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February 16, 2018

William Rice, Chairman  
Village of Nelsonville Zoning Board of Appeals  
258 Main Street  
Nelsonville, New York 10516

RE: The application of Homeland Towers, LLC, New York SMSA Limited Partnership d/b/a Verizon Wireless ("Verizon") and New Cingular Wireless PCS LLS ("AT&T") collectively ("Applicants") to construct a wireless telecommunications facility at 15 Rockledge Road, Village of Nelsonville, New York

Dear Chairman Rice and members of the Zoning Board of Appeals:

The undersigned is now in receipt of a new bulk submission with respect to the above referenced application. Specifically, the undersigned has received the following documents:

Supplemental submission on behalf of the Applicants submitted by Robert Gaudio, Esq. dated February 9, 2018 containing: Visual Recourse Assessment; Alternate Site Analysis; Radio Frequency Engineering Report; Keweenaw Indian Community Concurrence; RF Exposure Compliance; Property Value Report and Conditions of Approval Acceptable to Homeland Towers.

For this response to your Board, this report will only deal with the following: Engineering Report; Radio Frequency Engineering Report, and RF Exposure Compliance Report.

The Radio Frequency Engineering Report, prepared by Adam Feehan, Sr. RF Engineer, PierCon Solutions, LLC, dated February 5, 2018 deals with specific responses to alternate supporting structure designs and the use of Distributed Antenna Systems ("DAS"). As is the case in many if not most of the applications this engineer reviews that have been prepared by a firm that exclusively represents carriers in both new as well as modification of facilities of the carriers, Mr. Feehan has, so to speak, "tasted the cool-aid" offered by the carriers. Mr. Feehan opines that "it is very difficult to modify the equipment after it has been installed "azimuths cannot be adjusted, mechanical down tilt cannot be added." Such a statement is somewhat far from the truth. In addition the inability to "house(s) most of the equipment (antennas, remote radio heads and cables) inside a flagpole type of design" as claimed is also somewhat overstated.

There exist today antennas that can transmit every one of the frequencies proposed to be utilized at the site. Therefore the requirement to "stack antennas" is not required as just one antenna aperture will be sufficient. Moreover, as has been the opinion of the undersigned (from actual

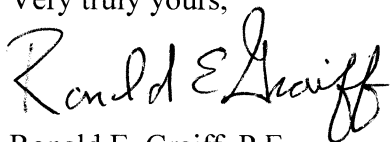
knowledge of existing sites) and in many, many application reviews, the use of such stacked antennas is not required nor is the placement of the remote radio heads on the structure itself required. The azimuth adjustment and down tilt adjustment requirements are trivial at best. In an area such as Nelsonville, as a result of a dearth of existing sites, the azimuths can be quite well determined prior to installation and will not require further adjustment. With respect to down tilt, modern antennas (such as are now in widespread use in the wireless community) and as proposed in the application before your Board, perform down tilt electrically without the need to physically adjust the antenna. These claims are without engineering support, and the claim for the need for two monopoles is not only incredible, but not supported.

With all of that disagreement stated with Mr. Feehan's comments on the monopole, it is refreshing to agree with him on the use of DAS in the area of Nelsonville. This engineer understands that others involved in objecting to this application have stated that DAS nodes cover perhaps up to one half mile. Such a claim is without merit. DAS systems were proposed and designed to provide cover to more urban areas where terrain and land clutter (for example trees) are not an issue. The area in and around Nelsonville is quite remarkable with respect to terrain and the existence of deciduous trees. Such conditions do not support the use for DAS systems. It is this engineer's opinion that reliable coverage from such DAS nodes would be limited at best to 1000 to 1500 feet from each node. Mr. Feehan's claim that up to 20 DAS nodes are required may be somewhat understated. To achieve the total coverage provided by the proposed modest macro site it may require even more nodes than even Mr. Feehan notes.<sup>1</sup>

One last comment on the use of stealth facilities may be in order. The use of an "obelisk" is intriguing. Such a structure would perhaps allow the use of remote radio heads within the structure at the top, satisfying one of Mr. Feehan's objections. The ultimate height of this type of structure may very well be dependent on the physical appearance required. Please note that this engineer has no opinion on what type of stealth structure is utilized to ameliorate its appearance whether it be a faux tree, a concealed monopole or an obelisk.

This review and comment is based on the information presented and to the best of the undersigned's knowledge and belief that the information contained there is true, accurate and complete. Should your Board have any additional questions, please feel free to contact the undersigned,

Very truly yours,



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<sup>1</sup> This opinion is based not only of theoretical knowledge, but is a result of most recent reviews of DAS systems in Rye, New York (96 nodes) and in the Village of Wesley Hills, New York (21 nodes). In these areas (with somewhat similar topography and land use) actual measurements of proposed nodes yielded results supporting the 1000 to 1500 foot coverage range.