



Planning Department

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MEMORANDUM

To: Planning Board **Date:** April 29, 2010
From: Roland Bartl, AICP, Planning Director *R. B.*
Kristin Alexander, AICP, Assistant Town Planner *KKA*
Subject: **Application for Personal Wireless Facility (PWF) Special Permit
SBA Towers II, LLC**

I have reviewed the latest materials provided by the applicant for the 5-7 Craig Road personal wireless facility special permit application. Some of the issues from the Planning Department's previous e-mails have been addressed by the latest information. Below are the issues that still remain from the previous memos along with new staff comments/questions. If you have any questions, please do not hesitate to contact us.

Outstanding Comments/Issues from Previous Planning Department Memos

Roland Bartl's outstanding original comments are in regular text (1/26/10).

Kristin Alexander's follow-up comments are in *italics* (3/12/10).

Updated comments are in ***bold italics*** (4/26/10).

3. ZBL 3.10.6.4 – The applicant has requested a waiver from the CAM (concealed antenna monopole) requirement to allow a monopole with externally mounted antennae. This section requires use of CAM in general, but provides for a waiver where aesthetic considerations are less important. This is a judgment call for the Board to make. I recommend not granting the waiver. Although the results of the balloon test are not yet in at the time of this writing, it is fair to say that the location is highly visible from a large area. Acton residents in many public planning sessions over the years have repeatedly identified the open fields and vista in this area of Town as a highly valuable asset. The Craig Road industrial park lies in a low spot and thus has not been a significant detractor. The proposed tower will be a change. Using a CAM would reduce the visual impact.

Staff still recommends not granting the waiver.

Please see comment #11 below.

Mr. Eriksen's letter to the Board dated 4/6/10 states that a CAM would decrease the maximum potential collocation of the site. The Planning Board should consider whether a CAM with less carriers or another style tower with more carriers is preferred and consistent with the zoning bylaw. Whichever tower type is chosen, because the site is highly visible and the adjacent land has been considered a valuable/scenic asset by Acton residents over the

years, the tower design and appearance should blend in with the surrounding natural landscape to the greatest extent possible. For reference, the specific language of section 3.10.6.4 of the zoning bylaw follows:

“Personal Wireless Towers shall be CAMs. On a case by case basis, generally when aesthetic considerations are less important, the Planning Board may allow Monopoles with external Flush Mounted Antennas, or external standard Antenna mounting frames that extend laterally from the Monopole.”

4. ZBL 3.10.6.5 – The tower is proposed at the maximum allowed height. There are currently two carriers with intent to locate equipment on the tower. The plans show accommodations for three more antenna arrays for a total of five. Why not at least six? How does a change to a CAM affect the tower’s co-locator capacity? What is the minimum feasible vertical space needed for an antenna array in a CAM and what is the minimum feasible vertical separation needed to between antenna arrays of different carriers?

This comment has not been addressed to staff’s satisfaction. The application should discuss these issues in more detail. Also see comment #12, bullet 3, below.

In his letter to the Board dated 4/6/10, Mr. Eriksen writes the applicant is proposing a 140’ high tower and is willing to allow the tower to extend to 175’ high if needed. The letter also states that the applicant is willing to allow more than 5 carriers on the tower if technically feasible. As mentioned in #3. above, the letter states that a CAM would decrease the maximum potential collocation of the site. Staff defers to Mr. Maxson for further information and guidance on this issue. The zoning bylaw, section 3.10.6.5 requires that towers are extended or structurally extendable to the maximum height that the zoning bylaw allows, i.e. 175 feet. Therefore, the Board should consider only the fully extended height of the tower when weighing the pros and cons of the proposed site and the type of tower that would be most suitable for the site. Consequently, should the Board decide to approve the tower, the approval should be for the fully extended height of 175 feet without the need to revisit the special permit for future height extension. However, the Board could limit the initial height to a lower elevation that is sufficient to accommodate the currently proposed carriers.

6. ZBL 3.10.6.10 – The plan shows adequate fencing. But, I did not see a specific installation to prevent unauthorized climbing as required in this section. The Board should review the proposed landscaping and evaluate if the proposed fence & plantings are sufficient to meet the 3.10.6.10 standard.

I cannot locate the information that discusses preventing unauthorized climbing of the tower in the new application materials received from the applicant. The applicant should provide the Board with this information or identify where it is located in the application materials so staff can review it.

At the 3/16/10 hearing, and in his letter dated 4/6/10, Mr. Eriksen stated the applicant is proposing a six-foot tall fence topped with barb wire surrounding the tower and compound. In addition, Mr. Eriksen said the climbing pegs to access the tower will be set at approx. 10’-12’ high on the tower. These two preventative measures satisfy staffs’ concerns and should be shown on the plan.

