



Thinking outside the sphere

Memorandum

To Acton Planning Board
From David Maxson, WCP
Re Status of Review 5-7 Craig Road Wireless Tower
December 3, 2013

I understand the applicant in the 5 Craig Road matter has new counsel participating in the hearing, and that the meeting scheduled for tonight was rescheduled for several reasons. This memo serves as a review of open tasks and presents follow-up questions to ensure we are all on the same track.

1. The question of the relatively wide divergence between applicant coverage analysis and Isotrope's analysis was to be refined with the provision of AT&T existing site information to Isotrope (Isotrope received directly from applicant with request for confidential handling of the source data). Isotrope analysis is still divergent from applicant's.
2. Another way to address computer modeling uncertainties is with drive testing of existing coverage ("scan test"). Applicant provided a supplemental map of a scan test. Map was not accompanied by any description of methodology, date of survey, adjustment factors (normalizations) applied to the raw data, if any. Was an external antenna used? If so, what gain and line loss? Was data adjusted accordingly? What band and air interface technology employed? What type of signal strength measurement? If internal to vehicle, was a consumer phone used? How mounted?
3. The question of the visual design of the tower was raised in the hearing. Applicant was to provide a sketch showing the antenna layout required for a CAM design (a.k.a. "unipole") and how fat a CAM would have to be to accommodate antennas and, if necessary, radio heads; as well, a showing of how much vertical space on such a unipole AT&T would need to satisfy its design objectives. Applicant has not submitted this information.
4. However, applicant did provide an additional photosimulation package of a three-pole combination with wrap-around cover, similar to a carillon tower style (applicant's supplement, Tab 6). This has been found to be preferable in some contexts in some communities.
5. Applicant was to provide information about coverage from a less than 105 foot height, more in keeping with the height of the local trees. (Proposal is to place a monopine with 110 foot branch height, 100 foot tower height, and 105 foot to top of antennas). Is AT&T's coverage need reasonably satisfied by a 65 foot tower (transcript p.65 indicates a belief the average tree height may be about 55 feet, and allowing for exceeding the tree height minimally, consider an antenna height of 65 feet)? Applicant provided a coverage plot of an 80 foot antenna height, with no analysis of its viability in the applicant's opinion.



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6. The state properties along Route 2 include undeveloped and wooded areas that might offer a less objectionable overall impact on the community than at the proposed location. Board was interested in seeing more thorough due diligence on siting there. Suggested state parcels include Acton Map-Parcel G4-184, G4-185, G4-187 north of Route 2 and G4-197 and G4-198 south of Route 2. The state parcels south of Route 2 appear to have substantial space meeting the 350 foot setback to residences. Judicious placement would be necessary to meet the setback on the parcels north of Route 2. All parcels mentioned are in the Acton ARC district. The applicant mentioned sending a registered letter to an unidentified recipient at the Commonwealth of Massachusetts and received no reply regarding G4-197. Also, there are several large parcels south of Route 2 and west of Hosmer Street that are in the OP2 district and one in the LI district.

Action items for applicant:

- Backup information for scan test map
- CAM antenna configuration and its impact on diameter and vertical aperture
- Applicant descriptive analysis of 80 foot height; model and analyze 65 foot height
- Further due diligence on potentially more visually secluded parcels

Action items for Isotrope:

- Review applicant drive test methodology before determining whether to recommend to Mr. Bartle that Isotrope conduct second-opinion drive test (transcript p.61)
- Prepare coverage mapping of existing, proposed and alternative configurations, after resolving coverage discrepancy

If acceptable to the Board, Isotrope would gladly work directly with the applicant to resolve open items.

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