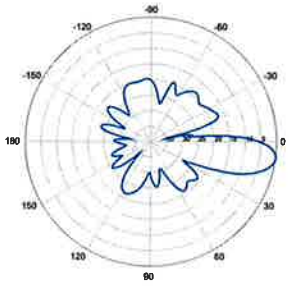
2° | Vertical | 850 MHz



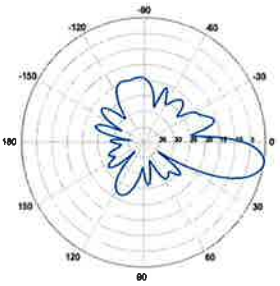
4° | Vertical | 850 MHz



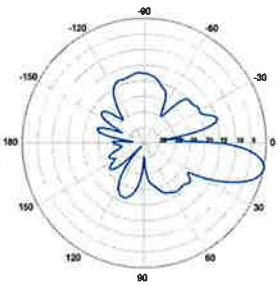
6° | Vertical | 850 MHz



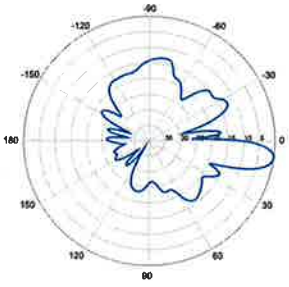
8° | Vertical | 750 MHz



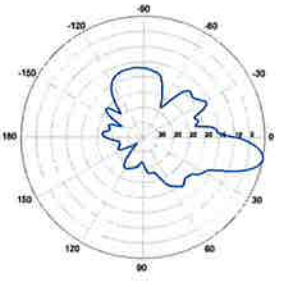
10° | Vertical | 750 MHz



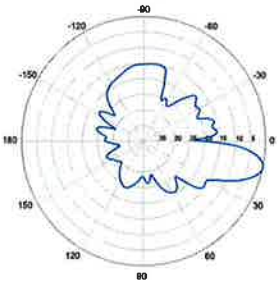
12° | Vertical | 750 MHz



8° | Vertical | 850 MHz



10° | Vertical | 850 MHz



12° | Vertical | 850 MHz

ATTACHMENT 3

(Revised)
STRUCTURAL ANALYSIS REPORT

For

GREENWICH CT

5 PERRYRIDGE ROAD
GREENWICH, CT 06830

Antennas Mounted to the Monopole

Prepared for:

verizon

99 East River Road, 9th Floor
East Hartford, CT 06108

Dated: June 28, 2018 (Rev 1)
Dated: October 12, 2017

Prepared by:

HUDSON Design Group LLC

45 Beechwood Drive
North Andover, MA 01845
(P) 978.557.5553 (F) 978.336.5586
www.hudsondesigngroupllc.com

STATE OF CONNECTICUT
GI KAI WANG
No. 23220
LICENSED PROFESSIONAL ENGINEER
6/28/2018

HUDSON
Design Group LLC

SCOPE OF WORK:

Hudson Design Group LLC (HDG) has been authorized by VERIZON to conduct a structural evaluation of the 164' monopole supporting the existing and proposed VERIZON's antennas located at elevation 124' above the ground level.

This report represents this office's findings, conclusions and recommendations pertaining to the support of VERIZON's existing and proposed antennas listed below.

Record drawings of the existing monopole prepared by Engineered Endeavors Inc., dated September 3, 2002, were available for our use. The previous structural analysis report prepared by Centek Engineering, dated January 21, 2016, was provided to this office.

CONCLUSION SUMMARY:

Based on our evaluation, we have determined that the existing monopole, anchor bolts, base plate and foundation **are in conformance** with the ANSI/TIA-222-G Standard for the loading considered under the criteria listed in this report. The monopole structure is rated at **53.0%** - (Anchor Bolts Controlling).

HUDSON
Design Group LLC

APPURTENANCES CONFIGURATION:

Tenant	Appurtenances	Elev.	Mount
	12' Omni	164'	Low Profile Platform
	(2) 8' Omni	164'	Low Profile Platform
	Panel Antenna 2'x2'	164'	Low Profile Platform
	(2) 10' Omni	164'	Low Profile Platform
	Camera	164'	Low Profile Platform
	(2) 4' Dish	160'	Pipe Mount
	2' Dish	160'	Pipe Mount
	(3) LLPX310R Antennas	154'	Low Profile Platform
	(2) A-ANT-23G Dish	154'	Low Profile Platform
	(3) RRH	151.5'	Tri - Bracket
	(2) HORIZON DUO	154'	Low Profile Platform
	(2) APXVSPP18-C Antennas	154'	Low Profile Platform
	P40-16-XLPP-RR Antenna	154'	Low Profile Platform
	(3) RRH 1900	154'	Low Profile Platform
	(3) RRH 800	154'	Low Profile Platform
	(3) APXVTM14 Antennas	154'	Low Profile Platform
	(3) RRH8X20-25	154'	Low Profile Platform
	(3) APX16PV-16PVL Antennas	144'	Low Profile Platform
	(3) LNX-6515DS-VTM Antennas	144'	Low Profile Platform
	(9) TMA	144'	Low Profile Platform
	(3) Smart Bias Tee	144'	Low Profile Platform
	(3) RRUS-11	138'	Ring Mount
	(3) RRUS-32	138'	Ring Mount
	(2) DC6-48-60-18-8F	138'	Ring Mount
	(3) Powerwave 7770 Antennas	134'	Low Profile Platform
	(3) QS66512 Antennas	134'	Low Profile Platform
	(3) 800 10965 Antennas	134'	Low Profile Platform
	(3) HPA-65R-BUU-H6 Antennas	134'	Low Profile Platform
	(6) LGP21401	134'	Low Profile Platform
	(6) TPX-070821	134'	Low Profile Platform
	(3) RRUS-32	134'	Low Profile Platform
	(3) RRUS-32	134'	Low Profile Platform
	(3) RRUS 4478 B14	134'	Low Profile Platform
	(1) DC6-48-60-18-8F	134'	Low Profile Platform

HUDSON
Design Group LLC

APPURTENANCES CONFIGURATION (continued):

Tenant	Appurtenances	Elev.	Mount
VERIZON	(6) DB844G65A-XY Antennas	124'	Low Profile Platform
VERIZON	(6) SBNHH-1D65B Antennas	124'	Low Profile Platform
VERIZON	(3) RRH2X60-700	124'	Low Profile Platform
VERIZON	(3) RRH2X60-PCS	124'	Low Profile Platform
VERIZON	(3) RRH4X45-AWS	124'	Low Profile Platform
VERIZON	(2) RC2DC-3315-PF-48	124'	Low Profile Platform
VERIZON	***(3) QUAD656C Antennas***	124'	Low Profile Platform
VERIZON	***(3) RRH4X40-850***	124'	Low Profile Platform
	531-70HD	114'	Low Profile Platform
	(2) DB586-Y	114'	Low Profile Platform
	ANT150F2	114'	Low Profile Platform
	Tower Top Amplifier	114'	Low Profile Platform
	(3) GPS	51.5'	Tri - Bracket

Proposed VERIZON Appurtenances shown in Bold.

VERIZON EXISTING/PROPOSED COAX CABLES:

Tenant	Coax Cables	Elev.	Mount
VERIZON	(6) 1 5/8" Cables	124'	Inside Monopole
VERIZON	(2) Fiber Cables	124'	Inside Monopole

Proposed VERIZON Coax Cables shown in Bold.

HUDSON
Design Group LLC

ANALYSIS RESULTS SUMMARY:

Component	Max. Stress Ratio	Elev. of Component (ft)	Pass/Fail	Comments
Pole Section-L1	13.1 %	131.5 – 164	PASS	
Pole Section-L2	13.7 %	119.29 – 131.5	PASS	
Pole Section-L3	33.2 %	78.79 – 119.29	PASS	
Pole Section-L4	37.1 %	39.88 – 78.79	PASS	
Pole Section-L5	50.6 %	1.5 – 39.88	PASS	
Anchor bolts & Base Plate	**53.0 %**	1.5	PASS	**Controlling**

MONOPOLE DEFLECTION:

DEFLECTION	ALLOWABLE *	PROPOSED **	Pass/Fail
TILT (Degrees)	1.9° @ 160'	**1.45° @ 164'**	PASS

Allowable tilt taken from EEI design notes, dated 8/21/2002.
****Proposed tilt reduced by 1.35.***

FOUNDATION ANALYSIS RESULTS SUMMARY:

	Design Reactions *	Proposed Reactions	Pass/Fail	Comments
AXIAL	102.8 k	**100.3 k**	PASS	
SHEAR	64.0 k	**60.9 k**	PASS	
MOMENT	7446 ft-k	**7022 ft-k**	PASS	

**** Design Reactions taken from EEI report (dated 8/21/2002) multiplied by 1.35.***

HUDSON
Design Group LLC

DESIGN CRITERIA:

1. EIA/TIA-222-G Structural Standards for Steel Antenna Towers and Antenna Supporting Structures

   County: Fairfield
   Wind Load: 110 mph (3 second gust)
   Structural Class: II
   Exposure Category: B
   Topographic Category: 1
   Nominal Ice Thickness: 0.75 inch

2. Approximate height above grade to proposed antennas: 124'

***Calculations and referenced documents are attached.**

ASSUMPTIONS:

1. The monopole geometry and member sizes are as indicated in the previous structural analysis report prepared by Centek Engineering, dated January 21, 2016.

2. The appurtenances configuration is as stated in the previous structural analysis report prepared by Centek Engineering, dated January 21, 2016. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.

3. The monopole and foundation are properly constructed and maintained. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.

4. The support mounts and platforms are not analyzed and are considered adequate to support the loading. The analysis is limited to the primary support structure itself.

5. All prior structural modification, if any, are assumed to be as per the data supplied (if available), and installed properly.

SUPPORT RECOMMENDATIONS:

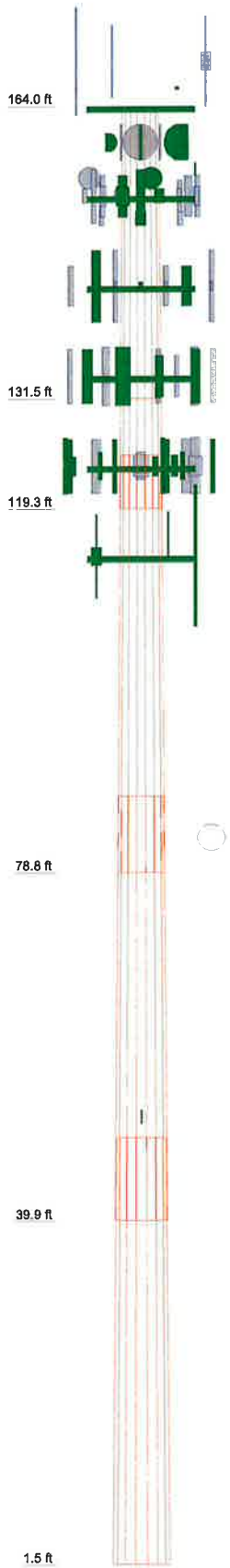
HDG recommends that the proposed antennas and RRHs be mounted on the existing steel platform supported by the monopole.

HUDSON
Design Group LLC

Photo 1: Photo illustrating the monopole with Appurtenances shown.