8. ZBL 3.10.6.12 – I have not received requests for Town owned devices to be placed on this tower. Fire and Police defer to IT. IT comments are outstanding. The applicant has not

requested approval for the placement on the proposed tower of any equipment that is not associated with a Personal Wireless Service.

The Town's IT Director, Mark Hald, has requested to place Town owned devices on the top of the tower (see IT memo dated 1/25/10). If the special permit is approved, this should be a condition of the decision.

Mark Hald, Roland Bartl, Mr. Eriksen, and a SBA Tower representative met on 4/29/2010 to discuss placing Town owned devices on the top of the tower if the tower is approved by the Planning Board. The result of the meeting was that Town equipment will be accommodated at a height that the Town requires. Town equipment will consist of up to four whip antennas. If the Tower is a CAM, the whips would need to be installed on the outside of the CAM (unless there is newer housing material available that will not obstruct transmissions to the whips at a height where steel supports can be mounted, which is most likely below the carriers' antennae). According to Mark Hald this may be adequate as long as the height is above any surrounding trees and other obstructions. Also discussed, without coming to a resolution, was the possibility of diverting some or all of the recommended sidewalk contribution (ZBL section 10.3) to the installation of the Town's fiber optic cables from this location to the nearest Town connection site on River Street.

11. ZBL 3.10.6.16 – A balloon test took place in 1/23/10. The date was announced in the newspaper and on the Town web site. From this test, the applicant will prepare a visibility report as required in this section. At present, this report is still outstanding.

The applicant provided a balloon test report (1/25/10).

In my opinion, the balloon test results show the tower would be highly visible from the following properties: 309 School Street, 311 School Street, 316 School Street, and along Route 2 from all directions. A CAM should be used. An abutter to the project asked if the tower can be designed as a silo structure to fit in with the adjacent farmland setting. This alternative design may reduce visual impact. Has the applicant considered this idea? The applicant should explain the pros and cons of a silo design.

In a letter to the Planning Board dated 3/18/10, Tower Engineering Professionals, Inc., the company that conducted the 1/23/10 balloon test, responded to David Maxson's concerns regarding the balloon test (expressed in Mr. Maxson's letter received 3/12/10). Staff defers to Mr. Maxson regarding the information in the company's 3/18/10 letter.

The applicant has provided photo simulations of a "monopine" tower. In staffs' opinion, the monopine looks out of place in this location. In order for the monopine to be feasible, it appears it would have to be much taller than the surrounding pine trees; therefore, would not blend in with the natural landscape/setting. Staff recommends against the monopine design at the proposed site.

The applicant has provided photo simulations of a 140' high flush mounted tower. The flush mounted tower is preferred over a monopine design, however, a CAM might still be the least obtrusive visually.

The applicant has provided a photo simulation of a silo design tower as viewed from Route 2. In staffs' opinion based on the simulations, the silo design blends in well with the adjacent farmland setting when viewed from Route 2. In a letter to the Planning Board dated 3/29/10, the 5-7 Craig Road property owners (the Palmers) stated they would not allow a silo design tower on the 5 Craig Road property because the silo design would be over 20' in width; therefore, would impede their trucking business. Since the property owners won't allow a silo

design, the applicant did not pursue additional photo simulations of the silo design on the site. We understand why the applicant did not want to spend money on additional silo photo simulations when it is not an option. However, it would have been helpful to see photo simulations showing the silo design as viewed from Craig Road and/or School Street to demonstrate how that option could interfere with existing business operations on the site (as stated by the owners).

It is staffs' understanding that all simulations represent a tower height of 140 feet. When reviewing the simulations, Board members should keep in mind that towers, regardless of what type or design, must be extended or extendable to 175 feet.

12. ZBL 3.10.6.17 b) through e) – At the hearing the applicant should be prepared to

- explain the rationale and process for selecting this particular site;

At the 3/16/10 hearing, the applicant's site acquisition specialists explained the rationale and process for selecting 5 Craig Road. The Planning Board, staff, and some abutters have asked the applicant to investigate additional sites. As of 4/29/10, staff has not received any information on the additional sites.

- demonstrate that there exists a significant gap for the proposed carriers that this facility can address;

Staff is still unclear whether there exists a significant gap for the proposed carriers. We defer to David Maxson on this issue.

Since Clear Wireless LLC (Clearwire) currently has no locations in Acton, it is understandable why it has a coverage gap at the proposed site.

There appears to be potentially conflicting information regarding T-Mobile's coverage in the proposed area. Staff wants a T-Mobile representative to explain why the neighbor's phone, with T-Mobile as the carrier, shows what appears to be adequate coverage inside a basement near 5 Craig Road yet T-Mobile (through this application) is stating there is still a need for adequate indoor coverage in the area.

