



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

July 11, 2008

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **EM-VER-027-080530** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 48 Cow Hill Road, Clinton, Connecticut.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated May 30, 2008, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

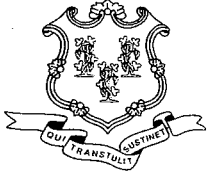
Thank you for your attention and cooperation.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/MP/cm

c: The Honorable William W. Fritz, Jr., First Selectman, Town of Clinton
Thomas Lane, Zoning Enforcement Officer, Town of Clinton
Crown Castle



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Phone: (860) 827-2935 Fax: (860) 827-2950

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Daniel F. Caruso
Chairman

June 2, 2008

The Honorable William W. Fritz, Jr.
First Selectman
Town of Clinton
54 East Main Street
Clinton, CT 06413

RE: **EM-VER-027-080530** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 48 Cow Hill Road, Clinton, Connecticut.

Dear Mr. Fritz:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

If you have any questions or comments regarding this proposal, please call me or inform the Council by June 16, 2008.

Thank you for your cooperation and consideration.

Very truly yours,

S. Derek Phelps
Executive Director

SDP/jb

Enclosure: Notice of Intent

c: Thomas Lane, Zoning Enforcement Officer, Town of Clinton

EM-VER-027-080530

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

ORIGINAL

May 30, 2008

Via Hand Delivery

S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RECEIVED
MAY 30 2008
CONNECTICUT
SITING COUNCIL

Re: **Notice of Exempt Modification – Antenna Swap
48 Cow Hill Road, Clinton, Connecticut**

Dear Mr. Phelps:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains a wireless telecommunications facility at the above referenced location. The Council approved Cellco’s shared use of this facility in Docket No. 148. On April 19, 2005, the Council approved Cellco’s request to replace three cellular antennas with six PCS antennas, for a total of fifteen antennas. Cellco now intends to modify its installation by replacing six (6) cellular antennas with six (6) newer model LPA-80080/6CF cellular antennas at the 208-foot level on the 212-foot tower and adding two (2) tower mounted amplifiers (TMAs). The tower is owned by Crown Castle International. Attached behind Tab 1 are the specifications for the proposed replacement antennas and TMAs, as well as a typical TMA mounting detail.

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 William W. Fritz, First Selectman of the Town of Clinton. Pursuant to a Council directive, a copy of this letter is also being sent to Raymond E. Hester, the owner of the property on which the facility is located.

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. The proposed modifications will not result in the increase in the overall height of the existing structure. Cellco’s replacement antennas and TMAs will be located at the 208-foot level of the 212-foot tower.



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HART1-1461957-1

S. Derek Phelps
May 30, 2008
Page 2

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

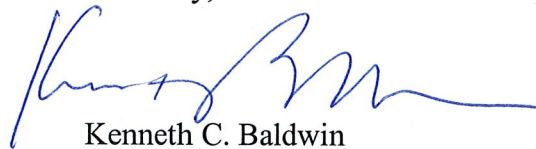
3. The proposed modifications will not increase noise levels at the facility by six decibels or more.

4. The operation of the replacement antennas will not increase radio frequency (RF) power density levels at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard. A cumulative power density table for the facility is included behind Tab 2.

Also attached is a Structural Analysis Report confirming that the tower can support the proposed modifications. (See Tab 3).

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:

William W. Fritz, Clinton First Selectman
Raymond E. Hester
Sandy M. Carter



LPA-80080/6CF

When ordering replace "___" with connector type.

Mechanical specifications

Length	1800 mm	70.9 in
Width	140 mm	5.5 in
Depth	335 mm	13.2 in
Depth with z-bracket	375 mm	14.8 in
4) Weight	9.5 kg	21.0 lbs
Wind Area		
Fore/Aft	0.25 m ²	2.7 ft ²
Side	0.60 m ²	6.5 ft ²
Rated Wind Velocity (Safety factor 2.0)	>295 km/hr >183 mph	
Wind Load @ 100 mph (161 km/hr)		
Fore/Aft	415 N	93.3 lbs
Side	870 N	195.6 lbs

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting and Downtilting

Mounting brackets attach to a pipe diameter of Ø50-102 mm (2.0-4.0 in). If the lock-down brace is used, the maximum diameter is Ø88.9 mm (3.5 in)