HUDSON
Design Group LLC

CALCULATIONS



Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (lb)
1	32.50	18	0.3125		47.0000	53.4200		5473.4
2	12.21	18	0.3750	6.00	53.4200	56.1500		2690.7
3	46.50	18	0.4375	8.42	54.0585	62.9700		12760.7
4	47.33	18	0.5625	9.25	60.4813	69.6600		18548.8
5	47.63	18	0.5625		66.7412	76.0000		20489.4
							A572-65	59963.0

DESIGNED APPURTENANCE LOADING

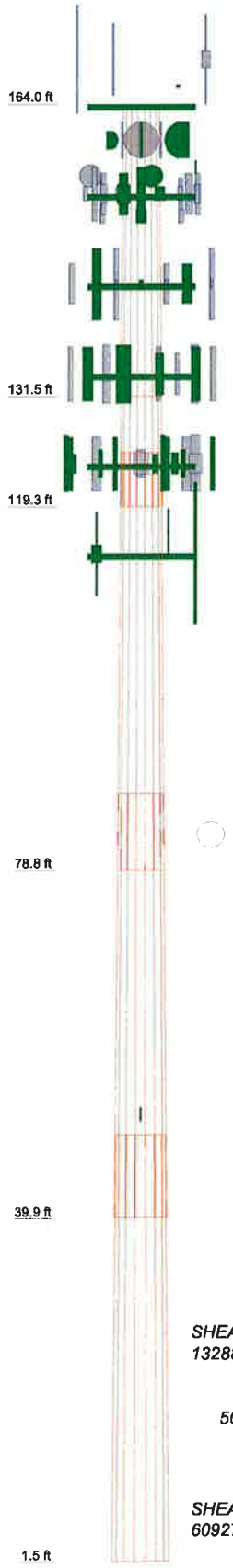
TYPE	ELEVATION	TYPE	ELEVATION
Omni 3"x12'	164	Powerwave 7770 w/mount pipe	134
Omni 3"x8'	164	Quintel QS66512-3 w/mpount pipe	134
Panel Antenna 2'X2'	164	800 10965 w/ Mount Pipe	134
Omni 3"x10'	164	HPA-65R-BUU-H6 w/mount pipe	134
Omni 3"x10'	164	Powerwave 7770 w/mount pipe	134
Omni 3"x8'	164	Quintel QS66512-3 w/mpount pipe	134
Camera	164	800 10965 w/ Mount Pipe	134
PiROD 13' Low Profile Platform	164	HPA-65R-BUU-H6 w/mount pipe	134
4"x4' pipe	160	(2) Powerwave TMA LGP21401	134
4"x4' pipe	160	(2) Powerwave TMA LGP21401	134
4"x4' pipe	160	(2) Powerwave TMA LGP21401	134
HP4-105	160	(2) TPX-070821 Triplexer	134
HP4-105	160	(2) TPX-070821 Triplexer	134
HP2-102	160	(2) TPX-070821 Triplexer	134
LLPX310R w/ Mount Pipe	154	Ericsson RRUS-32	134
HORIZON DUO	154	Ericsson RRUS-32	134
HORIZON DUO	154	Ericsson RRUS-32	134
APXVSPP18-C w/mount pipe	154	Ericsson RRUS-32 (ATT)	134
Powerwave P40-16-XLPP-RR w/mount pipe	154	Ericsson RRUS-32	134
		Ericsson RRUS-32	134
APXVSPP18-C w/mount pipe	154	RRUS 4478 B14	134
FD-RRH4x40 1900	154	RRUS 4478 B14	134
FD-RRH4x40 1900	154	RRUS 4478 B14	134
FD-RRH4x40 1900	154	DC6-48-60-18-8F	134
FD-RRH2x50 800	154	PiROD 15' Low Profile Platform (ATT)	134
FD-RRH2x50 800	154	Powerwave 7770 w/mount pipe	134
FD-RRH2x50 800	154	Quintel QS66512-3 w/mpount pipe	134
GPS	154	800 10965 w/ Mount Pipe	134
APXVTM14 w/mount pipe	154	HPA-65R-BUU-H6 w/mount pipe	134
APXVTM14 w/mount pipe	154	(2) SBNHH-1D65B w/ Mount Pipe	124
APXVTM14 w/mount pipe	154	(2) SBNHH-1D65B w/ Mount Pipe	124
RRH 8x20-25	154	RRH2x60-700	124
RRH 8x20-25	154	RRH2x60-700	124
RRH 8x20-25	154	RRH2x60-700	124
PiROD 13' Low Profile Platform	154	RRH2x60 PCS	124
LLPX310R w/ Mount Pipe	154	RRH2x60 PCS	124
LLPX310R w/ Mount Pipe	154	RRH2x60 PCS	124
A-ANT-23G-24	154	RRH 4X45 AWS	124
A-ANT-23G-24	154	RRH 4X45 AWS	124
Valmont Light Duty Tri-Bracket (1)	151.5	RRH 4X45 AWS	124
FD-RRH2x50 800	151.5	RxxDC-3315-PF-48	124
FD-RRH2x50 800	151.5	RxxDC-3315-PF-48	124
FD-RRH2x50 800	151.5	QUAD656C w/mount pipe (Verizon - proposed)	124
LNX-6515DS-VTM w/ Mount Pipe	144	QUAD656C w/mount pipe	124
(3) Ericsson KRY 112 71/2	144	QUAD656C w/mount pipe	124
(3) Ericsson KRY 112 71/2	144	RRH 4x40-850	124
(3) Ericsson KRY 112 71/2	144	RRH 4x40-850	124
ATSBT-TOP-MF-4G	144	RRH 4x40-850	124
ATSBT-TOP-MF-4G	144	PiROD 13' Low Profile Platform (Verizon - existing)	124
ATSBT-TOP-MF-4G	144	(2) DB844G65ZAXY w/Mount Pipe	124
PiROD 13' Low Profile Platform	144	(2) DB844G65ZAXY w/Mount Pipe	124
RFS APX16PV-16PVL w/mount pipe	144	(2) DB844G65ZAXY w/Mount Pipe	124
RFS APX16PV-16PVL w/mount pipe	144	(2) SBNHH-1D65B w/ Mount Pipe	124
LNX-6515DS-VTM w/ Mount Pipe	144	Tower Top Amplifier	114
LNX-6515DS-VTM w/ Mount Pipe	144	PiROD 13' Low Profile Platform	114
RFS APX16PV-16PVL w/mount pipe	144	531-70HD	114
Ericsson RRUS-32	138	DB586-Y	114
DC6-48-60-18-8F	138	DB586-Y	114
DC6-48-60-18-8F	138	ANT150F2	114
Ring Mount	138	GPS	51.5
Ericsson RRUS-11 (ATT)	138	GPS	51.5
Ericsson RRUS-11	138	GPS	51.5
Ericsson RRUS-11	138	Valmont Light Duty Tri-Bracket (1)	51.5
Ericsson RRUS-32	138		
Ericsson RRUS-32	138		

MATERIAL STRENGTH

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

Hudson Design Group LLC
45 Beechwood Drive
North Andover, MA 01845
Phone: (978) 557-5553
FAX: (978) 336-5586

Job: ***GREENWICH CT***			
Project: ***164 ft Monopole***			
Client: VERIZON	Drawn by: kw		App'd:
Code: TIA-222-G	Date: 06/25/18		Scale: N
Path:			Dwg No.



Section	1	2	3	4	5
Length (ft)	32.50	12.21	46.50	47.33	47.63
Number of Sides	18	18	18	18	18
Thickness (in)	0.3125	0.3750	0.4375	0.5625	0.5625
Socket Length (ft)		6.00	8.42	9.25	
Top Dia (in)	47.0000	53.4200	54.0585	60.4813	66.7412
Bot Dia (in)	53.4200	56.1500	62.9700	69.6600	76.0000
Grade	A572-65				
Weight (lb)	5473.4	2690.7	12760.7	18548.8	20489.4

59963.0

MATERIAL STRENGTH

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

ALL REACTIONS ARE FACTORED

AXIAL
155851 lb

SHEAR
13288 lb

MOMENT
1511378 lb-ft

TORQUE 866 lb-ft
50.0 mph WIND - 0.7500 in ICE

AXIAL
100328 lb

SHEAR
60927 lb

MOMENT
7021909 lb-ft

TORQUE 3826 lb-ft
REACTIONS - 110.0 mph WIND

Hudson Design Group LLC
45 Beechwood Drive
North Andover, MA 01845
Phone: (978) 557-5553
FAX: (978) 336-5586

Job:	**GREENWICH CT**		
Project:	***164 ft Monopole***		
Client: VERIZON		Drawn by: kw	App'd:
Code: TIA-222-G		Date: 06/25/18	Scale: N
Path:			Dwg No.

Tower Input Data

There is a pole section.
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 110.0 mph.
Structure Class II.
Exposure Category B.
Topographic Category 1.
Crest Height 0.00 ft.
Nominal ice thickness of 0.7500 in.
Ice thickness is considered to increase with height.
Ice density of 56.0 pcf.
A wind speed of 50.0 mph is used in combination with ice.
Temperature drop of 50.0 °F.
Deflections calculated using a wind speed of 60.0 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.

Tapered Pole Section Geometry

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	164.00-131.50	32.50	0.00	18	47.0000	53.4200	0.3125	1.2500	A572-65 (65 ksi)
L2	131.50-119.29	12.21	6.00	18	53.4200	56.1500	0.3750	1.5000	A572-65 (65 ksi)
L3	119.29-78.79	46.50	8.42	18	54.0585	62.9700	0.4375	1.7500	A572-65 (65 ksi)
L4	78.79-39.88	47.33	9.25	18	60.4813	69.6600	0.5625	2.2500	A572-65 (65 ksi)
L5	39.88-1.50	47.63		18	66.7412	76.0000	0.5625	2.2500	A572-65 (65 ksi)

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
7/8	B	Surface Ar (CaAa)	51.50 - 4.50	3	3	0.000 0.000	1.1100		0.54
1 5/8	B	Surface Ar (CaAa)	144.00 - 7.50	1	1	0.000 0.000	1.9800		1.04
1 5/8	B	Surface Ar (CaAa)	144.00 - 7.50	5	5	0.000 0.000	1.9800		1.04