- explain how the proposed facility provides service coverage to the significant gap;

The applicant submitted a letter with supplemental coverage maps for Clearwire Wireless Broadband showing the coverage area with the tower as proposed; without the tower; and with the tower at 160', 135', and 100' high (Eriksen letter, 2/18/10). The applicant also submitted 135' and 100' high tower coverage maps for T-Mobile (Eriksen letter, 3/11/10). The 2/18/10 letter states that an RF Engineer from Clearwire New England will attend the 3/16/10 hearing to discuss the maps in more detail. Staff wants to know at the hearing whether a shorter tower would satisfy the applicant and two carriers' coverage needs. A shorter tower is preferred as long as it can support at least five to six carriers and/or be built to extend to 175' in the future to host additional carriers.

As mentioned in #4. above, Mr. Eriksen's 4/6/10 letter to the Board states the applicant is proposing a 140' high tower and is willing to allow the tower to extend to 175' high if needed. The letter also states that the applicant is willing to allow more than 5 carriers on the tower if technically feasible. The plan should be changed to reflect this information. Staff defers to Mr. Maxson for further information and guidance on this issue.

- address the availability/feasibility of co-location on existing towers in Acton or Concord by the proposed carriers;

Did Clearwire New England investigate co-locating on the Knox Trail tower in Acton?

In the 4/6/10 letter from Mr. Eriksen, the applicant explains that the Knox Trail tower is not part of Clearwire's build plans, and even if it locates on the Knox Trail tower, there will still be a coverage gap around 5 Craig Road.

Did either carrier investigate co-locating on the Annursnac Hill tower in Concord?

The 4/6/10 Eriksen letter states that Clearwire is in the process of negotiating/permitting a location on the Annursnac Hill tower in Concord. The applicant stated that even if Clearwire is able to locate on the Annursnac Hill tower, it still needs to locate on the 5 Craig Road site. The applicant has not addressed whether or not T-Mobile investigated co-locating on the Annursnac Hill tower in Concord.

- report on investigations of other potentially suitable sites for this tower; and

It appears the site acquisition specialist for the project identified five potential locations in Acton for the proposed tower (including the proposed site). The other four Acton locations were dismissed for various reasons (see LaMontagne letter, 2/2/10, revised 2/11/10).

- a. Citizens have asked whether the applicant has investigated locating a tower on the Acton Water District land east of School Street (across from Craig Road) and/or the Wetherbee Street land with the existing group of towers (owned by C. Moritz). These sites should be investigated by the applicant.*

At the 3/16/10 public hearing, the applicant's representatives said they would investigate locating a tower on these two sites. As of 4/29/10, we have not seen or heard the results of the investigation. However, staff is aware that the applicant has contacted the Acton Water District.

- b. Since the proposed site is close to the town line, did the specialist investigate any potential locations in Concord? Locations in Concord should have been considered as well.*

In the 4/6/10 letter from Mr. Eriksen, it explains that Clearwire is pursuing sites in Concord, but it would still need to locate on the 5 Craig Road site to fill the coverage gap. The letter further explains that T-Mobile is located on one tower in Concord, but it didn't address whether T-Mobile investigated any other sites in Concord. At the 3/16/10 public hearing, the applicant's representatives said they would investigate other Acton and Concord sites suggested by an abutter to 5 Craig Road. As of 4/29/10, we have not seen or heard the results of the investigation.

- report on possible other available methods to provide service to the significant gap such as a lower tower, smaller repeater devices, etc., with implications, consequences, and effects for each such alternative.

The applicant has not addressed this issue in detail.

I defer to the technical review and verbal contribution at the hearing by David Maxson, Broadcast Signal Lab, to assist and advise the Board on evaluating the applicant's statements in these matters.

Further information from the applicant and expertise from David Maxson are still needed on all the issues above. I've elaborated on some of the issues based on the latest information from the applicant.

The applicant should finish addressing the issues above. We continue to defer to the technical review and verbal contribution by Mr. Maxson.

13. ZBL 3.10.6.17 g) – The plans for the proposed tower specify galvanized steel or other color. The color should be specified; typically a light gray works best. Galvanized steel might too shiny, at least in the beginning.

The applicant should change Structural Note 3 on plan sheet C-3 to state: “The tower will be painted a light gray.”

Other sites and types of towers are now being considered. The applicant shouldn’t change the note on the plan until the site and tower type is finalized.

14. ZBL 3.10.6.17 j) –

- The application contains a copy of an FCC website page. I am not clear whether or not it actually represents the FCC license for Clearwire and T-Mobile. The Town’s file on this application should have copies of the actual FCC licenses for both carriers as Personal Wireless Services for this region as defined in section 3.10.3.9.
- The applicant should provide evidence that the facility complies with Mass DPH regulations.

I cannot locate this information in the new application materials received from the applicant. The applicant should provide the Board with this information or identify where it is located in the application materials so staff can review it.

