Chairman Filipi announced that alternate Carmen Yon would be seated for Cathy Davis. Filipi also noted the procedures by which the hearing would function, stating that all questions and comments would be directed at the chairman rather than at members of the Board or the applicant. Filipi introduced David Maxson, Isotrope, LLC principal, providing wireless technology consulting services. He will consult with the ZBA on this case.

7:00 PM Public hearing. Blue Sky Towers, LLC application for a variance to install a multi-user Wireless Communications Facility outside of the Town’s Wireless Facility Communications Overlay District, consisting of a 140 foot monopole tower within a fenced compound located on the 20 acre parcel known as 36 Webber Lane, Map 11, Lot 30-1, Rural District.

Earl Duval introduced himself as the Attorney for the applicant, Blue Sky Towers, LLC, James George as the Site Acquisition Manager for the company, and Ryan Monte De Ramos, radio frequency engineer for T-Mobile, prospective carrier on this tower.

Mr. George presented his analysis of all the sites he had visited, based on radio frequency analysis of possible sites, in preparation for this hearing. He included all existing towers and structures, and properties within the T-Mobile target area to determine feasibility of sites for the proposed tower. The Board reviewed the A-1 plot plan for the site determined to be the best for T-Mobile, located at 36 Webber Lane. Mr. George said T-Mobile will occupy the top location at 136’ on the antenna and three other tenant carriers will locate below that, at 126’, 116’, and 106’. The monopole is galvanized steel and all equipment will be in a fenced area, gated for security.

Wittenborg noted that the height is indicated at 146 feet on the map. Mr. Duval responded that there is a 6 foot lightening rod on top of the 140 foot monopole, which, he said is optional. Lynn Hay, who owns property on Baldwin Court asked for confirmation that the tower is 140 feet tall. Attorney Duval said that was correct, the tower is 140 feet tall and is portrayed with an optional 6 foot lightening rod.

Handy questioned whether the tower may be lighted given the proximity to local airports. He noted that the application indicates that the FAA has made a determination that the proposed tower is not a hazard to air navigation and therefore it does not need to be lighted. Handy said there is a tower in Troy that is lighted and it is under 200 feet tall. Mr. Maxson explained that the FAA has a four mile radius around major airports, and it requires notification if a tower is proposed within that radius above a certain height-to-distance ratio. If it is outside that radius it does not require notification unless it is more than 200 feet tall. He added that you can depend on the FAA determination as “the gold standard.”

Mr. George continued his analysis, regarding the Saga Tower located on Route 12N. It is a lattice structure with 2 co-located providers AT&T and US Cellular. He found that locating T-Mobile on the tower is not feasible for the following reasons: it will not serve the T-Mobile radio frequency area gap in coverage they are targeting. He added that the property is for sale and apparently in litigation with the bank, and owes back taxes, all of which make it less likely as leasable property.
Susan Silverman, selectmen’s representative, noted that the Town met with an attorney for the Bard Building management company and there is an offer to buy and rehabilitate the building. There is a possibility that the property will come back on the tax rolls and be in use again.

The second tower Mr. George analyzed is the WiValley Wireless Communication tower located on the Pinnacle. It is an 80 foot tall monopole and is not structurally compatible for his provider. Further, there are abutter issues. WiValley entered into a settlement agreement with an abutter, Russ Raitto, to not increase the height of the monopole, or to add another tower, or antennas unless approved by the Raittos. Mr. George contacted the attorney involved and was assured the Raittos would not agree to changing their agreement with WiValley. He concluded that this site is not feasible.

His analysis included a tower in Rindge that has two carriers. It is a lattice tower that is 6.3 miles away from Fitzwilliam and will not provide coverage for the areas of need in Fitzwilliam. He said he approached the Town to determine if the Department of Public Works (Highway Barn) would be a suitable site for the tower. The Selectmen made the determination that they did not want a tower in the Depot area.