Mounting Bracket & Downtilt Bracket Kit #21699999

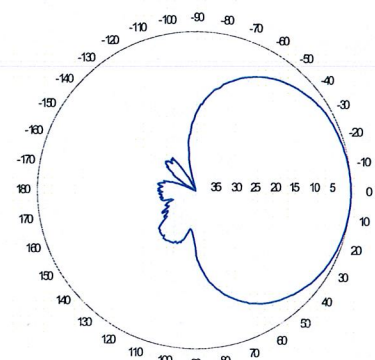
Electrical specifications

Frequency Range	806-960 MHz
Impedance	50Ω
3) Connector(s)	NE or E-DIN 1 port / center
1) VSWR	≤ 1.4:1
Polarization	Vertical
1) Gain	14 dBd
2) Power Rating	500 W
1) Half Power Angle	
H-Plane	80°
E-Plane	10°
1) Electrical Downtilt	0°
1) Null Fill	10%
Lightning Protection	Direct Ground

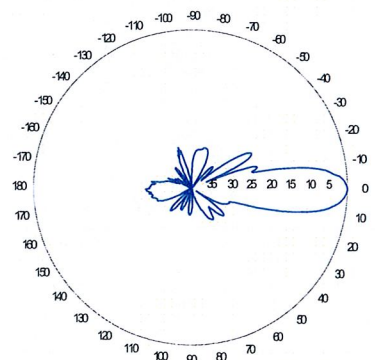
1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) The antenna weight listed above does not include the bracket weight.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation pattern¹⁾



Horizontal

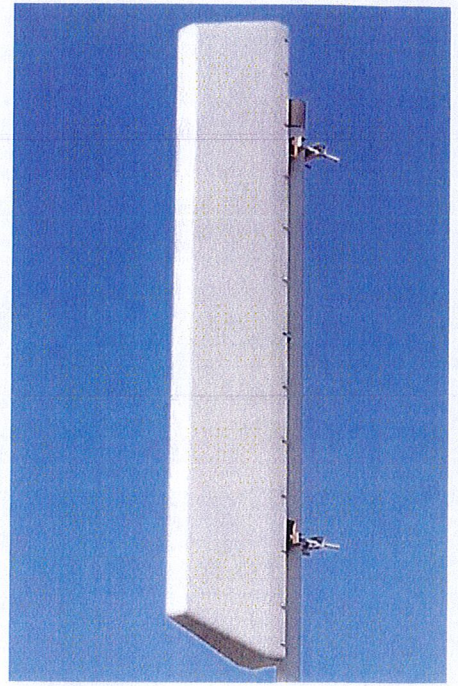


Vertical

Featuring upper side lobe suppression.

Radiation patterns for all antennas are measured with the antenna mounted on a fiberglass pole.

Mounting on a metal pole will typically improve the Front-to-Back ratio.



Amphenol Antel's Exclusive 3T (True Transmission Line Technology) Antenna Design:

- True log-periodic design allows for superior front-to-side characteristics to minimize sector overlap.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

This Amphenol Antel antenna is under a five-year limited warranty for repair or replacement.

Antenna available with center-fed connector only.

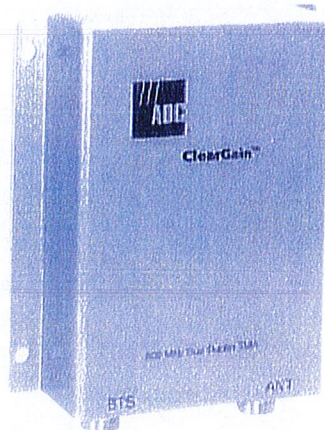
CF Denotes a Center-Fed Connector.

806-960 MHz



Revision Date: 7/5/07

ClearGain® Tower-Mounted Amplifiers Americas



As mobile usage continues to increase, service providers are faced with the challenge of optimizing and expanding their wireless networks to provide new and existing services. ADC's ClearGain® Tower-Mounted Amplifiers (TMAs) minimize the cost of network expansion and improve quality of service, allowing service providers to increase profitability from new and existing services.

The ClearGain TMAs improve signal quality by boosting the uplink signal of a mobile system to increase receiver performance and improve overall coverage.