Staff defers to Mr. Maxson to determine whether the FCC documentation recently provided for T-Mobile and Clearwire complies with the zoning bylaw. The applicant has provided evidence that the facility complies with the Mass DPH regulations.

15. Other:

- Aerial views indicate, and a site drive-by confirms, that the area where the tower and equipment compound are proposed is presently used for truck parking by the property owner, who runs a warehouse/distribution/moving business. The owner should explain how this proposed change will affect truck operations, and particularly whether or not any changes will cause a spill over into Craig Road, a public way.

This comment still needs to be addressed.

The property owners and Mr. Eriksen (through his 4/6/10 letter and at the 3/16/10 public hearing) have addressed this issue by explaining that the proposed tower location has shifted on the site to better accommodate the existing truck operations and so there will be no spill over onto Craig Road.

In addition: The Town has no evidence that the current use of the 5 Craig Road (tax map H-4, parcel 45) lot is legal. A site plan was approved for 7 Craig Road (tax map H-4, parcel 13) years ago; however, it did not show parking to be located on 5 Craig Road. The current use of 5 Craig Road needs to cease or somehow become legitimized before a personal wireless facility special permit at 5-7 Craig Road can be issued.

The property owners have provided the Planning Department with aerial photographs showing that truck operations and parking were occurring at 5 Craig Road on 4/1/1972 and 8/23/1993. Since those business uses and activities have operated continuously at 5 Craig Road since at least 1972, and well before the Groundwater Protection District zones

requirements were established in the Acton Zoning Bylaw, the uses are grandfathered. Furthermore, even if these uses and activities occurring at 5 Craig Road were in violation of zoning, they have existed much longer than ten years and are therefore most likely protected under the statute of limitations (time period during which legal action can be taken) for zoning violations (MA General Laws Ch.. 40A, Section 7).

- ZBL Section 10.3, the general section of the zoning bylaw for special permits, provides that the special permit granting authority may require the installation of a sidewalk along the entire frontage. In this case, if the special permit is granted, I recommend that the applicant be given the alternative choice to contribute to the Town of Acton sidewalk fund: \$50/linear foot * 445 feet = \$22,250.

Staff still recommends a sidewalk contribution.

In the 4/6/10 letter from Mr. Eriksen, the applicant requests a reduction in the sidewalk contribution amount since they believe they will not be creating a greater need for sidewalk space in Acton and since Craig Road has no sidewalks. Staff continues to recommend the full sidewalk contribution. Our recommendation is consistent with past recommendations and special permit approvals for other cell tower proposals in Acton.

Additional Comments

- An abutter at the 3/16/10 hearing commented that the special permit granted for 7 Craig Road required the 5-7 Craig Road business/property owner to provide annual reports to the Town related to hazardous materials. According to the Health Department, the property owner filed a hazardous materials report with the Town within the past month.*
- At the 3/16/10 hearing, the Planning Board, the applicant's representatives, and Mr. Maxson agreed that the applicant will first investigate whether T-Mobile has already conducted a drive test, and if not, Mr. Fagas will work with Mr. Maxson on conducting a drive test based on acceptable industry standards. In a 4/9/10 e-mail from Mr. Eriksen to Mr. Maxson, Mr. Eriksen wrote that SBA Towers and T-Mobile cannot fund a drive test at this time; therefore, one wasn't going to be conducted. The e-mail went on to state that the applicant is hoping that Clearwire's documentation showing it has no facilities (no coverage) in the area, and T-Mobile's documentation stating they would (pay to) locate on a tower at 5 Craig Road, are enough evidence that coverage for these carriers is needed in that area. Staff defers to the Planning Board and Mr. Maxson on this issue.*
- At the 3/16/10 hearing, the Planning Board asked for documentation from T-Mobile stating (1) it still has an interest in locating at the proposed site, and (2) the name of its authorized representative at the public hearing. Peter Berie, Development Manager for T-Mobile USA, wrote in a letter (date unknown) that T-Mobile has an interest in utilizing the SBA site at 5 Craig Road in the event the facility gets approved and built. The letter should have a date on it so there is no question as to when T-Mobile said they have an interest in the site. T-Mobile has not provided any documentation stating the name of its authorized representative for the public hearing.*
- The Planning Board asked the applicant at the 3/16/10 hearing to provide modeling of a distributed antenna system (DAS). Mr. Eriksen's 4/1/10 letter to the Board states that a DAS would not be feasible for Clearwire and an RF engineer from the company could be available*

at the 5/4/10 hearing to discuss the issue. Staff recommends having the RF engineer attend the 5/4/10 hearing.

- e. The applicant has provided additional money to the Town to cover the costs of Mr. Maxson completing his review of the proposal.*

cc: Planning Department
David Maxson
Applicant

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