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
1/2	A	No	Inside Pole	164.00 - 4.50	6	No Ice	0.00	0.25
						1/2" Ice	0.00	0.25
						1" Ice	0.00	0.25
5/8	A	No	Inside Pole	164.00 - 4.50	1	No Ice	0.00	0.40
						1/2" Ice	0.00	0.40
						1" Ice	0.00	0.40
7/8	A	No	Inside Pole	164.00 - 4.50	3	No Ice	0.00	0.54
						1/2" Ice	0.00	0.54
						1" Ice	0.00	0.54
1 1/4	A	No	Inside Pole	164.00 - 4.50	5	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
						1" Ice	0.00	0.66
1/2	B	No	Inside Pole	154.00 - 7.50	1	No Ice	0.00	0.25
						1/2" Ice	0.00	0.25
						1" Ice	0.00	0.25
2" Rigid Conduit	B	No	Inside Pole	154.00 - 7.50	2	No Ice	0.00	2.80
						1/2" Ice	0.00	2.80
						1" Ice	0.00	2.80
LDF4.5-50 (5/8 FOAM)	B	No	Inside Pole	154.00 - 7.50	2	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15
1 5/8	B	No	Inside Pole	144.00 - 4.50	12	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
1 5/8	A	No	Inside Pole	134.00 - 11.50	12	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
FB-L98B-002	A	No	Inside Pole	134.00 - 11.50	2	No Ice	0.00	0.25
						1/2" Ice	0.00	0.25
						1" Ice	0.00	0.25
WR-VG122ST-BRDA	A	No	Inside Pole	134.00 - 11.50	4	No Ice	0.00	0.25
						1/2" Ice	0.00	0.25
						1" Ice	0.00	0.25
WR-VG122ST-BRDA	A	No	Inside Pole	134.00 - 11.50	2	No Ice	0.00	0.25
						1/2" Ice	0.00	0.25
						1" Ice	0.00	0.25
1 5/8 Fiber Cable	B	No	Inside Pole	154.00 - 7.50	6	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
7/8	C	No	Inside Pole	114.00 - 1.50	2	No Ice	0.00	0.54
						1/2" Ice	0.00	0.54
						1" Ice	0.00	0.54
1 5/8	C	No	Inside Pole	114.00 - 1.50	2	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
1/2	C	No	Inside Pole	114.00 - 1.50	1	No Ice	0.00	0.25
						1/2" Ice	0.00	0.25
						1" Ice	0.00	0.25
1 5/8 Fiber Cable	C	No	Inside Pole	14.00 - 7.50	1	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
**********								
1 5/8 (Verizon - existing)	C	No	Inside Pole	124.00 - 7.50	6	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04
1 5/8 Fiber Cable	C	No	Inside Pole	124.00 - 7.50	2	No Ice	0.00	1.04
						1/2" Ice	0.00	1.04
						1" Ice	0.00	1.04

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
4"x4' pipe	A	From Face	0.50	0.0000	160.00	No Ice	1.08	1.08	43.00
			0.00			1/2" Ice	1.47	1.47	54.63
			0.00			1" Ice	1.73	1.73	69.27
4"x4' pipe	B	From Face	0.50	0.0000	160.00	No Ice	1.08	1.08	43.00
			0.00			1/2" Ice	1.47	1.47	54.63
			0.00			1" Ice	1.73	1.73	69.27
4"x4' pipe	C	From Face	0.50	0.0000	160.00	No Ice	1.08	1.08	43.00
			0.00			1/2" Ice	1.47	1.47	54.63
			0.00			1" Ice	1.73	1.73	69.27
Omni 3"x12'	A	From Face	4.00	0.0000	164.00	No Ice	3.60	3.60	50.00
			-4.00			1/2" Ice	4.83	4.83	76.06
			5.00			1" Ice	6.08	6.08	109.92
Omni 3"x8'	A	From Face	4.00	0.0000	164.00	No Ice	2.40	2.40	25.00
			4.00			1/2" Ice	3.19	3.19	42.51
			5.00			1" Ice	3.67	3.67	65.37
Panel Antenna 2'X2'	B	From Face	4.00	0.0000	164.00	No Ice	4.80	0.72	20.00
			4.00			1/2" Ice	5.07	0.87	45.02
			5.00			1" Ice	5.35	1.03	73.54
Omni 3"x10'	B	From Face	4.00	0.0000	164.00	No Ice	3.00	3.00	20.00
			4.00			1/2" Ice	4.03	4.03	41.79
			5.00			1" Ice	5.03	5.03	70.14
Omni 3"x10'	A	From Face	4.00	0.0000	164.00	No Ice	3.00	3.00	20.00
			-4.00			1/2" Ice	4.03	4.03	41.79
			5.00			1" Ice	5.03	5.03	70.14
Omni 3"x8'	A	From Face	4.00	0.0000	164.00	No Ice	2.40	2.40	25.00
			4.00			1/2" Ice	3.19	3.19	42.51
			5.00			1" Ice	3.67	3.67	65.37
Camera	C	From Face	4.00	0.0000	164.00	No Ice	0.14	0.42	10.00
			-4.00			1/2" Ice	0.19	0.52	15.35
			2.00			1" Ice	0.25	0.63	22.39
PiROD 13' Low Profile Platform	C	None		0.0000	164.00	No Ice	15.70	15.70	1300.00
						1/2" Ice	20.10	20.10	1765.00
						1" Ice	24.50	24.50	2230.00
**********									
PiROD 13' Low Profile Platform	C	None		0.0000	154.00	No Ice	15.70	15.70	1300.00
						1/2" Ice	20.10	20.10	1765.00
						1" Ice	24.50	24.50	2230.00
LLPX310R w/ Mount Pipe	A	From Face	3.00	0.0000	154.00	No Ice	4.54	2.98	45.12
			0.00			1/2" Ice	4.89	3.53	83.10
			0.00			1" Ice	5.25	4.09	126.44
LLPX310R w/ Mount Pipe	B	From Face	3.00	0.0000	154.00	No Ice	4.54	2.98	45.12
			0.00			1/2" Ice	4.89	3.53	83.10
			0.00			1" Ice	5.25	4.09	126.44
LLPX310R w/ Mount Pipe	C	From Face	3.00	0.0000	154.00	No Ice	4.54	2.98	45.12
			0.00			1/2" Ice	4.89	3.53	83.10
			0.00			1" Ice	5.25	4.09	126.44
FD-RRH2x50 800	A	From Face	3.00	0.0000	151.50	No Ice	2.06	1.93	64.00
			0.00			1/2" Ice	2.24	2.11	86.12
			0.00			1" Ice	2.43	2.29	111.30
FD-RRH2x50 800	B	From Face	3.00	0.0000	151.50	No Ice	2.06	1.93	64.00
			0.00			1/2" Ice	2.24	2.11	86.12
			0.00			1" Ice	2.43	2.29	111.30

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
FD-RRH2x50 800	C	From Face	3.00	0.0000	151.50	No Ice	2.06	1.93	64.00
			0.00			1/2" Ice	2.24	2.11	86.12
			0.00			1" Ice	2.43	2.29	111.30
HORIZON DUO	A	From Face	1.00	0.0000	154.00	No Ice	1.67	0.29	12.30
			0.00			1/2" Ice	1.83	0.40	21.39
			0.00			1" Ice	2.00	0.51	32.65
HORIZON DUO	C	From Face	1.00	0.0000	154.00	No Ice	1.67	0.29	12.30
			0.00			1/2" Ice	1.83	0.40	21.39
			0.00			1" Ice	2.00	0.51	32.65
APXVSPP18-C w/mount pipe	A	From Face	4.00	0.0000	154.00	No Ice	8.26	7.47	87.55
			0.00			1/2" Ice	8.82	8.66	158.03
			0.00			1" Ice	9.35	9.56	236.54
Powerwave P40-16-XLPP-RR w/mount pipe	B	From Face	4.00	0.0000	154.00	No Ice	9.19	4.71	82.25
			0.00			1/2" Ice	9.61	5.36	148.76
			0.00			1" Ice	10.05	6.03	222.16
APXVSPP18-C w/mount pipe	C	From Face	4.00	0.0000	154.00	No Ice	8.26	7.47	87.55
			0.00			1/2" Ice	8.82	8.66	158.03
			0.00			1" Ice	9.35	9.56	236.54
FD-RRH4x40 1900	A	From Face	4.00	0.0000	154.00	No Ice	2.24	2.32	60.00
			2.00			1/2" Ice	2.44	2.53	83.13
			0.00			1" Ice	2.65	2.74	109.50
FD-RRH4x40 1900	B	From Face	4.00	0.0000	154.00	No Ice	2.24	2.32	60.00
			2.00			1/2" Ice	2.44	2.53	83.13
			0.00			1" Ice	2.65	2.74	109.50
FD-RRH4x40 1900	C	From Face	4.00	0.0000	154.00	No Ice	2.24	2.32	60.00
			2.00			1/2" Ice	2.44	2.53	83.13
			0.00			1" Ice	2.65	2.74	109.50
FD-RRH2x50 800	A	From Face	4.00	0.0000	154.00	No Ice	2.06	1.93	64.00
			-2.00			1/2" Ice	2.24	2.11	86.12
			0.00			1" Ice	2.43	2.29	111.30
FD-RRH2x50 800	B	From Face	4.00	0.0000	154.00	No Ice	2.06	1.93	64.00
			-2.00			1/2" Ice	2.24	2.11	86.12
			0.00			1" Ice	2.43	2.29	111.30
FD-RRH2x50 800	C	From Face	4.00	0.0000	154.00	No Ice	2.06	1.93	64.00
			-2.00			1/2" Ice	2.24	2.11	86.12
			0.00			1" Ice	2.43	2.29	111.30
Valmont Light Duty Tri-Bracket (1)	B	None		0.0000	151.50	No Ice	1.76	1.76	54.00
						1/2" Ice	2.08	2.08	70.00
						1" Ice	2.40	2.40	86.00
GPS	C	From Face	4.00	0.0000	154.00	No Ice	0.21	0.21	5.00
			-6.00			1/2" Ice	0.31	0.31	7.52
			3.00			1" Ice	0.42	0.42	11.31
APXVTM14 w/mount pipe	A	From Face	4.00	0.0000	154.00	No Ice	6.65	5.03	91.90
			2.00			1/2" Ice	7.14	5.89	147.31
			0.00			1" Ice	7.60	6.63	209.47
APXVTM14 w/mount pipe	B	From Face	4.00	0.0000	154.00	No Ice	6.65	5.03	91.90
			2.00			1/2" Ice	7.14	5.89	147.31
			0.00			1" Ice	7.60	6.63	209.47
APXVTM14 w/mount pipe	C	From Face	4.00	0.0000	154.00	No Ice	6.65	5.03	91.90
			2.00			1/2" Ice	7.14	5.89	147.31
			0.00			1" Ice	7.60	6.63	209.47
RRH 8x20-25	A	From Face	4.00	0.0000	154.00	No Ice	4.05	1.53	70.00
			2.00			1/2" Ice	4.30	1.71	97.14
			0.00			1" Ice	4.56	1.90	127.80
RRH 8x20-25	B	From Face	4.00	0.0000	154.00	No Ice	4.05	1.53	70.00
			2.00			1/2" Ice	4.30	1.71	97.14
			0.00			1" Ice	4.56	1.90	127.80

tnxTower	Job: GREENWICH CT	Page: 5 of 15
Hudson Design Group LLC 45 Beechwood Drive North Andover, MA 01845 Phone: (978) 557-5553 FAX: (978) 336-5586	Project: 164 ft Monopole	Date: 09:56:46 06/25/18
	Client: VERIZON	Designed by: kw

