

September 17, 2014

Michael Fitzgerald, Chair  
Ashfield Planning Board  
412 Main Street  
Ashfield, MA 01330

Reference: Special Permit Application Cell Tower 1450 Spruce Corner Road

Dear Mr. Fitzgerald:

I am writing to express my concerns regarding the quality and validity of some of the information submitted by Industrial Wireless on behalf of their client Leonard Roberts as part of the Special Permit application for the proposed cell tower at 1450 Spruce Corner Road. I am also very concerned about the lack of technical review and guidance provided by the Planning Board's peer review consultant Bruce Beliveau of Beliveau Communications and Consulting. Mr. Beliveau explicitly states on his website that he has spent his career working for the telecommunications industry. I believed he offered an extremely biased review of information submitted and comments received at the Public Hearing on July 16, 2014. Frankly, it appeared that he was working for Industrial Wireless, not the Planning Board and citizens of Ashfield. The following are some of the issues that I believe need to be addressed before further review of the Special Permit application can continue, and are reasons to deny granting a Special Permit.

According to the Center for Municipal Solutions in Albany, NY who have provided telecommunications consulting for more than 700 communities in 33 states and the National Park Service:

- 50% of the wireless communications towers built since the 1996 Telecommunications Act don't need to exist.
- 60% of the towers built since 1996 to provide cellular and PCS service are much taller than is necessary.

After consulting with experts in the telecommunications industry about the specifics of Industrial Wireless's application and the Ashfield Telecommunications Bylaw, the following issues regarding the coverage maps have been brought to my attention:

1. Industrial Wireless provided an "Existing Towers – Cellular Coverage Comp" map. Existing towers in Shelburne, Conway, Goshen and Cummington are shown. At several of these towers, there are more than one carrier. It is inappropriate and misleading to create a composite of multiple carriers and then delineate a coverage area because each carrier has their own propagation model based on their specific technology, frequency, etc. Each carrier also has their own wireless network which is critical to the delineation of their service area. This is not an apples to apples comparison and is a misleading representation of coverage.
2. The coverage maps provided by Industrial Wireless do not identify the carrier. It is unusual if not misleading for an application to not identify a carrier (as a co-applicant) because each carrier has their own propagation model based on their specific technology, frequency, etc. Each carrier also has their own wireless network which is critical to the delineation of their service area. A coverage map/propagation study should have been done for a *specific* carrier. The composite coverage map and the coverage maps for specific sites are misleading given a specific carrier has not been identified. The consultant I spoke with stated he *never* allows a Planning Board to accept coverage maps submitted by the applicant. Coverage maps are

typically generated by a third party based on a specific set of inputs dictated by the Planning Board's peer review consultant, or generated by the applicant based on a specific set of inputs dictated by the Planning Board's peer review consultant. Those modeling inputs would be relative to the technology of the specific carrier identified as the co-applicant to the Special Permit. Control of the modeling data would provide an apples to apples comparison of coverage at various locations. Thus far, the Ashfield Planning Board has not been able to provide information relative to the inputs used by Industrial Wireless to generate the coverage maps, or what information your peer review Bruce Beliveau used to evaluate the coverage maps.

3. To date, Industrial Wireless has stated they are seeking to construct a tower suitable to accommodate five carriers. Also to date, no specific carrier/carriers have been identified as co-applicants to the Special Permit. Therefore, Industrial's application is void of critical information to evaluate the necessity for a variance in height that is almost twice as high as the Ashfield Telecommunications Bylaw allows so that *five* carriers can be accommodated. So far I have not found a tower/pole in the area that has more than two carriers, other than in Northampton which has more due to their vicinity to I91.
4. The coverage maps provided by Industrial Wireless delineate coverage based on "Received Power Level" at -84 dBmW (yellow on maps) and -87 dBmW (in cyan on maps). These levels are generally accepted levels for in-building service. Why are in-building service levels being evaluated when Industrial Wireless has repeatedly stated their target gap are roads (Route 116 and 112) so that a person driving in their car can talk on the phone and not drop a call. The commonly accepted signal levels for all but metropolitan markets (and workable for cellular or PCS carriers) is -101 dBm for on-street service and -97 dBm for in-vehicle service. The data used to model coverage seems to be inconsistent with the intended purpose of their coverage.
5. According to a telecommunications consultant that assists municipalities in reviewing cell tower applications, a "drive test" is *always* required. Drive tests are a generally accepted means of determining whether a set of propagation studies reflect the true situation when actually applied to the real world, i.e. will the design actually enable service to be used throughout the area intended. They are conducted by erecting/installing a temporary wireless (transmit and receive) facility (at the height projected as needed by the propagation studies) and recording the signal strength on computer throughout the area which will show the signal strength at the location from which the call was made or received.

Likewise, every carrier does a drive test annually of their advertised service area. They actually drive around and measure the strength of the actual signal at a regular short interval (seconds). Typically, a Planning Board would ask for the drive test from the carrier that is the co-applicant to evaluate the existing actual signal strength and coverage. Through this very reliable evaluation method, a town is able to determine several things:

- a) Will the proposed cell tower create redundant coverage? Courts have ruled that redundant coverage is a legally valid reason for not allowing a cell tower.
- b) What is the actual coverage for each carrier, not a misleading composite of coverage for multiple carriers.

For all of these reasons, it is apparent that some critical information submitted by Industrial Wireless is misleading and intentionally biased, and the Special Permit should be denied. It is also clear that

cellular technology is highly specialized and technical field. The Citizens of Ashfield deserve to have accurate information put forth so that they can plan for the best placement of the first, of likely several, cell towers in our community. I also ask the Planning Board to recommend development a Telecommunications Master Plan for Ashfield. Such a plan could help our community plan for the best placement of cell towers. I would be happy to serve on such a committee.

Thank you for your consideration.

Sincerely,

Anne Capra Madocks