



CITY OF SOMERVILLE, MASSACHUSETTS
OFFICE OF STRATEGIC PLANNING & COMMUNITY DEVELOPMENT
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Case #: ZBA 2010-69
Date: December 2, 2010
Recommendation: See Below

PLANNING BOARD RECOMMENDATION

Site: 15 Warren Avenue

Applicant Name: Clear Wireless, LLC
Applicant Address: 100 Cambridge Street, Suite 2200, Boston, MA 02114
Property Owner Name: Somerville Housing Authority
Property Owner Address: 93 Highland Avenue, Somerville, MA 02143
Agent Name: Jason Ellis
Agent Address: 100 Cambridge Street, Suite 2200, Boston, MA 02114

Alderman: Thomas Taylor

Legal Notice: Applicant Clear Wireless, LLC, and Owner, Somerville Housing Authority Seek a Special Permit under SZO §4.4.1 & §14; and seeks a Variance under **§7.11.15.3** to install three (3) panel antennas, façade mount four (4) two-foot wireless backhaul dish antennas, and add one GPS antenna on the roof of the structure along with associated equipment and cabling.

Zoning District/Ward: RA / Ward 3

Zoning Approval Sought: Special Permit under SZO §4.4.1 & §14; Variance under **§7.11.15.3**

Date of Application: 10/25/2010

Dates of Public Meeting • Hearing: Planning Board **12/2** • Zoning Board of Appeals **12/15**

Dear ZBA members:

At its regular meeting on December 2, 2010 the Planning Board heard the above-referenced application. Based on materials submitted by the Applicant and the Staff recommendation, the Board voted 5-0, to recommend **peer review of the case** of the requested **Special Permit and Variance**.



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In conducting its analysis, the Planning Board found:

I. PROJECT DESCRIPTION

1. Subject Property: The 15 Warren Street property is a Somerville Housing Authority property with an existing 100 foot high building with a 113 foot high penthouse. At this time, no telecommunication carriers are using the roof of this building.

2. Proposal: three (3) panel antennas, façade mount four (4) two-foot wireless backhaul dish antennas, and add one GPS antenna on the roof of the structure along with associated equipment and cabling. The applicant is proposing equipment that will be façade mounted on the penthouse, as well as a GPS antenna that will be above the penthouse height. Associated equipment will be located on the roof next to the penthouse.

3. Nature of Application: Under SZO §7.11.15.3 establishment of a wireless communications facility requires a Special Permit approval. Furthermore, §7.11.15.3 does not allow for a installation of wireless communication equipment in the RA zoning district. While the ZBA typically would not entertain use variances, the applicant has indicated, and City's Law Department have agreed that the federal case of *Nextel Communications of the Mid-Atlantic, Inc. v. Town of Wayland*, 231 F. Supp. 2d 396 (D. Mass. 2002).

4. Surrounding Neighborhood: The surrounding neighborhood is mainly residential single, two and three family homes. The Union Square commercial district is at the base of Warren Avenue.

5. Green Building Practices: None indicated.

6. Comments:

Fire Prevention: Has not provided comments at this time.

Alderman: Has not provided comments at this time.

II. FINDINGS FOR SPECIAL PERMIT (SZO§7.11.15.3):

In order to grant a special permit, the SPGA must make certain findings and determinations as outlined in §5.1.4 of the SZO. This section of the report goes through §5.1.4 in detail.

1. Information Supplied: The Board finds that the information provided by the Applicant conforms to the requirements of §5.1.2 of the SZO and allows for a comprehensive analysis of the project with respect to the required Special Permits. The Board has requested additional photo-simulations that the applicant has agreed to provide. The Board is interested in understanding the design impacts of the project on views from Prospect Hill (above the proposed development site). The applicant is working to provide this information.

2. Compliance with Standards: The Applicant must comply "with such criteria or standards as may be set forth in this Ordinance which refer to the granting of the requested special permit."

The Applicant seeks a special permit under §7.11.15.3 of the SZO which requires the applicant to follow guidelines and procedures set forth in Article 14 for the, "regulation of wireless telecommunications facilities so as to allow and encourage such uses in the City with minimal harm to the public health, safety, and general welfare."

Guidelines in Article 14 of the SZO state that antennas should not be located more than 10ft above the roofline, should be located at a minimum of 10ft from the roof edge and below a forty-five degree plane beginning at the cornice of the building. The proposed new antennas are flush mounted on the penthouse. The Board has requested additional photo simulations to understand the impact of this design.