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
RRH 8x20-25	C	From Face	4.00 2.00 0.00	0.0000	154.00	No Ice 1/2" Ice 1" Ice	4.05 4.30 4.56	1.53 1.71 1.90	70.00 97.14 127.80
**********									
RFS APX16PV-16PVL w/mount pipe	A	From Face	4.00 -5.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	6.22 6.61 7.01	4.03 4.67 5.32	58.25 107.10 162.24
RFS APX16PV-16PVL w/mount pipe	B	From Face	4.00 -5.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	6.22 6.61 7.01	4.03 4.67 5.32	58.25 107.10 162.24
RFS APX16PV-16PVL w/mount pipe	C	From Face	4.00 -5.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	6.22 6.61 7.01	4.03 4.67 5.32	58.25 107.10 162.24
LNX-6515DS-VTM w/ Mount Pipe	A	From Face	4.00 5.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	11.67 12.39 13.12	9.83 11.35 12.90	83.15 172.72 272.25
LNX-6515DS-VTM w/ Mount Pipe	B	From Face	4.00 5.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	11.67 12.39 13.12	9.83 11.35 12.90	83.15 172.72 272.25
LNX-6515DS-VTM w/ Mount Pipe	C	From Face	4.00 5.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	11.67 12.39 13.12	9.83 11.35 12.90	83.15 172.72 272.25
(3) Ericsson KRY 112 71/2	A	From Face	4.00 0.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	0.58 0.69 0.80	0.40 0.49 0.59	13.20 18.38 25.16
(3) Ericsson KRY 112 71/2	B	From Face	4.00 0.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	0.58 0.69 0.80	0.40 0.49 0.59	13.20 18.38 25.16
(3) Ericsson KRY 112 71/2	C	From Face	4.00 0.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	0.58 0.69 0.80	0.40 0.49 0.59	13.20 18.38 25.16
ATSBT-TOP-MF-4G	A	From Face	4.00 0.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	0.17 0.23 0.29	0.09 0.14 0.19	2.00 3.67 6.27
ATSBT-TOP-MF-4G	B	From Face	4.00 0.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	0.17 0.23 0.29	0.09 0.14 0.19	2.00 3.67 6.27
ATSBT-TOP-MF-4G	C	From Face	4.00 0.00 0.00	0.0000	144.00	No Ice 1/2" Ice 1" Ice	0.17 0.23 0.29	0.09 0.14 0.19	2.00 3.67 6.27
PiROD 13' Low Profile Platform	C	None		0.0000	144.00	No Ice 1/2" Ice 1" Ice	15.70 20.10 24.50	15.70 20.10 24.50	1300.00 1765.00 2230.00
**********									
Ericsson RRUS-11 (AT&T)	A	From Face	0.50 0.00 0.00	0.0000	138.00	No Ice 1/2" Ice 1" Ice	2.79 3.00 3.21	1.19 1.34 1.50	50.70 71.57 95.48
Ericsson RRUS-11	B	From Face	0.50 0.00 0.00	0.0000	138.00	No Ice 1/2" Ice 1" Ice	2.79 3.00 3.21	1.19 1.34 1.50	50.70 71.57 95.48
Ericsson RRUS-11	C	From Face	0.50 0.00 0.00	0.0000	138.00	No Ice 1/2" Ice 1" Ice	2.79 3.00 3.21	1.19 1.34 1.50	50.70 71.57 95.48
Ericsson RRUS-32	A	From Face	0.50 0.00 0.00	0.0000	138.00	No Ice 1/2" Ice 1" Ice	3.31 3.56 3.81	2.42 2.64 2.86	77.00 104.93 136.47
Ericsson RRUS-32	B	From Face	0.50	0.0000	138.00	No Ice	3.31	2.42	77.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			0.00			1/2" Ice	3.56	2.64	104.93
			0.00			1" Ice	3.81	2.86	136.47
Ericsson RRUS-32	C	From Face	0.50	0.0000	138.00	No Ice	3.31	2.42	77.00
			0.00			1/2" Ice	3.56	2.64	104.93
			0.00			1" Ice	3.81	2.86	136.47
DC6-48-60-18-8F	A	From Face	0.50	0.0000	138.00	No Ice	0.79	0.79	20.00
			0.00			1/2" Ice	1.27	1.27	35.12
			0.00			1" Ice	1.45	1.45	52.57
DC6-48-60-18-8F	B	From Face	0.50	0.0000	138.00	No Ice	0.79	0.79	20.00
			0.00			1/2" Ice	1.27	1.27	35.12
			0.00			1" Ice	1.45	1.45	52.57
Ring Mount	B	None		0.0000	138.00	No Ice	1.40	1.40	90.00
						1/2" Ice	2.40	2.40	130.00
						1" Ice	3.40	3.40	170.00
**********									
PiROD 15' Low Profile Platform (AT&T)	A	None		0.0000	134.00	No Ice	17.30	17.30	1500.00
						1/2" Ice	22.10	22.10	2030.00
						1" Ice	26.90	26.90	2560.00
Powerwave 7770 w/mount pipe	A	From Face	3.50	0.0000	134.00	No Ice	5.65	4.10	57.25
			-2.00			1/2" Ice	6.03	4.75	103.17
			0.00			1" Ice	6.42	5.42	155.38
Quintel QS66512-3 w/mpount pipe	A	From Face	3.50	0.0000	134.00	No Ice	8.85	8.94	137.85
			-6.00			1/2" Ice	9.61	10.33	218.75
			0.00			1" Ice	10.39	11.73	308.20
800 10965 w/ Mount Pipe	A	From Face	3.50	0.0000	134.00	No Ice	13.92	7.50	134.55
			2.00			1/2" Ice	14.50	8.71	229.58
			0.00			1" Ice	15.07	9.65	333.52
HPA-65R-BUU-H6 w/mount pipe	A	From Face	3.50	0.0000	134.00	No Ice	9.72	7.15	68.55
			6.00			1/2" Ice	10.29	8.33	144.37
			0.00			1" Ice	10.83	9.23	228.36
Powerwave 7770 w/mount pipe	B	From Face	3.50	0.0000	134.00	No Ice	5.65	4.10	57.25
			-2.00			1/2" Ice	6.03	4.75	103.17
			0.00			1" Ice	6.42	5.42	155.38
Quintel QS66512-3 w/mpount pipe	B	From Face	3.50	0.0000	134.00	No Ice	8.85	8.94	137.85
			-6.00			1/2" Ice	9.61	10.33	218.75
			0.00			1" Ice	10.39	11.73	308.20
800 10965 w/ Mount Pipe	B	From Face	3.50	0.0000	134.00	No Ice	13.92	7.50	134.55
			2.00			1/2" Ice	14.50	8.71	229.58
			0.00			1" Ice	15.07	9.65	333.52
HPA-65R-BUU-H6 w/mount pipe	B	From Face	3.50	0.0000	134.00	No Ice	9.72	7.15	68.55
			6.00			1/2" Ice	10.29	8.33	144.37
			0.00			1" Ice	10.83	9.23	228.36
Powerwave 7770 w/mount pipe	C	From Face	3.50	0.0000	134.00	No Ice	5.65	4.10	57.25
			-2.00			1/2" Ice	6.03	4.75	103.17
			0.00			1" Ice	6.42	5.42	155.38
Quintel QS66512-3 w/mpount pipe	C	From Face	3.50	0.0000	134.00	No Ice	8.85	8.94	137.85
			-6.00			1/2" Ice	9.61	10.33	218.75
			0.00			1" Ice	10.39	11.73	308.20
800 10965 w/ Mount Pipe	C	From Face	3.50	0.0000	134.00	No Ice	13.92	7.50	134.55
			2.00			1/2" Ice	14.50	8.71	229.58
			0.00			1" Ice	15.07	9.65	333.52
HPA-65R-BUU-H6 w/mount pipe	C	From Face	3.50	0.0000	134.00	No Ice	9.72	7.15	68.55
			6.00			1/2" Ice	10.29	8.33	144.37
			0.00			1" Ice	10.83	9.23	228.36
(2) Powerwave TMA LGP21401	A	From Face	2.50	0.0000	134.00	No Ice	1.05	0.38	14.10
			-2.00			1/2" Ice	1.18	0.47	21.29
			0.00			1" Ice	1.32	0.57	30.37

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
(2) Powerwave TMA LGP21401	B	From Face	2.50	0.0000	134.00	No Ice	1.05	0.38	14.10
			-2.00			1/2" Ice	1.18	0.47	21.29
			0.00			1" Ice	1.32	0.57	30.37
(2) Powerwave TMA LGP21401	C	From Face	2.50	0.0000	134.00	No Ice	1.05	0.38	14.10
			-2.00			1/2" Ice	1.18	0.47	21.29
			0.00			1" Ice	1.32	0.57	30.37
(2) TPX-070821 Triplexer	A	From Face	2.50	0.0000	134.00	No Ice	0.47	0.10	7.50
			-6.00			1/2" Ice	0.56	0.15	10.96
			0.00			1" Ice	0.66	0.20	15.74
(2) TPX-070821 Triplexer	B	From Face	2.50	0.0000	134.00	No Ice	0.47	0.10	7.50
			-6.00			1/2" Ice	0.56	0.15	10.96
			0.00			1" Ice	0.66	0.20	15.74
(2) TPX-070821 Triplexer	C	From Face	2.50	0.0000	134.00	No Ice	0.47	0.10	7.50
			-6.00			1/2" Ice	0.56	0.15	10.96
			0.00			1" Ice	0.66	0.20	15.74
Ericsson RRUS-32	A	From Face	2.50	0.0000	134.00	No Ice	3.31	2.42	77.00
			-6.00			1/2" Ice	3.56	2.64	104.93
			0.00			1" Ice	3.81	2.86	136.47
Ericsson RRUS-32	B	From Face	2.50	0.0000	134.00	No Ice	3.31	2.42	77.00
			-6.00			1/2" Ice	3.56	2.64	104.93
			0.00			1" Ice	3.81	2.86	136.47
Ericsson RRUS-32	C	From Face	2.50	0.0000	134.00	No Ice	3.31	2.42	77.00
			-6.00			1/2" Ice	3.56	2.64	104.93
			0.00			1" Ice	3.81	2.86	136.47
**********									
Ericsson RRUS-32 (AT&T)	A	From Face	2.50	0.0000	134.00	No Ice	3.31	2.42	77.00
			2.00			1/2" Ice	3.56	2.64	104.93
			0.00			1" Ice	3.81	2.86	136.47
Ericsson RRUS-32	B	From Face	2.50	0.0000	134.00	No Ice	3.31	2.42	77.00
			2.00			1/2" Ice	3.56	2.64	104.93
			0.00			1" Ice	3.81	2.86	136.47
Ericsson RRUS-32	C	From Face	2.50	0.0000	134.00	No Ice	3.31	2.42	77.00
			2.00			1/2" Ice	3.56	2.64	104.93
			0.00			1" Ice	3.81	2.86	136.47
RRUS 4478 B14	A	From Face	2.50	0.0000	134.00	No Ice	2.02	1.25	59.40
			6.00			1/2" Ice	2.20	1.40	77.06
			0.00			1" Ice	2.39	1.56	97.48
RRUS 4478 B14	B	From Face	2.50	0.0000	134.00	No Ice	2.02	1.25	59.40
			6.00			1/2" Ice	2.20	1.40	77.06
			0.00			1" Ice	2.39	1.56	97.48
RRUS 4478 B14	C	From Face	2.50	0.0000	134.00	No Ice	2.02	1.25	59.40
			6.00			1/2" Ice	2.20	1.40	77.06
			0.00			1" Ice	2.39	1.56	97.48
DC6-48-60-18-8F	C	From Face	2.50	0.0000	134.00	No Ice	0.79	0.79	20.00
			0.00			1/2" Ice	1.27	1.27	35.12
			0.00			1" Ice	1.45	1.45	52.57
**********									
PiROD 13' Low Profile Platform (Verizon - existing)	A	None		0.0000	124.00	No Ice	15.70	15.70	1300.00
						1/2" Ice	20.10	20.10	1765.00
						1" Ice	24.50	24.50	2230.00
(2) DB844G65ZAXY w/Mount Pipe	A	From Leg	4.00	0.0000	124.00	No Ice	5.05	5.28	41.55
			0.00			1/2" Ice	5.68	6.31	92.81
			0.00			1" Ice	6.19	7.06	150.42
(2) DB844G65ZAXY w/Mount Pipe	B	From Leg	4.00	0.0000	124.00	No Ice	5.05	5.28	41.55
			0.00			1/2" Ice	5.68	6.31	92.81
			0.00			1" Ice	6.19	7.06	150.42
(2) DB844G65ZAXY	C	From Leg	4.00	0.0000	124.00	No Ice	5.05	5.28	41.55