Features:

- Provides amplification of the Band
- Highly advanced LNA amplifies RX signal for improved receiver performance and increase in coverage
- Dual duplex feature reduces the number of feeder cable runs by providing simultaneous operation of TX and RX with low TX loss
- Full Band feature provides amplification of the entire band
- Advanced filtering maintains the lowest possible noise figure for improved quality of service
- Slim, stackable design conserves tower space and reduces tower-related costs
- Seamless aluminum sleeve construction protects components from the elements
- Modular system is fully compatible with all base stations
- Power and alarming for up to six masthead units is provided from a single unit at the base station



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ClearGain® Tower-Mounted Amplifiers Americas

Introduction

Unacceptable network quality is one of the main reasons for mobile subscriber churn. With industry churn at their current rates, a service provider's entire customer base could be lost in as few as three years. The cost of acquiring new subscribers to replace the existing customer base can be enormous. Improvements in quality of service can directly impact a service provider's profitability through the cost savings associated with increased subscriber retention and the additional revenue gained from increased billable minutes of use resulting from improved signal quality.

While subscribers are willing to pay a premium for data services, improved quality of service is necessary to provide new data services. Due to the tradeoff between bit rate and bandwidth inherent to data services, improved signal quality is required to achieve the same level of performance at even higher data rates. ADC's ClearGain Tower-Mounted Amplifiers help provide this improvement in signal quality.

TMA's improve signal quality by boosting the uplink (RX) signal of a mobile system immediately after the antenna. This compensates for the loss in signal strength that occurs when the signal is passed through the coaxial feeder cable to the base transceiver station (BTS) at the base of the tower. ClearGain TMA's perform this amplification with the lowest possible noise contribution, resulting in a substantial increase in receiver performance and an improvement in overall coverage. These improvements in quality of service allow mobile subscribers to place more calls, make longer calls, and successfully complete calls in an expanded geographic area, resulting in increased revenue.

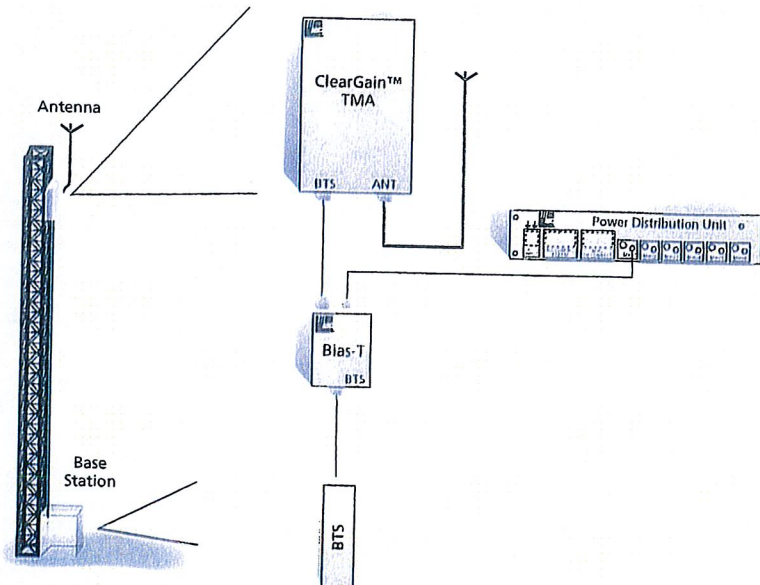
System Overview

The ClearGain TMA system is modular, consisting of a Masthead Unit (MHU), a Power Distribution Unit (PDU) and a Bias-T Unit. This system provides full compatibility with all base stations. The ClearGain MHU offers dual duplex operation and incorporates a highly advanced fixed-gain, low-noise amplifier (LNA) and high-performance filters for added reliability. The MHU amplifies each band to maximize signal quality and optimize coverage.

The ClearGain MHU features a slim, lightweight design. This allows two ClearGain TMA's to be mounted with one set of brackets thereby, conserving valuable and costly tower space and reducing clutter on the tower. The TMA is protected with a strong, aluminum sleeve construction designed to ensure superior weather protection and resistance to corrosion, resulting in increased reliability.

In the ClearGain TMA system, DC power is supplied to the MHU from a ClearGain PDU. The PDU also provides alarming and monitoring of the feeder cable and up to six MHUs from a single unit. The flexible design of the ClearGain PDU allows it to be rack- or wall-mounted on the side of a BTS cabinet.

An external Bias-T Unit is used in conjunction with the ClearGain PDU. The Bias-T inserts DC power onto the coaxial cable and extracts alarm and monitoring signals from the coaxial cable.