Mr. George said after he’d exhausted the steel in the air and other viable town structures, he looked at other properties. The Decatur properties on the east lake side include many acres. The land is in the process of being transferred to a family Trust, and the best site is wet. He concluded it would not be a feasible site.

He said RF engineers want the tower built on a hill. He reported that American Tower has a lease on property on Brigham Hill Road, which is 1.2 miles southeast of the Blue Sky Tower selected site and is at a lower elevation. Further he said that properties on Laurel Lake may be impacted by a tower in this area. Mr. George also noted that the Town’s Overlay District is primarily along the two state roads in town, Route 119 and Route 12. Much of the land along these roads is wet and low elevation, making it not really useable for their purposes.

Wittenborg said there are approximately 23 miles of potential sites for a tower in the overlay district, with a vast amount of acreage, not all of which is low lying or wet, and some of it is for sale. Mr. George responded that given the existing coverage along the overlay corridor and the dynamic of the topography the coverage would be duplicated, but would not cover the area T-Mobile is targeting. Wittenborg noted that town residents decided where they wanted towers by approving the ordinance. She added that there are about 2,300 people living on 36 square miles of land, and it is hard to see the good of serving 65-90 people in the target area. She added that the Board needs to better understand the issues of “gap in coverage.”

Mr. Ramos presented the propagation information he developed for the various scenarios for proposed and existing tower placement and coverage. Mr. Maxson clarified that propagation as used by radio frequency engineers refers to the radio waves that propagate through space and coverage maps show propagation for different towers. He added that there needs to be sufficient evidence for the record and he helps municipal Boards gather the facts in a case. Mr. Ramos said he evaluates alternative sites for coverage objectives and there is no T-Mobile coverage in Fitzwilliam. It is possible that in the future there will be opportunity to connect sites that are coming online to improve coverage. He demonstrated coverage and overlap areas using several propagation maps.

The Board asked for additional mapping with specifications, including the coverage being added by this specific tower that is not provided already by other towers. Mr. Maxson said it is customary to see coverage maps for
proposed alternative sites in town and for existing coverages, to see how proposed coverage fills the gaps. He said it is helpful to see coverage maps for proposed sites not yet online. Mr. Maxson said that with no other T-Mobile sites in town, then the maps will show what T-Mobile can provide.

Yon asked if the square footage or acreage could be provided for the coverage maps to show how many acres are in each layer of coverage. Maxson cautioned the Board about the reliability of that information since some acreage may be less critical to providing service than other acreage. Mr. Maxson also said that counting population is another way of assessing coverage, but because census blocks are used to determine how many homes or individuals are included in a given area a cluster of houses in one larger unpopulated area will not be counted accurately.

Ernst noted that there is no cell service coverage at all on the west side of West Lake Road and there are miles of trails there, left without emergency service coverage. He said the applicant is looking at residences, not open land, which could be a problem. Wittenborg noted that Nancy Carney, the Fitzwilliam Fire Chief, has information about 911 emergency calls in areas without cell service.

Mr. Maxson said the application did reference 911 service capability for public service. Mrs. Hay asked if there was no service or just no T-Mobile service. Mr. Maxson said that even if there is another carrier in town it is appropriate for T-Mobile to cover any gap in T-Mobile coverage and to build a tower to do it if they have no other choice. Filipi said they considered alternative site on other towers. Yon asked why he gets Verizon service, if only US Cellular and AT&T are in town. Mr. George said he had seen some towns that may have had Verizon antennas, but did not trespass to confirm it. Yon wondered if he got Verizon coverage by roaming. Maxson said carriers do not generally share their antennas, but there could be a roaming agreement with US Cellular. Where antenna sharing does happen it is more likely to be in cities. Yon said his phone showed “extended” service, which Mr. Maxson suggested might indicate it is roaming to a local network.