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Offsets: Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
w/Mount Pipe			0.00				1/2" Ice	5.68	6.31	92.81
			0.00				1" Ice	6.19	7.06	150.42
(2) SBNHH-1D65B w/ Mount Pipe	A	From Leg	4.00	0.00	0.0000	124.00	No Ice	8.42	7.09	66.55
			0.00				1/2" Ice	8.98	8.27	135.68
			0.00				1" Ice	9.50	9.17	212.84
(2) SBNHH-1D65B w/ Mount Pipe	B	From Leg	4.00	0.00	0.0000	124.00	No Ice	8.42	7.09	66.55
			0.00				1/2" Ice	8.98	8.27	135.68
			0.00				1" Ice	9.50	9.17	212.84
(2) SBNHH-1D65B w/ Mount Pipe	C	From Leg	4.00	0.00	0.0000	124.00	No Ice	8.42	7.09	66.55
			0.00				1/2" Ice	8.98	8.27	135.68
			0.00				1" Ice	9.50	9.17	212.84
RRH2x60-700	A	From Leg	3.00	0.00	0.0000	124.00	No Ice	3.50	1.82	60.00
			0.00				1/2" Ice	3.76	2.05	82.72
			0.00				1" Ice	4.03	2.29	109.06
RRH2x60-700	B	From Leg	3.00	0.00	0.0000	124.00	No Ice	3.50	1.82	60.00
			0.00				1/2" Ice	3.76	2.05	82.72
			0.00				1" Ice	4.03	2.29	109.06
RRH2x60-700	C	From Leg	3.00	0.00	0.0000	124.00	No Ice	3.50	1.82	60.00
			0.00				1/2" Ice	3.76	2.05	82.72
			0.00				1" Ice	4.03	2.29	109.06
RRH2x60 PCS	A	From Leg	3.00	0.00	0.0000	124.00	No Ice	2.15	1.35	55.00
			0.00				1/2" Ice	2.34	1.50	72.75
			0.00				1" Ice	2.54	1.67	93.35
RRH2x60 PCS	B	From Leg	3.00	0.00	0.0000	124.00	No Ice	2.15	1.35	55.00
			0.00				1/2" Ice	2.34	1.50	72.75
			0.00				1" Ice	2.54	1.67	93.35
RRH2x60 PCS	C	From Leg	3.00	0.00	0.0000	124.00	No Ice	2.15	1.35	55.00
			0.00				1/2" Ice	2.34	1.50	72.75
			0.00				1" Ice	2.54	1.67	93.35
RRH 4X45 AWS	A	From Leg	3.00	0.00	0.0000	124.00	No Ice	2.66	1.59	64.00
			0.00				1/2" Ice	2.88	1.77	84.35
			0.00				1" Ice	3.10	1.96	107.85
RRH 4X45 AWS	B	From Leg	3.00	0.00	0.0000	124.00	No Ice	2.66	1.59	64.00
			0.00				1/2" Ice	2.88	1.77	84.35
			0.00				1" Ice	3.10	1.96	107.85
RRH 4X45 AWS	C	From Leg	3.00	0.00	0.0000	124.00	No Ice	2.66	1.59	64.00
			0.00				1/2" Ice	2.88	1.77	84.35
			0.00				1" Ice	3.10	1.96	107.85
RxxDC-3315-PF-48	A	From Leg	2.00	0.00	0.0000	124.00	No Ice	4.59	2.52	32.00
			0.00				1/2" Ice	4.86	2.73	67.82
			0.00				1" Ice	5.14	2.95	107.61
RxxDC-3315-PF-48	B	From Leg	2.00	0.00	0.0000	124.00	No Ice	4.59	2.52	32.00
			0.00				1/2" Ice	4.86	2.73	67.82
			0.00				1" Ice	5.14	2.95	107.61
**********										
QUAD656C w/mount pipe (Verizon - proposed)	A	From Leg	4.00	0.00	0.0000	124.00	No Ice	8.72	7.28	59.55
			6.00				1/2" Ice	9.27	8.48	130.31
			0.00				1" Ice	9.80	9.39	209.24
QUAD656C w/mount pipe	B	From Leg	4.00	0.00	0.0000	124.00	No Ice	8.72	7.28	59.55
			6.00				1/2" Ice	9.27	8.48	130.31
			0.00				1" Ice	9.80	9.39	209.24
QUAD656C w/mount pipe	C	From Leg	4.00	0.00	0.0000	124.00	No Ice	8.72	7.28	59.55
			6.00				1/2" Ice	9.27	8.48	130.31
			0.00				1" Ice	9.80	9.39	209.24
RRH 4x40-850	A	From Leg	3.00	0.00	0.0000	124.00	No Ice	3.70	1.29	66.14
			6.00				1/2" Ice	3.95	1.46	90.08
			0.00				1" Ice	4.20	1.64	117.36

Description	*Face or Leg*	*Offset Type*	*Offsets: Horz Lateral Vert* ft ft ft	*Azimuth Adjustment* °	*Placement* ft		C_AA_A *Front* ft²	C_AA_A *Side* ft²	*Weight* lb
RRH 4x40-850	B	From Leg	3.00	0.0000	124.00	No Ice	3.70	1.29	66.14
			6.00			1/2" Ice	3.95	1.46	90.08
			0.00			1" Ice	4.20	1.64	117.36
RRH 4x40-850	C	From Leg	3.00	0.0000	124.00	No Ice	3.70	1.29	66.14
			6.00			1/2" Ice	3.95	1.46	90.08
			0.00			1" Ice	4.20	1.64	117.36
**********									
PiROD 13' Low Profile Platform	A	None		0.0000	114.00	No Ice	15.70	15.70	1300.00
						1/2" Ice	20.10	20.10	1765.00
						1" Ice	24.50	24.50	2230.00
531-70HD	C	From Face	3.00	0.0000	114.00	No Ice	5.44	5.44	43.00
			-6.00			1/2" Ice	7.60	7.60	84.96
			0.00			1" Ice	9.23	9.23	137.08
DB586-Y	C	From Face	3.00	0.0000	114.00	No Ice	1.01	1.01	8.25
			5.00			1/2" Ice	1.28	1.28	16.59
			2.50			1" Ice	1.56	1.56	28.01
DB586-Y	C	From Face	3.00	0.0000	114.00	No Ice	1.01	1.01	8.25
			5.00			1/2" Ice	1.28	1.28	16.59
			-2.50			1" Ice	1.56	1.56	28.01
ANT150F2	C	From Face	3.00	0.0000	114.00	No Ice	1.29	1.29	7.00
			-3.00			1/2" Ice	1.60	1.60	17.28
			2.50			1" Ice	1.91	1.91	31.06
Tower Top Amplifier	C	From Face	3.00	0.0000	114.00	No Ice	2.70	1.09	40.00
			5.00			1/2" Ice	2.91	1.24	57.99
			0.00			1" Ice	3.13	1.41	78.92
**********									
Valmont Light Duty Tri-Bracket (1)	C	None		0.0000	51.50	No Ice	1.76	1.76	54.00
						1/2" Ice	2.08	2.08	70.00
						1" Ice	2.40	2.40	86.00
GPS	C	From Face	1.50	0.0000	51.50	No Ice	0.21	0.21	5.00
			0.00			1/2" Ice	0.31	0.31	7.52
			0.00			1" Ice	0.42	0.42	11.31
GPS	C	From Face	1.50	0.0000	51.50	No Ice	0.21	0.21	5.00
			0.00			1/2" Ice	0.31	0.31	7.52
			0.00			1" Ice	0.42	0.42	11.31
GPS	C	From Face	1.50	0.0000	51.50	No Ice	0.21	0.21	5.00
			0.00			1/2" Ice	0.31	0.31	7.52
			0.00			1" Ice	0.42	0.42	11.31

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* ft²	*Weight* lb
HP4-105	A	Paraboloid w/Shroud (HP)	From Leg	1.00	0.0000		160.00	4.00	No Ice	12.57	79.00
				0.00					1/2" Ice	13.09	146.19
				0.00					1" Ice	13.61	213.38
HP4-105	B	Paraboloid w/Shroud (HP)	From Leg	1.00	0.0000		160.00	4.00	No Ice	12.57	79.00
				0.00					1/2" Ice	13.09	146.19
				0.00					1" Ice	13.61	213.38
HP2-102	C	Paraboloid	From	1.00	0.0000		160.00	2.00	No Ice	3.14	25.00

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral / Vert	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter		Aperture Area	Weight
				ft	°	°	ft	ft		ft^2	lb
		w/Shroud (HP)	Leg	0.00					1/2" Ice	3.41	42.49
				0.00					1" Ice	3.67	59.98
A-ANT-23G-24	A	Paraboloid w/Radome	From Face	3.10	0.0000		154.00	2.50	No Ice	4.90	41.00
				-2.52					1/2" Ice	5.20	81.00
				2.00					1" Ice	5.60	121.00
A-ANT-23G-24	C	Paraboloid w/Radome	From Face	3.80	0.0000		154.00	2.50	No Ice	4.90	41.00
				-1.24					1/2" Ice	5.20	81.00
				2.00					1" Ice	5.60	121.00

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

Comb. No.	Description
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 Reactions

Location	Condition	Gov. Load Comb.	Vertical lb	Horizontal, X lb	Horizontal, Z lb
Pole	Max. Vert	26	155851.25	0.00	0.00
	Max. H_x	20	100328.29	60767.52	259.06
	Max. H_z	2	100328.29	238.59	60765.22
	Max. M_x	2	6994330.46	238.59	60765.22
	Max. M_z	8	6992459.63	-60706.24	62.15
	Max. Torsion	22	3363.89	52629.41	30587.81
	Min. Vert	19	75246.22	52503.82	-30349.56
	Min. H_x	8	100328.29	-60706.24	62.15
	Min. H_z	14	100328.29	-143.53	-60927.01
	Min. M_x	14	-7021879.89	-143.53	-60927.01
	Min. M_z	20	-7003432.25	60767.52	259.06
	Min. Torsion	10	-3826.15	-52441.77	-30589.23

Tower Mast Reaction Summary

Load Combination	Vertical lb	$Shear_x$ lb	$Shear_z$ lb	Overturning Moment, M_x lb-ft	Overturning Moment, M_z lb-ft	Torque lb-ft
Dead Only	83606.91	0.00	0.00	603.68	290.25	0.00
1.2 Dead+1.6 Wind 0 deg - No Ice	100328.29	-238.59	-60765.22	-6994330.46	36457.18	-1125.03
0.9 Dead+1.6 Wind 0 deg - No Ice	75246.22	-238.59	-60765.22	-6962016.22	36180.50	-1119.79
1.2 Dead+1.6 Wind 30 deg - No Ice	100328.29	30406.95	-52605.23	-6055408.53	-3506852.80	1644.87
0.9 Dead+1.6 Wind 30 deg - No Ice	75246.22	30406.95	-52605.23	-6027454.24	-3490627.77	1647.96
1.2 Dead+1.6 Wind 60 deg - No Ice	100328.29	52603.70	-30407.22	-3502961.57	-6061800.21	2418.07
0.9 Dead+1.6 Wind 60 deg - No Ice	75246.22	52603.70	-30407.22	-3486860.48	-6033701.96	2418.27
1.2 Dead+1.6 Wind 90 deg - No Ice	100328.29	60706.24	-62.15	-11734.92	-6992459.63	2724.17
0.9 Dead+1.6 Wind 90 deg - No Ice	75246.22	60706.24	-62.15	-11852.10	-6960042.15	2721.43
1.2 Dead+1.6 Wind 120 deg - No Ice	100328.29	52441.77	30589.23	3529541.79	-6033076.57	3826.15
0.9 Dead+1.6 Wind 120 deg - No Ice	75246.22	52441.77	30589.23	3512940.21	-6005135.64	3821.11
1.2 Dead+1.6 Wind 150 deg -	100328.29	30364.33	52814.09	6087877.45	-3495539.62	3432.31