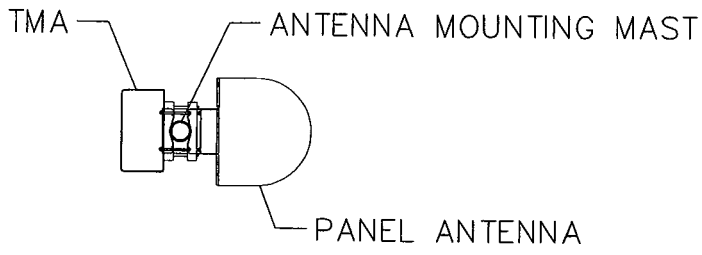




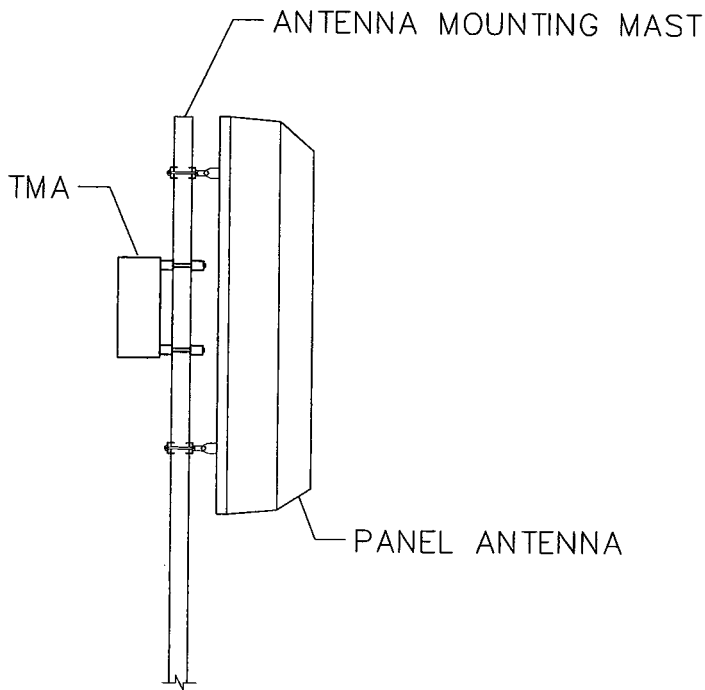
ClearGain® Tower-Mounted Amplifiers Americas

Dual Band 800/1900 MHz Full Band Typical Specifications

ELECTRICAL	
Nominal Impedance of RF Inputs and Outputs:	50 Ohm
Frequency Range	
TX: 800:	869-894 MHz
1900:	1930-1990 MHz
RX: 800:	824-849 MHz
1900:	1850-1910 MHz
Filter Bandwidth:	25/60 MHz
Passband (RX)	
Gain:	12 dB
Noise Figure:	
800:	1.5 dB
1900:	1.6 dB
Dynamic Range	
Input at 1 dB Gain Compression:	+0 dBm
IIP3:	+13 dBm
Max. Input Power:	+10 dBm
851 MHz Rejection:	<30 dB
1915 MHz Rejection:	<15 dB
1916 MHz Rejection:	<30 dB
Bypass Insertion Loss:	2.0 dB
Isolation in TX Path:	80 dB
Insertion Loss of TX Path (TX to Antenna):	4 dB
Passband Return Loss:	
TX Band:	>18 dB
RX Band:	>18 dB
Intermodulation:	-120 dBm
Max. Input Power (RMS Power):	
800:	500 W
1900:	250 W
Tx Filter Rejection in RX Path:	40 dB
POWER	
Operational Voltage:	7 to 20 Vdc
Operational Current:	280 ± 10 mA
Alarm Current Level:	350-520 mA
PHYSICAL	
Dimensions (HxWxD):	357 mm x 287 mm x 149 mm
Weight:	10.5 kg (22.5 lbs.)
Color:	Silver
Housing:	Aluminum
CONNECTORS	
Antenna Connector:	7/16 DIN female
BTS Connector:	7/16 DIN female
ENVIRONMENTAL	
Operating Temperature:	-40° to +60 °C
Lightning Protection:	IEC 61000-4-5
Vibration:	
Storage:	ETS3019-1-1
Transport:	ETS3019-1-2
Operation:	ETS3019-1-3
REGULATORY	
EMC:	ETS300 342-2
APPROVALS	
FCC:	Part 15, Class A
UL:	1950
QUALITY	
MTBF:	900,000 hours