3. Consistency with Purposes: The Applicant has to ensure that the project "is consistent with (1) the general purposes of this Ordinance as set forth in Article 1, and (2) the purposes, provisions, and specific objectives applicable to the requested special permit which may be set forth elsewhere in this Ordinance, such as, but not limited to, those purposes at the beginning of the various Articles."

The Board finds that the proposal is not inconsistent with the underlying regulations of the RA zoning district, but may only be allowed if the provisions of federal telecommunications regulations require it to be located in this district (see variance findings below).

The Board finds that the proposal as conditioned **is not inconsistent** with the purposes set forth in Article 14 of the Zoning Ordinance as conditioned in this report, to:

- a) *Protect residential areas and land uses from potential adverse impacts of towers and antennas;*
- b) *Encourage the location of telecommunications facilities in non-residential areas;*
- c) *Minimize the total number of towers and antennas throughout the community;*
- d) *Strongly encourage the joint use of new and existing tower sites as a primary option rather than construction of additional single-use towers;*
- e) *Encourage users of towers and antennas to locate them in areas where the adverse impact on the community is minimal;*
- f) *Encourage users of towers and antennas to configure them in ways that minimize the adverse visual impact of the towers and antennas through careful design, siting, landscape screening, and innovative camouflaging techniques;*
- g) *Enhance the ability of the providers of telecommunications services to provide such services to the community quickly, effectively, and efficiently;*
- h) *Consider the public health and safety of communications facilities; and*
- i) *Avoid potential damage to adjacent properties from tower and antenna failure through sound engineering and careful siting of structures.*

4. Site and Area Compatibility: The Applicant has to ensure that the project "(i)s designed in a manner that is compatible with the characteristics of the built and unbuilt surrounding area, including land uses."

The Board is seeking further information from photo simulations before making a finding on this item.

5. Review Criteria for Telecommunications Facilities: In addition to those standards outlined in Section 5.1 for the granting of special permits, the SPGA shall consider the following factors in determining whether to issue a special permit for a telecommunications facility:

- a) *Height of proposed facility:*
- b) *Proximity of facility to residential structures and residential zoning districts:*
- c) *Nature of uses on adjacent and nearby properties:*
- d) *Surrounding topography and prominence of proposed facility:*
- e) *Surrounding tree cover and foliage:*

The Board is seeking a peer review and additional photo simulations before making these findings (a-e).

- f) *Design of tower, with particular reference to design characteristics that have the effect of reducing or eliminating visual obtrusiveness, as specified in Section 14.3:* Not applicable.
- g) *Location of tower, with particular reference to the existence of more suitable locations, as specified in Section 14.3:* Not applicable.
- h) *Proposed ingress and egress:* Ingress and egress to the site will be at existing entries with no new impacts
- i) *Distance from existing facilities:*
- j) *Availability of suitable existing towers, poles, other structures, or alternative technologies, as discussed in Section 14.5.2:*

The Board is seeking a peer review and additional photo simulations before making these findings (i-j).

III. FINDINGS FOR VARIANCE (SZO §5.5.3):

In order to grant a variance for lot area per dwelling unit (§8.5.B) requirements the SPGA must make certain findings and determinations as outlined in §5.5.3 of the SZO.

1. There are “special circumstances relating to soil conditions, shape or topography of land or structures which especially affect such land or structures but not affecting generally the zoning district in which it is located, causing substantial hardship, financial or otherwise.”

Applicant justification: The Property is a large parcel that abuts a commercial mixed use district. The surrounding area is comprised of residential and commercial properties however there are no other feasible locations on which to locate a wireless telecommunications facility. Existing structures and buildings in the area are insufficient in height to allow the Applicant to operate thereon and provide adequate coverage to this significant gap in its network. The Property provides a unique opportunity – given the character and size of the existing Building – to allow the Applicant to install the WCF on an existing building, thereby minimizing any adverse visual impacts to the surrounding area. Accordingly, the proposed design conforms to the existing characteristics of the Property by façade mounting the antennas to the existing penthouse and painting them to match. The WCF however, requires relief for this use in the Residential A zoning district under the Ordinance.