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
No Ice 0.9 Dead+1.6 Wind 150 deg - No Ice	75246.22	30364.33	52814.09	6059387.18	-3479384.08	3426.25
1.2 Dead+1.6 Wind 180 deg - No Ice	100328.29	143.53	60927.01	7021879.89	-20181.62	1108.08
0.9 Dead+1.6 Wind 180 deg - No Ice	75246.22	143.53	60927.01	6989048.45	-20171.10	1102.59
1.2 Dead+1.6 Wind 210 deg - No Ice	100328.29	-30159.40	52818.91	6091603.72	3467964.44	-1402.03
0.9 Dead+1.6 Wind 210 deg - No Ice	75246.22	-30159.40	52818.91	6063086.13	3451763.29	-1405.41
1.2 Dead+1.6 Wind 240 deg - No Ice	100328.29	-52503.82	30349.56	3495438.04	6046919.89	-2100.36
0.9 Dead+1.6 Wind 240 deg - No Ice	75246.22	-52503.82	30349.56	3479005.11	6018718.14	-2100.56
1.2 Dead+1.6 Wind 270 deg - No Ice	100328.29	-60767.52	-259.06	-38439.99	7003432.25	-2367.50
0.9 Dead+1.6 Wind 270 deg - No Ice	75246.22	-60767.52	-259.06	-38428.50	6970775.69	-2364.48
1.2 Dead+1.6 Wind 300 deg - No Ice	100328.29	-52629.41	-30587.81	-3527616.59	6064141.12	-3363.89
0.9 Dead+1.6 Wind 300 deg - No Ice	75246.22	-52629.41	-30587.81	-3511395.92	6035856.69	-3358.60
1.2 Dead+1.6 Wind 330 deg - No Ice	100328.29	-30501.48	-52734.90	-6073575.68	3518452.72	-3189.88
0.9 Dead+1.6 Wind 330 deg - No Ice	75246.22	-30501.48	-52734.90	-6045531.97	3501997.32	-3183.81
1.2 Dead+1.0 Ice+1.0 Temp	155851.25	0.00	0.00	2825.25	252.79	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	155851.25	-32.17	-13263.85	-1501470.00	5221.00	-273.45
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	155851.25	6639.61	-11484.64	-1299739.82	-754047.56	292.77
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	155851.25	11487.71	-6637.03	-750398.32	-1303866.85	546.67
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	155851.25	13258.91	-11.72	702.58	-1504428.39	683.38
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	155851.25	11462.79	6659.79	759486.18	-1299397.86	865.99
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	155851.25	6629.61	11515.01	1310295.80	-751769.25	749.11
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	155851.25	19.61	13287.92	1511375.92	-2573.48	273.11
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	155851.25	-6600.78	11515.12	1310743.49	748266.81	-255.63
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	155851.25	-11470.31	6626.98	754749.51	1301635.59	-495.32
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	155851.25	-13265.89	-37.14	-2751.61	1506183.29	-623.53
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	155851.25	-11489.92	-6660.94	-753686.96	1304416.03	-793.44
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	155851.25	-6650.60	-11502.89	-1302341.83	755777.55	-709.75
Dead+Wind 0 deg - Service	83606.91	-39.70	-10109.92	-1159828.67	6285.07	-189.62
Dead+Wind 30 deg - Service	83606.91	5059.01	-8752.28	-1004066.34	-581528.56	271.57
Dead+Wind 60 deg - Service	83606.91	8752.03	-5059.05	-580627.97	-1005381.41	402.78
Dead+Wind 90 deg - Service	83606.91	10100.10	-10.34	-1450.76	-1159772.75	456.24
Dead+Wind 120 deg - Service	83606.91	8725.09	5089.33	586025.67	-1000617.11	639.68
Dead+Wind 150 deg - Service	83606.91	5051.92	8787.03	1010441.81	-579653.62	571.29
Dead+Wind 180 deg - Service	83606.91	23.88	10136.83	1165388.12	-3108.82	181.36
Dead+Wind 210 deg - Service	83606.91	-5017.82	8787.83	1011058.27	575556.41	-236.69
Dead+Wind 240 deg - Service	83606.91	-8735.41	5049.46	580368.61	1003388.89	-349.96

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	lb	lb	lb	lb-ft	lb-ft	lb-ft
Dead+Wind 270 deg - Service	83606.91	-10110.30	-43.10	-5880.71	1162070.12	-391.34
Dead+Wind 300 deg - Service	83606.91	-8756.31	-5089.10	-584718.06	1006248.04	-557.10
Dead+Wind 330 deg - Service	83606.91	-5074.74	-8773.86	-1007080.99	583931.23	-530.76

Maximum Tower Deflections - Service Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
L1	164 - 131.5	7.1093	45	0.3257	0.0008
L2	131.5 - 119.29	4.9187	45	0.3119	0.0005
L3	125.29 - 78.79	4.5173	45	0.3052	0.0005
L4	87.21 - 39.88	2.3181	45	0.2328	0.0003
L5	49.13 - 1.5	0.7801	45	0.1417	0.0001

Critical Deflections and Radius of Curvature - Service Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection	Tilt	Twist	Radius of Curvature
ft			in	°	°	ft
164.00	Omni 3"x12'	45	7.1093	0.3257	0.0008	400574
160.00	HP4-105	45	6.8356	0.3250	0.0008	400574
156.00	A-ANT-23G-24	45	6.5623	0.3242	0.0007	250359
154.00	PiROD 13' Low Profile Platform	45	6.4259	0.3237	0.0007	200287
151.50	FD-RRH2x50 800	45	6.2557	0.3231	0.0007	160229
144.00	RFS APX16PV-16PVL w/mount pipe	45	5.7484	0.3203	0.0006	100143
138.00	Ericsson RRUS-11	45	5.3471	0.3170	0.0005	77033
134.00	PiROD 15' Low Profile Platform	45	5.0826	0.3141	0.0005	66531
124.00	PiROD 13' Low Profile Platform	45	4.4351	0.3035	0.0005	44119
114.00	PiROD 13' Low Profile Platform	45	3.8140	0.2883	0.0004	37887
51.50	Valmont Light Duty Tri-Bracket (1)	45	0.8490	0.1479	0.0001	16612

Maximum Tower Deflections - Design Wind

Section No.	Elevation	Horz. Deflection	Gov. Load Comb.	Tilt	Twist
	ft	in		°	°
L1	164 - 131.5	42.8395	14	1.9632	0.0048
L2	131.5 - 119.29	29.6404	14	1.8795	0.0029
L3	125.29 - 78.79	27.2214	14	1.8391	0.0028
L4	87.21 - 39.88	13.9702	14	1.4030	0.0015
L5	49.13 - 1.5	4.7011	14	0.8540	0.0007

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
164.00	Omni 3"x12'	14	42.8395	1.9632	0.0048	67116
160.00	HP4-105	14	41.1903	1.9588	0.0045	67116
156.00	A-ANT-23G-24	14	39.5434	1.9539	0.0043	41947
154.00	PiROD 13' Low Profile Platform	14	38.7215	1.9511	0.0042	33558
151.50	FD-RRH2x50 800	14	37.6962	1.9471	0.0040	26846
144.00	RFS APX16PV-16PVL w/mount pipe	14	34.6391	1.9305	0.0036	16778
138.00	Ericsson RRUS-11	14	32.2216	1.9104	0.0033	12906
134.00	PiROD 15' Low Profile Platform	14	30.6279	1.8926	0.0031	11144
124.00	PiROD 13' Low Profile Platform	14	26.7261	1.8292	0.0027	7344
114.00	PiROD 13' Low Profile Platform	14	22.9843	1.7371	0.0024	6300
51.50	Valmont Light Duty Tri-Bracket (1)	14	5.1164	0.8916	0.0008	2757

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
L1	164 - 131.5 (1)	TP53.42x47x0.3125	32.50	0.00	0.0	52.6760	-19168.90	3227770.00	0.006
L2	131.5 - 119.29 (2)	TP56.15x53.42x0.375	12.21	0.00	0.0	64.7894	-21192.10	4269230.00	0.005
L3	119.29 - 78.79 (3)	TP62.97x54.0585x0.4375	46.50	0.00	0.0	84.5934	-43021.30	5667380.00	0.008
L4	78.79 - 39.88 (4)	TP69.66x60.4813x0.5625	47.33	0.00	0.0	120.1620	-67011.00	8488930.00	0.008
L5	39.88 - 1.5 (5)	TP76x66.7412x0.5625	47.63	0.00	0.0	134.6840	-100306.00	9152010.00	0.011

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} lb-ft	ϕM_{nx} lb-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} lb-ft	ϕM_{ny} lb-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	164 - 131.5 (1)	TP53.42x47x0.3125	442195.83	3531850.00	0.125	0.00	3531850.00	0.000
L2	131.5 - 119.29 (2)	TP56.15x53.42x0.375	630667.50	4783283.33	0.132	0.00	4783283.33	0.000
L3	119.29 - 78.79 (3)	TP62.97x54.0585x0.4375	2304575.00	7104258.00	0.324	0.00	7104258.00	0.000
L4	78.79 - 39.88 (4)	TP69.66x60.4813x0.5625	4262641.67	11742749.33	0.363	0.00	11742749.33	0.000
L5	39.88 - 1.5 (5)	TP76x66.7412x0.5625	7021908.00	14202666.67	0.494	0.00	14202666.67	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	164 - 131.5 (1)	TP53.42x47x0.3125	29798.30	1613880.00	0.018	394.88	7072341.33	0.000
L2	131.5 - 119.29 (2)	TP56.15x53.42x0.375	30908.70	2134620.00	0.014	394.90	9578250.00	0.000
L3	119.29 - 78.79 (3)	TP62.97x54.0585x0.4375	48098.20	2833690.00	0.017	1108.80	14225916.00	0.000
L4	78.79 - 39.88 (4)	TP69.66x60.4813x0.5625	54605.40	4244460.00	0.013	1108.38	23514165.33	0.000
L5	39.88 - 1.5 (5)	TP76x66.7412x0.5625	60963.70	4576000.00	0.013	1108.08	28440082.67	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	164 - 131.5 (1)	0.006	0.125	0.000	0.018	0.000	0.131 ✔	1.000	4.8.2 ✔
L2	131.5 - 119.29 (2)	0.005	0.132	0.000	0.014	0.000	0.137 ✔	1.000	4.8.2 ✔
L3	119.29 - 78.79 (3)	0.008	0.324	0.000	0.017	0.000	0.332 ✔	1.000	4.8.2 ✔
L4	78.79 - 39.88 (4)	0.008	0.363	0.000	0.013	0.000	0.371 ✔	1.000	4.8.2 ✔
L5	39.88 - 1.5 (5)	0.011	0.494	0.000	0.013	0.000	0.506 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	164 - 131.5	Pole	TP53.42x47x0.3125	1	-19168.90	3227770.00	13.1	Pass
L2	131.5 - 119.29	Pole	TP56.15x53.42x0.375	2	-21192.10	4269230.00	13.7	Pass
L3	119.29 - 78.79	Pole	TP62.97x54.0585x0.4375	3	-43021.30	5667380.00	33.2	Pass
L4	78.79 - 39.88	Pole	TP69.66x60.4813x0.5625	4	-67011.00	8488930.00	37.1	Pass
L5	39.88 - 1.5	Pole	TP76x66.7412x0.5625	5	-100306.00	9152010.00	50.6	Pass
							Summary	
						Pole (L5)	50.6	Pass
						RATING =	**50.6**	**Pass**