PLAN VIEW



SIDE ELEVATION

TYPICAL TOWER MOUNTED AMPLIFIER (TMA) - MOUNTING DETAIL

NOT TO SCALE



April 25, 2008

LaShay Holmes
 Crown Castle USA
 9105 Monroe Road, Suite 150
 Charlotte, NC 28270
 (704) 814 8311

Vertical Structures, Inc.
 309 Spangler Drive, Suite E
 Richmond, KY 40475
 (859) 624-8360
 jkays@verticalstructures.com

Subject: Structural Opinion Letter

Carrier Designation Verizon Wireless Change-Out
 Carrier Site Number: TBD
 Carrier Site Name: Clinton, CT

Crown Castle Designation: Crown Castle BU Number: 806363
 Crown Castle Site Name: HRT 105
 Crown Castle JDE Job Number: 101955

Engineering Firm Designation Vertical Structures Project Number: 2008-004-066

Site Data 48 Cow Hill Road, Clinton, CT, Middlesex County
 Latitude 41°-17'-20.0", Longitude -72°-32'-18.0"
 212' Rohn SSMW Self-Supporting Tower

Dear Ms. Holmes,

Vertical Structures is pleased to submit this structural opinion letter assessing the suitability of the aforementioned tower with the proposed, existing and reserved loading as specified in Tables 1 & 2. This letter has been prepared in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 284487, and Application Number 59402, Revision 2. Opinions stated within this letter are consistent with TIA/EIA-222-F standard guidelines and local code requirements based upon an 85 MPH basic "fastest mile" wind speed, equivalent to a 105 MPH basic "3-second gust" wind speed per IBC Table 1609.3.1.

Table 1 – Proposed Antenna and Cable Information

Mount Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount Manufacturer	Mount Model	Number Of Feed Lines	Feed Line Size (Inches)
208	6	Antel	LPA-80080/6CF				
	2	ADC	Dual Band 800/1900 TMA				

Table 2 – Existing and Reserved Antenna and Cable Information

Mount Center Line Elevation (feet)	Number Of Antenna	Antenna Manufacturer	Antenna Model	Mount Manufacturer	Mount Model	Number Of Feed Lines	Feed Line Size (inches)
208	3 + 6'	Swedcom	ALP 9212-N	Rohn	(3) 15' Sector Frames	15	1 5/8
	6	Decibel	DB948F85T2E-M				
197	12**		52" x 9" Panel			12**	1 5/8
	6 + 3***	Decibel	DB980H90E-M	Rohn	(3) 15' Sector Frames	6 + 3***	1 5/8
190	6 + 3***	Powerwave Technologies	7770.00		(3) 14' Angle Sector Frames	12	1 5/8
	6	Powerwave Technologies	LGP13519 Diplexer				
	6	ADC	800/1900 TMA				
175	12	Decibel	DB844H90E-XY	Rohn	(3) 15' Sector Frames	12	1 1/4
165	2	RFS/Celwave	1142-2C	Rohn	(2) 6' Sidearms	2	7/8
145	2	RFS/Celwave	1142-2C	Rohn	(2) 6' Sidearms	2	7/8
137	3	EMS Wireless	RR90-17-02DP		(3) 2' Sidearms	6	1 1/4
	6		TMA				
133	1	Andrew	PL6-59W		(1) Pipe Mount	1	EW52
125	1	RFS/Celwave	1142-2C	Rohn	(1) 6' Sidearm	1	7/8

*Indicates antennas to be removed. Existing mounts and feedlines to be reused.

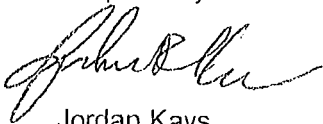
**Indicates MLA loading. Existing and proposed loading controls and is used in this analysis.

***Indicates reserved equipment.

Based on a comparison of the loading in Tables 1 & 2 to the loading considered in our February 27, 2008 analysis, we have determined the tower superstructure and foundation are sufficient for the proposed Verizon Wireless change-out. All cables are assumed to be routed in accordance with the drawing in Appendix B of the referenced analysis report.

Vertical Structures appreciates the opportunity of providing our continuing professional services to you and Crown Castle USA. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,



Jordan Kays
 Project Engineer