Radio frequency engineers determine the placement of network points-of-presence using computer engineering models that simultaneously evaluate area topography and population patterns to identify specific geographic areas to be serviced by each antenna facility in the network. As a result of this modeling, combined with actual coverage data provided by existing "on air" facilities, the Applicant's radio frequency engineers have identified a limited geographic area as a necessary location for a

communications facility to remedy an existing gap in reliable service coverage in the general vicinity of the Property. Without the requested relief, there would remain a substantial "gap" in reliable service coverage in the Applicant's network. Radio frequency coverage maps and an Affidavit of Radio Frequency Expert, provided by the Applicant and attached hereto, confirm that a wireless communications facility located at the Property is required to remedy the existing gap in the Applicant's network coverage in the area. The requested height has been determined by the Applicant's engineers to be the minimum height necessary to connect coverage from the proposed WCF with coverage from adjacent cell sites in the Applicant's network (i.e., to remedy the existing "gap" in service and to effect reliable handoffs between adjacent cell sites as a subscriber travels through the area). Further, in the context of a utility service where the critical criteria in the development of each facility is its ability to integrate with a network of surrounding sites and, subsequently, for each cluster of sites to function within a regional/national network, there is an underlying premise that each site chosen by the Applicant for a facility possesses a unique location and topographical characteristics.

Finally, as noted in *Nextel Communications of the Mid-Atlantic, Inc. v. Town of Wayland*, 231 F.Supp. 2d 396, 406-407 (D. Mass. 2002), the "need for closing a significant gap in coverage, in order to avoid an effective prohibition of wireless services, constitutes another unique circumstance when a zoning variance is required." The existing structures located near the Property are not at a height sufficient to allow the Applicant to provide adequate coverage to this significant gap in its network and there is no property available to the Applicant that would not require the requested relief. Consequently, the proposal to install the WCF is required. Given the height of the Building, as well as the proposed design of the WCF, the proposed installation will have a minimal visual impact to the surrounding neighborhood while achieving the Applicant's requisite coverage.

Board Finding: While the legal analysis by the applicant is sound, making this finding relies upon the statement by the applicant's radio frequency (RF) engineer that the "need for closing a significant gap in coverage, in order to avoid an effective prohibition of wireless services, constitutes (a) unique circumstance when a zoning variance is required." The Board recommends a peer review by an independent RF engineer to confirm this determination by the applicant.

2. "The variance requested is the minimum variance that will grant reasonable relief to the owner, and is necessary for a reasonable use of the building or land."

Applicant justification: The intent of the TCA enacted by the U.S. Congress was to institute a framework to promote competition and innovation within the telecommunications industry. Under its license from the FCC, the Applicant is obligated to provide a reliable "product" (i.e. wireless communications service) to the population in the greater Boston region, which includes the City of Somerville. Likewise, consumer expectations for increasingly robust and reliable service requires competing service providers (such as the Applicant's, operating under the brand name Clearwire) to identify and remedy existing gaps in reliable network coverage, or gaps that result from increasing subscriber voice and data traffic beyond the limits of existing network infrastructure. A carrier's failure to remedy network gaps in a timely fashion can result in a significant loss of subscribers to competing telecommunications carriers. As demonstrated in the Affidavit of Radio Frequency Expert and Service Coverage maps provided by the Applicant and attached hereto, the proposed WCF and corresponding requested relief are necessary to remedy a gap in reliable service coverage within the Applicant's existing network infrastructure.

Given the location of the significant gap in coverage, and the location of the existing site to which the proposed WCF must connect, both depicted on the coverage maps submitted herewith, the proposed

wireless communications services cannot be provided without requiring the requested relief. The Applicant has investigated alternative sites in and around the defined geographic area within which its engineers determined that a facility must be located to fill the gap in service coverage and to function effectively within the Applicant's network of existing and planned facilities. No existing structure or property near the vicinity of the proposed WCF is feasible to accommodate the Applicant's network requirements.

Accordingly, a literal enforcement of the provisions of the Ordinance would prevent the Applicant from eliminating an existing gap in reliable service coverage, resulting in a potential loss of subscribers and the inability to effectively compete for subscribers with FCC licensed competitors in the market, contrary to the intent of the Ordinance and the U.S. Congress in enacting the TCA.

Board Finding: While the legal analysis by the applicant is sound, making this finding relies upon the statement by the applicant's radio frequency (RF) engineer that the "need for closing a significant gap in coverage, in order to avoid an effective prohibition of wireless services, constitutes (a) unique circumstance when a zoning variance is required." The Board recommends a peer review by an independent RF engineer to confirm this determination by the applicant.

3. "The granting of the variance would be in harmony with the general purpose and intent of this Ordinance and would not be injurious to the neighborhood or otherwise detrimental to the public welfare."