Stiffened or Unstiffened, Ungrouted, Circular Base Plate - Any Rod Material

TIA Rev G Assumption: Clear space between bottom of leveling nut and top of concrete **not** exceeding (1)*(Rod Diameter)

Site Data

BU#: *GREENWICH CT*
Site Name: *0*
App #: *0*

Pole Manufacturer:	*Other*

Reactions		
Mu:	7022	ft-kips
Axial, Pu:	100	kips
Shear, Vu:	61	kips
Eta Factor, η	0.55	TIA G (Fig. 4-4)

If No stiffeners, Criteria:	AISC LRFD	<-Only Applcable to Unstiffened Cases

Anchor Rod Data		
Qty:	30	
Diam:	2.25	in
Rod Material:	A615-J	
Strength (Fu):	100	ksi
Yield (Fy):	75	ksi
Bolt Circle:	86	in

Anchor Rod Results

		Rigid
Max Rod (Cu+ Vu/ή):	137.7 Kips	AISC LRFD
Allowable Axial, Φ*Fu*Anet:	260.0 Kips	φ*Tn
Anchor Rod Stress Ratio:	53.0% **Pass**	

Plate Data		
Diam:	92	in
Thick:	3	in
Grade:	60	ksi
Single-Rod B-eff:	8.04	in

Base Plate Results

	Flexural Check	Rigid
Base Plate Stress:	22.6 ksi	AISC LRFD
Allowable Plate Stress:	54.0 ksi	φ*Fy
Base Plate Stress Ratio:	41.9% **Pass**	Y.L. Length: 40.25

Stiffener Data (Welding at both sides)		
Config:	0	*
Weld Type:		
Groove Depth:		<-- Disregard
Groove Angle:		<-- Disregard
Fillet H. Weld:		in
Fillet V. Weld:		in
Width:		in
Height:		in
Thick:		in
Notch:		in
Grade:		ksi
Weld str.:		ksi

n/a

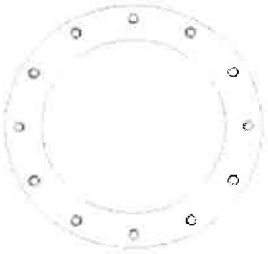
Stiffener Results

Horizontal Weld :	n/a
Vertical Weld:	n/a
Plate Flex+Shear, fb/Fb+(fv/Fv)^2:	n/a
Plate Tension+Shear, ft/Ft+(fv/Fv)^2:	n/a
Plate Comp. (AISC Bracket):	n/a

Pole Results

Pole Punching Shear Check:	n/a

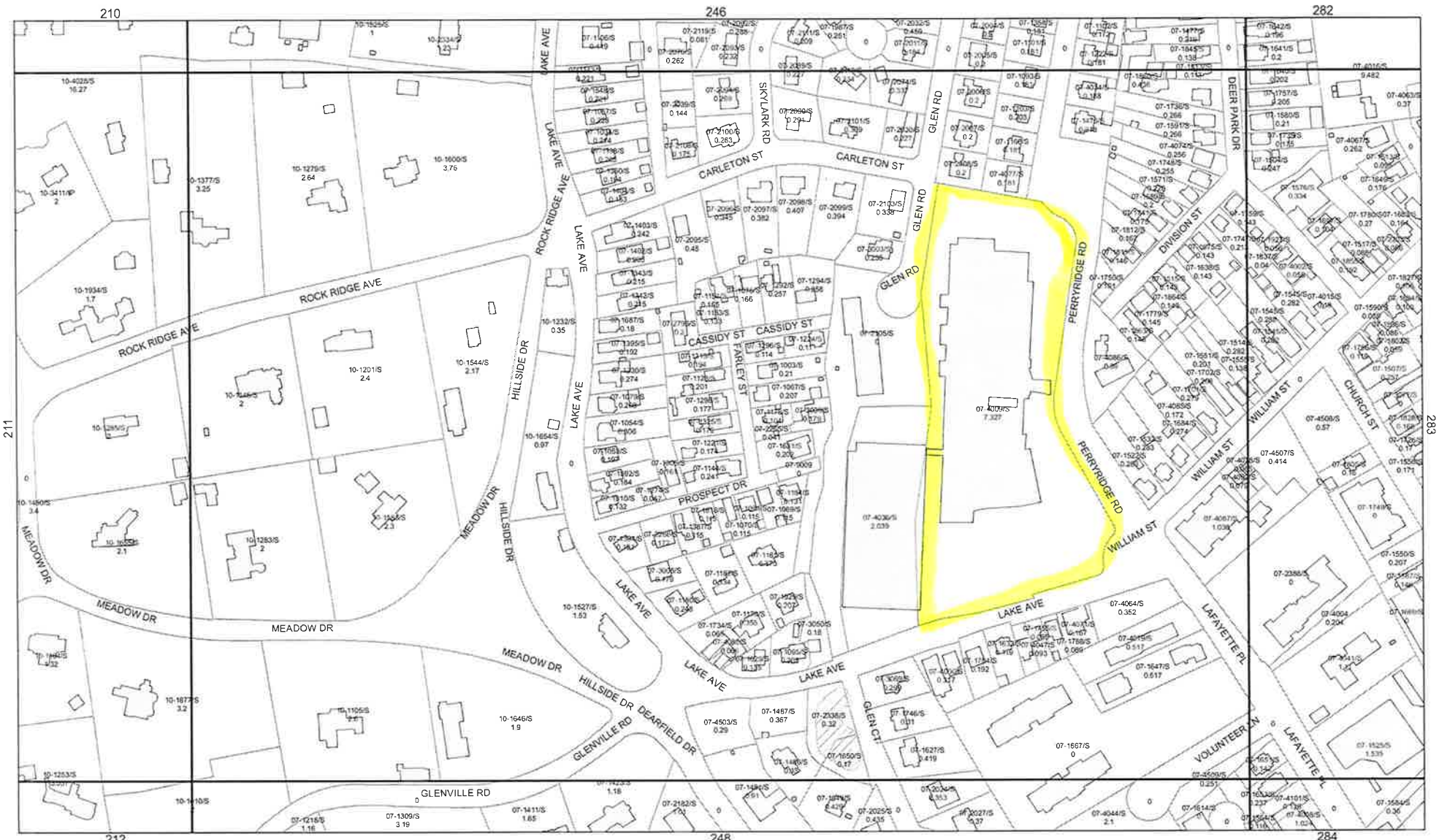
Pole Data		
Diam:	76	in
Thick:	0.5625	in
Grade:	65	ksi
# of Sides:	18	"0" IF Round
Fu	80	ksi
Reinf. Fillet Weld	0	"0" if None



* 0 = none, 1 = every bolt, 2 = every 2 bolts, 3 = 2 per bolt

** Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

ATTACHMENT 4



This map was produced from the Town of Greenwich Geographic Information System. The Town expressly disclaims any liability that may result from the use of this map. Aerial: 4/2/08. Data: 10/1/08. Map: 7/20/09. Copyright © 2005 by the Town of Greenwich.

TOWN OF GREENWICH TAX MAP 247 VOL 3

200 100 0 200 Feet

N W E S

Tax ID 247/113 Printed 07/18/2018 Card No. 1 of 2

ADMINISTRATIVE INFORMATION

PARCEL NUMBER
07-4009/S

Parent Parcel Number

Property Address
PERRYRIDGE ROAD 0005

Neighborhood
2200 WEST PUTNAM

Property Class
299 Exempt Commercial

TAXING DISTRICT INFORMATION

Jurisdiction	57	Greenwich, CT
Area	001	
Corporation	057	
District	07	
Section & Plat	167	
Routing Number	6578W0001	

Site Description

Topography:

Public Utilities:
Sewer, Electric

Street or Road:

Neighborhood:

Zoning:
H-1 Hospital Zone

Legal Acres:
7.3274

OWNERSHIP

GREENWICH HOSPITAL
C/O NANCYE FRITZ FACILITIES MGMT
5 PERRYRIDGE ROAD
GREENWICH, CT 06830

LOT NO 1 2 3 4 PERRYRIDE RD & LAKE AVE W1 1A

TRANSFER OF OWNERSHIP

Date		
01/06/2012	GREENWICH HOSPITAL ASSOCIATION THE $0	Bk/Pg: 6265, 4
07/03/1990	NA $0	Bk/Pg: 2051, 54

EXEMPT

VALUATION RECORD

Assessment Year		10/01/2006	10/01/2007	10/01/2010	10/01/2015	10/01/2015	10/01/2016	10/01/2017
Reason for Change		2006 List	2007 List	2010 Reval	2015 Prelim	2015 Final	2016 List	2017 List
VALUATION	L	11876300	11876300	11846300	13938000	13938000	13938000	13938000
Market	B	255669200	257342000	276895100	355986700	355986700	355986700	355986700
	T	267545500	269218300	288741400	369924700	369924700	369924700	369924700
VALUATION	L	8313410	8313410	8292410	9756600	9756600	9756600	9756600
70% Assessed	B	178968440	180139400	193826570	249190690	249190690	249190690	249190690
	T	187281850	188452810	202118980	258947290	258947290	258947290	258947290

LAND DATA AND CALCULATIONS

Land Type	Rating Soil ID -or- Actual Frontage	Measured Acreage -or- Effective Frontage	Table Effective Depth	Prod. Factor -or- Depth Factor -or- Square Feet	Base Rate	Adjusted Rate	Extended Value	Influence Factor	Value
1 Primary Commercial				319181.38	58.22	58.22	18584000 0	-25%	13938000

BP10: 9-2198 (Hlmsly) Cnvrt lounge to CT/xray rm cmplt; 9-3185 (Wtsn) cnvrt med spc for use as hyperbaric center cmplt; 10-0173 (Hlmsly) create injctn suite for MRI/CT cmplt; 10-0281 (Hmsly/Wtsn) Installation of 22 patient ceil lifts cmplt; 10-0449 Minor int partng cmplt. 10-1908 Minor int alt nvc.
BP11: 10-2842 Clinical sim rm cmplt (Helmsley 2nd flr); 10-3186,10-3677 int alt (Watson 1st & 2nd flr) cmplt; 10-4136 elct eqmnt cmplt PP. 11-0668 Minor alt Emerg Dept access cmplt. 11-1627 3rd flr Helmsley reconfig of 1800 sf spc w/ consolid. of nursing stations. 11-1765 Rplc frnt entry w/ revolv. door. 11-2990 2nd flr Helmsley consolid mult. strg rms into one--not started.
BP12: Helmsley Wing: 11-1627 3rd flr reconfig of 1800 sf for exp of maternity suite, nursing station & parenatology cmplt nvc. 11-2990 2nd flr cnvrt rooms for equip storage area cmplt nvc. Watson Wing: 3rd flr 11-3059 cnvrt corridor to PT/exrcs area