Mr. George said T-Mobile is a low band provider which provides wider coverage. Mr. Maxson asked that this kind of information be on the map legend. Mr. Ramos said the nearest T-Mobile provider is about 12-13 miles away from proposed site in Fitzwilliam. Mr. Ramos said that the Pinnacle hill stops propagation from the Saga tower, stopping coverage for Route 119W, Laurel Lake and the west side of Brigham Hill Road. Filipi asked if they had done any propagation studies on Fullam Hill Road or other sites within the overlay district. He mentioned a proposed AT&T tower which was approved years ago, but which has never been built. It is in the overlay district.

Mr. Maxson asked for maps that compare and contrast the Saga coverage for Route 119W and Route 12N. He also suggested a mileage scale on the map legend, and also to include the town boundaries on the maps.

Mr. George said neither the AT&T tower in Troy, nor the US Cellular tower in Rindge are feasible sites to meet the T-Mobile coverage target. Filipi asked about the feasibility of locating the tower in the overlay district, and requested that propagation maps include sites within the overlay district. He wants to know what they could provide if located in the overlay district because it is imperative for them to show why the proposed site is the only site possible.

Attorney Duvall asked Mr. Maxson about a report. Mr. Maxson suggested he would summarize the items requested for them. And he will talk with the applicant about model hypothetical locations within the corridor.
The coverage maps will be redone to include existing coverages. The map legends will include the frequency of any bandwidths portrayed, the scale of the maps and town boundaries.

ZBA staff will request a map from SWRPC that depicts the WFCOD overlay on a map of the town. Staff will convey this map to Mr. Maxson, Blue Sky Towers, LLC, and Mr. Ramos. The Board agreed that the WiValley tower could come off the list of proposed sites because the settlement terms preclude building a tower on site.

Mr. Maxson requested a map showing the collective gaps in coverage for the Town. Further, he asked that the applicant provide maps showing the existing and proposed coverage for those projects in the T-Mobile pipeline, indicating where each project is in the pipeline. He would like to see modeling of alternatives within the overlay district, and a proposal for filling gap in coverage due to the blockage of the Saga tower coverage for Route 119 W caused by the Pinnacle.

Filipi asked that propagation maps for lower tower heights be prepared; perhaps at 20 & 30 foot increments down to a 110 foot tower. He understood that a shorter tower would impact the number of co-location sites available. Mr. Maxson suggested the Board could consider the tower design, camouflaged like a fire tower, or tree, etc. Mr. Maxson also suggested the revised maps address the capacity of the network, with only the coverage covered, adding that the applicant needs to address other capacity claims, of which there is no evidence in the application.

Filipi wondered if the ZBA should condition the height of a tower outside the overlay district. He added that he’d heard that some tower companies are unwilling to share space on their tower; wondering if the variance is granted, how to require co-location. Mr. Maxson said the tower is being built by a tower company, and therefore it wants to lease to several carriers; it is a benefit to Blue Sky Towers to make agreements structured to benefit even competitors.

Filipi read into the record the letter in opposition to the tower from Mr. and Mrs. Hay.

There was discussion about how much time the applicant would need to provide the requested information to set a date for continuing the hearing. With Yon unable to attend a meeting on December 8\textsuperscript{th}, Wittenborg noted another alternate Sue Wood could be seated if necessary, adding that in practice the Board allows for an absent member to read the minutes in preparation for being seated at a continued public hearing.

Filipi moved, Handy seconded and the Board voted to continue the public hearing to December 8, 2015 at 7:00.

Barbara Green requested that in future abutters be notified of a balloon test. Staff noted that the test was posted in the newspaper, at the Town Hall and Post Office. Without an application, which requires an abutter list and payment for the noticing, abutter notices are not sent out.

**Minutes.** The Board reviewed minutes of the October 20, 2015 meeting. Filipi moved, Ernst seconded and the Board approved the minutes as written.

Yon moved, Ernst seconded and the Board voted to adjourn the meeting at 9:15 PM.