Applicant justification: Although the use is prohibited under the Table of Uses, pursuant to §7.11.15.3 of the Ordinance the Applicant provides that the WCF is in harmony with the intent of the Ordinance. As §6.1.1 of the Ordinance provides, Residential A zoning districts are "to establish and preserve quiet neighborhoods of one- and two-family homes, free from other uses except those which are both compatible with and convenient to the residents of such districts." The Applicant's proposed installation satisfies this requirement of the Ordinance. As explained in more detail below, the proposed WCF will produce no objectionable noise, glare, dust, smoke, fumes, odors, or effluent, and will not have any impact on traffic or circulation. Further, the proposed WCF is compatible and convenient to the inhabitants of the City by enhancing telecommunication services within the City. Accordingly, relief may be granted by the Board without substantial detriment to the public good or nullifying or substantially derogating from the intent or purpose of the Ordinance.

The WCF produces no odors, smoke, dust, glare or waste. Visits to and from the WCF will be limited to one or two per month by maintenance personnel so it will not produce large amounts of traffic. Accordingly, the requested relief may be granted without substantial detriment to the public good. In fact, the WCF will provide a benefit to the community in the form of improved communications infrastructure. As a substantial part of the intent and purpose of the Wireless Communication Ordinance is to minimize potential adverse impacts on adjacent properties and residential neighborhoods, the Applicant respectfully suggests that its proposed WCF is consistent with the intent and purpose of the Ordinance. The Applicant's proposed structure is camouflaged, unmanned and will generate approximately two vehicle trips per month for routine maintenance. The WCF is serviced by electricity and no back-up generator will be required. The proposed use will discharge no wastewater on the site nor will it involve on-site storage or disposal of toxic or hazardous waste. The Applicant's WCF will be a benefit to the community by allowing for more competitive wireless telecommunications services to the residents and businesses of the City of Somerville. In addition, granting the requested relief will not cause substantial detriment to the public good or impair the intent or purpose of the Ordinance because:

1. The proposed use complies with the Ordinance to the extent reasonably feasible and will reduce the number of new structures ultimately needed to provide wireless communication services in the surrounding area by the use of an existing Building.
2. The proposed location is reasonably adaptable to the proposed wireless communications use.
3. The proposed WCF is designed to be at the minimum height necessary to provide adequate coverage to the area and keep potential visual impacts to a minimum.
4. The WCF will comply in all respects with radio frequency emission standards established by the Federal Communications Commission.
5. The proposed use is passive in nature, requires no employees on the premises, will not generate large amounts of traffic, and will not burden municipal systems.
6. The proposed WCF is compatible and convenient to the inhabitants of the city by enhancing telecommunications services within the City of Somerville.
7. The proposed WCF will lessen the danger from fire and natural disasters by providing emergency communications in the event of such fires and natural disasters.
8. The proposed WCF will involve no overcrowding of land or undue concentration of population because it is an unmanned installation.
9. The proposed WCF will preserve and increase the amenities of the City by enhancing telecommunications services.
10. The proposed WCF will not adversely affect water supplies as it neither uses water nor produces waste.
11. The proposed WCF will facilitate the adequate provision of transportation by improving mobile telecommunications for business, personal, and emergency uses.
12. The proposed WCF will involve no adverse effects on drainage, schools, parks, or open space.
13. The proposed WCF will involve no excessive noise.
14. The proposed WCF will not adversely impact upon historic sites.
15. The proposed WCF will be an appropriate use of the Property within the City of Somerville.

Board Finding: The Board is still seeking additional information about the visual impacts of the proposal. A well designed wireless installation on a tall residential rooftop can be completed without significant detrimental impact on the neighborhood, and staff will work with the applicant to ensure that the design minimizes or eliminates neighborhood impacts if it is determined that the application meets the other two variance tests.

III. RECOMMENDATION

Based on the above findings, the Planning Board recommends that, per M.G.L. c.44 Section 53G, the ZBA **request the applicant provide funding to support an independent peer review of the RF**

Engineer's analysis, by an engineer chosen on behalf of the ZBA by Staff and funded by the applicant to address if the "need for closing a significant gap in coverage, in order to avoid an effective prohibition of wireless services, constitutes (a) unique circumstance when a zoning variance is required." This is the first case that Staff has been able to find in Somerville where an applicant is requesting to put a new wireless facility on a site with no previously approved facilities within the RA zoning district. Clearly, case law has established that there are specific instances where this can and should be approved by a ZBA. But, because of the high standard required to make findings to meet the variance criteria and justify exercising the provisions identified in federal case law to override state and local prohibitions on use variances, the Board finds that only with an independent certification of the gap in coverage should this project be supported.

Sincerely,



Kevin Prior
Chair

Cc: Agent: Jason Ellis