Permit Number Type	FilingDate	Est. Cost Est. SqFt	Field Visit

Supplemental Cards

TRUE TAX VALUE 13938000

Supplemental Cards
TOTAL LAND VALUE 13938000

IMPROVEMENT DATA

PHYSICAL CHARACTERISTICS

ROOFING

Built-up

WALLS

	B	1	2	U
Frame				
Brick	Yes	Yes	Yes	Yes
Metal				
Guard				

FRAMING

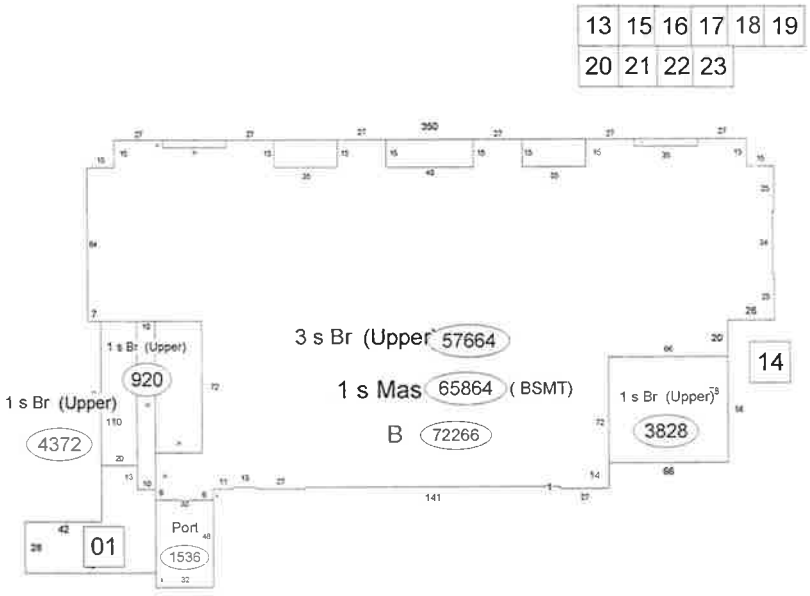
	B	1	2	U
R Conc	72266	65864	0	0
F Prf	0	0	65864	116248

FINISH

	UF	SF	FO	FD
B	72266	0	0	0
1	31346	0	0	34518
2	0	0	0	65864
U	0	0	0	116248
Total	103612	0	0	216630

HEATING AND AIR CONDITIONING

	B	1	2	U
Heat	72266	34518	65864	116248
Sprink	72266	31346	65864	116248



Helmsley Wing


07-4009/S Helmsley East Elev. Looking NW

(LCM: 150.00)

SPECIAL FEATURES

Description	Value
C : Remod 2013	

SUMMARY OF IMPROVEMENTS

ID	Use	Stry Hgt	Const Type	Grade	Year Const	Eff Year	Cond	Base Rate	Feat-ures	Adj Rate	Size or Area	Computed Value	Phys Depr	Obsol Depr	Market Adj	% Comp	Value
C	HOSPITAL	0.00		Exe	1999	2005	EX	0.00	N	0.00	132648	0	0	0	150	100	174540100
01	PAVING	0.00	6	Gd+	1996	1996	AV	6.30	N	15.62	2816	43980	9	0	100	100	40000
13	RTWCONC	12.00	6D	Exe	1999	2000	VG	26.00	N	93.60	12x280	26210	0	0	100	100	26200
14	BusShelt	0.00		Good	2001	2001	GD	0.00	N	0.00	0	16000	0	SV	100	100	16000
15	MEZZFO	1.00		Exe	2004	2005	EX	68.10	N	245.16	12x 22	63250	0	0	100	100	63300
16	ELEVCOM	3.00	2H	Exe	1999	2005	EX	169000	N	608400	2@ 0	1216800	0	0	100	100	1216800
17	ELEVCOM	2.00	2H	Exe	1999	2005	EX	169000	N	608400	2@ 0	1216800	0	0	100	100	1216800
18	ELEVCOM	5.00	2E	Exe	1999	2005	EX	169000	N	608400	2@ 0	1216800	0	0	100	100	1216800
19	ELEVCOM	4.00	2E	Exe	1999	2005	EX	169000	N	608400	5@ 0	3042000	0	0	100	100	3042000
20	LOADDOCK	3.00	6	Good	2006	2006	GD	22.10	N	49.73	6x 43	12680	0	0	100	100	12700
21	LOADDOCK	3.00	6	Good	2006	2006	GD	22.10	N	49.73	6x 29	8500	0	0	100	100	8500
22	COMCNPYG	0.00		Good	2006	2006	GD	50.00	N	112.50	15x 46	75040	0	0	100	100	75000
23	COMCNPYG	0.00		Good	2006	2006	GD	50.00	N	112.50	15x 32	52200	0	0	100	100	52200

Data Collector/Date
bd 07/22/2013

Appraiser/Date
TOG 10/01/2015

Neighborhood
Neigh 2200 AV

Supplemental Cards
TOTAL IMPROVEMENT VALUE 181526400

TRANSFER OF OWNERSHIP

Date

VALUATION RECORD

Assessment Year

Reason for Change

VALUATION

Site Description

LAND DATA AND CALCULATIONS

Land Type	Rating Soil ID -or- Actual Frontage	Measured Acreage -or- Effective Frontage	Table Effective Depth	Prod. Factor -or- Depth Factor -or- Square Feet	Base Rate	Adjusted Rate	Extended Value	Influence Factor	Value

BP12: Helmsley Wing: 11-1627 3rd flr reconfig of 1800 sf for exp of cmplt nvc. 11-4380 install wiring for patient monitoring syst PP 12-1445 Rmv/Rplc walls for rmvl/rplcmnt of MRI 1st flr Helmsley. 12-2952 Minor int alt/partitions creating ofc from exstg fin area in Watson. 12-3318 Minor int alt for swtch in use.
BP13: 12-3090, 12-4509 elec upgrds/maint and instltn of recept., outlets, cabling, etc for BMDI (Biomedical Device Integration) for remote monitors cmplt. 12-3318 (Helmsley-3rd flr) Create strg rm and gen ofc frm one rm cmplt nvc. 13-5349 Add door beween Nursery and NICU, NVC
BP14: 14-2040, NCV
BP17: Building Permits for 2017
BP 15-2229: Emergency Rm Ren. NVC TD
DBA: Greenwich Hospital
GEN: C02: Helmsley Wing; C03: Voided w/ demo cmplt 4/06 (Original South Wing); C04: Watson Wing; CO3 had 2 bsmt lvls,

Supplemental Cards
TOTAL LAND VALUE

IMPROVEMENT DATA

PHYSICAL CHARACTERISTICS

ROOFING

Built-up

WALLS

	B	1	2	U
Frame		Yes		
Brick	Yes		Yes	Yes
Metal				
Guard				

FRAMING

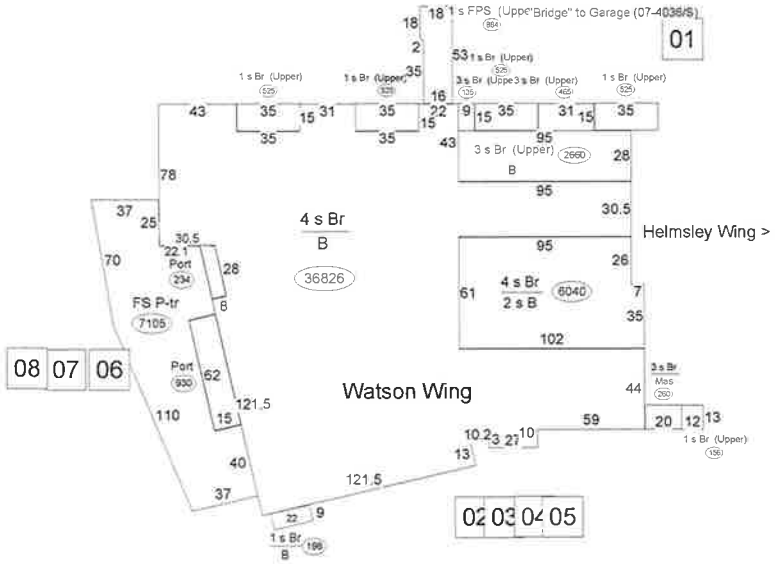
	B	1	2	U
R Conc	51764	0	0	0
F Prf	0	44208	48486	92928

FINISH

	UF	SF	FO	FD
B	51764	0	0	0
1	0	0	0	44208
2	0	0	0	48486
U	0	0	0	92928
Total	51764	0	0	185622

HEATING AND AIR CONDITIONING

	B	1	2	U
Heat	11486	44208	48486	92928
Sprink	51764	44208	48486	92928



(LCM: 150.00)

SPECIAL FEATURES

Description	Value
C : Remod 2012	

SUMMARY OF IMPROVEMENTS

ID	Use	Stry Hgt	Const Type	Grade	Year Const	Eff Year	Cond	Base Rate	Feat-ures	Adj Rate	Size or Area	Computed Value	Phys Depr	Obsol Depr	Market Adj	% Comp	Value
C	HOSPITAL	0.00		Exe	2005	2007	EX	0.00	N	0.00	49724	0	0	0	150	100	169931100
01	TOWER	164.00	5PF	Exe	2003	2003	VG	0.00	N	0.00	164	450000	0	SV	100	100	450000
02	ELEVCOM	6.00	2E	Exe	2005	2005	EX	169000	N	608400	3@ 0	1825200	0	0	100	100	1825200
03	ELEVCOM	5.00	2E	Exe	2005	2005	EX	169000	N	608400	2@ 0	1216800	0	0	100	100	1216800
04	ELEVFRT	5.00	2E	Exe	2005	2005	EX	98500	N	354600	1@ 0	354600	0	0	100	100	354600
05	ELEVFRT	6.00	2E	Exe	2005	2005	EX	98500	N	354600	1@ 0	354600	0	0	100	100	354600
06	Pat.Rail	0.00		Exe	2006	2006	EX	0.00	N	0.00	0	3500	0	SV	100	100	3500
07	RTWCONC	10.00	6D	Exe	2006	2006	EX	26.00	N	93.60	10x510	47740	0	0	100	100	47700
08	WALKPAT	0.00	7	Good	2006	2006	GD	15.00	N	33.75	8200	276750	0	0	100	100	276800

Data Collector/Date	Appraiser/Date	Neighborhood	Supplemental Cards TOTAL IMPROVEMENT VALUE	174460300
bd 07/22/2013	TOG 10/01/2015	Neigh 2200 AV		

ATTACHMENT 5

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here *Postmark with Date of Receipt.*
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	3		neopost 07/24/2016 US POSTAGE $002.38 ZIP 06103 041L122033
	Postmaster, per *(name of receiving employee)*		OLD STATE HOUSE STATION 06103 JUL 24 2018 USPS

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Peter Tesei, First Selectman Town of Greenwich 101 Field Point Road Greenwich, CT 06830				
2.	Katie DeLuca, Director Planning and Zoning Town of Greenwich 101 Field Point Road Greenwich, CT 06830				
3.	Greenwich Hospital 5 Perryridge Road Greenwich, CT 06830				
4.					
5.					
6.					