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RECEIVED

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PUBLIC SERVICE  
COMMISSION

January 5, 2016

**VIA FEDEX**

J.E.B. Pinney, Commission Staff Attorney  
Public Service Commission  
211 Sower Boulevard  
P.O. Box 615  
Frankfort, KY 40602-0615

RE: Cell Tower Zero Fall Zone Design  
Location: 395 Miller Ridge Road, Pine Ridge, KY 41360  
Applicants: New Cingular Wireless PCS, LLC d/b/a AT&T Mobility and  
American Towers, LLC  
Site Name: Pea Ridge  
PSC Case No.: 2015-00404

Dear Mr. Pinney:

We have received and responded to the letter from David Graham concerning this tower site. Please find enclosed our response to his concerns and make this letter and its enclosures a part of the administrative record. Do not hesitate to contact us with any concerns regarding this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read 'D. Pike', is written over a horizontal line.

David A. Pike  
Attorney for Applicants



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January 5, 2016

**VIA PRIORITY MAIL**

David Graham  
P.O. Box 553  
Campton, KY 41301

RE: Cell Tower Zero Fall Zone Design  
Location: 395 Miller Ridge Road, Pine Ridge, KY 41360  
Applicant: New Cingular Wireless PCS, LLC d/b/a AT&T Mobility and  
American Towers, LLC  
Site Name: Pea Ridge  
PSC Case No.: 2015-00404

Dear Mr. Graham:

Thank you for your letter concerning the above tower site. AT&T is committed to improving communications service in Wolfe County, Kentucky. In response to your concerns about tower safety, we have enclosed a report from a licensed engineer explaining the tower's safety design features.

Sincerely,

A handwritten signature in blue ink, appearing to read 'David A. Pike', is written over a blue horizontal line.

David A. Pike  
Attorney for Applicants



January 10, 2014

American Tower Corp.

Attn: Mr. Ron Rohr

SUBJECT: Valmont File #237100 Model V-29.0 x 255' Self Supporting Tower  
Site: #281378 Pea Ridge, KY

Thank you for your inquiry concerning tower design codes and practices as they relate to your requested tower designs.

Valmont Structures has been designing and building guyed and self-supporting towers and monopoles since the early 1950's. During this time, we have sold thousands of towers ranging in height from as little as 50' high to in excess of 1400'. These towers were individually engineered to accommodate the loading requirements imparted by the design wind speed, ice considerations, antenna loading, and other factors dictated by the national code requirements existing at the time the tower was built.

The present National Tower code, the TIA-222-G, represents the latest refinement of specific minimum requirements for tower engineers and manufacturers to follow to help assure that the tower structure and its foundation are designed to meet the most realistic conditions for local weather while assuring that the tower is designed to stringent factors of safety.

The TIA-222-G code incorporates an escalating wind factor based on tower height. If 90 MPH 3 second gust is the basic design wind speed at the 10 meter height, then per the specification, this speed is then increased in stages up the tower. "Meeting the code" implies that the design will have all of the code requirements for safety factors intact at the wind speed specified. Thus, the ultimate survival speed would be considerably higher.

While failure is extremely rare in any kind of tower, it is especially so for self supported towers and monopoles. In fact, only if a tower or monopole were subjected to a direct hit from a tornado or the severest of hurricanes would failure be predicted, and then usually only if hit by flying debris.

We are aware of only a very few documented instances of a self supporting tower or monopole failure. Self supporting towers and monopoles can be designed such that the most common mode of failure is in the upper middle region of the tower, with the upper portion of the tower remaining connected and "bending and bowing over" against the base of the tower or pole. The fact that the wind is normally greater on the upper portion of the structure contributes to the likelihood of this type of failure.



Communications Division, Valmont Industries, Inc.

1545 Pidco Drive Plymouth, Indiana 46563-4005 USA

574-936-4221 Fax 574-936-6796 [www.valmont.com](http://www.valmont.com)



This particular Tower has a theoretical failure at the tower midpoint or above. The predicted mode of wind induced failure would be a buckling of the tower legs above the tower midpoint with the top sections of the tower folding over on to the intact base sections. This would then affect a "zero fall zone" at ground level.

As Senior Project Engineer of the company and a registered P.E. in 20 states, I oversee all engineering and application of our towers. I am a graduate engineer from Auburn University and work in collaboration with other registered professional engineers on our staff.

Valmont Structures is an AISC approved shop. All Valmont Structures welders are AWS and CWB qualified. Mathematical and physical tests are performed routinely on tower sections and designs as required. Our total design, engineer and build process has been quality audited by our customers including public utilities, telephone companies, government agencies, and of course AISC.

We trust the above and the attached will be helpful to you. If you should need anything else, please let us know at your convenience.

Sincerely,

Nitesh Ahuja, P.E.  
Senior Project Engineer  
Ext. #5257

