



CITY OF SOMERVILLE, MASSACHUSETTS
OFFICE OF STRATEGIC PLANNING & COMMUNITY DEVELOPMENT
JOSEPH A. CURTATONE
MAYOR

PLANNING DIVISION
STAFF

CHRISTOPHER DI IORIO, *SENIOR PLANNER*
LORI MASSA, *PLANNER*
DAWN PEREIRA, *ADMINISTRATIVE ASSISTANT*
FREDERICK J. LUND, *SENIOR DRAFTSMAN*

Case #: ZBA 2009-53
Date: March 1, 2010
Recommendation: Conditional Approval

PLANNING STAFF REPORT

Site: 114 Highland Avenue

Applicant Name: Clearwire

Applicant Address: 5808 Lake Washington Blvd., Suite 300, Kirkland, WA 98033, c/o Lisa Bera c4144033103

Property Owner Name: Somerville Housing Authority

Property Owner Address: 30 Memorial Road, Somerville, MA

Agent Name: Lisa Ann Bera, Centerline Comm.

Agent Address: 960 Turnpike St #28, Canton, MA 02021

Alderman: Thomas Taylor

Legal Notice: Applicant Clearwire & Owner Somerville Housing Authority seek a Special Permit under SZO §7.11.15.3 in order to replace, relocate and install wireless communications equipment.

Zoning District/Ward: Residence C / 3

Zoning Approval Sought: Special Permit under SZO §7.11.15.3

Date of Application: October 29, 2009

Dates of Public Meeting • Hearing: Planning Board 3/4/10 • Zoning Board of Appeals 3/17/10

I. PROJECT DESCRIPTION

1. Subject Property: The property is a 20,282 sf parcel in a Residence C district. The building is a seven story, 62 foot tall brick building. The Somerville Housing Authority owns the building. Sprint Nextel currently has wireless equipment on the roof of the building consisting of façade mounted antennas on penthouses, equipment cabinets, and a GPS antenna. The installation occurred under special permit # ZBA 1998-38. The Applicant received several revisions to the permit to add equipment. The latest revision occurred in July of 2008.



CITY HALL • 93 HIGHLAND AVENUE • SOMERVILLE, MASSACHUSETTS 02143
(617) 625-6600 EXT. 2500 • TTY: (617) 666-0001 • FAX: (617) 625-0722

www.somervillema.gov



2. Proposal: The Applicant, Clearwire, is proposing the following:
- Remove 3 existing penthouse façade mounted Sprint WiMAX antennas and replace with 3 Clearwire Panel antennas
 - Install 2 additional penthouse façade mounted backhaul antennas
 - Install 1 GPS antenna
 - Install 3 remote radio head (RRH) antennas on ballast mounts
 - Install a new coax cable run and an additional cabinet on the roof

The reason for the location of new Clearwire antennas is to service their customer base. There are approximately eight locations planned for Somerville. Clearwire is a FCC licensed company that is required to comply with all state and federal regulations.

3. Nature of Application: Under SZO §7.11.15.3 a wireless communications facility requires a Special Permit.

4. Surrounding Neighborhood: Along Highland Ave the property is in close proximity to religious institutions and multifamily homes. It directly abuts an American Legion building and a residential property. There are primarily one- and two-family homes to the south of the property. There is a five story building across the street; however, the other buildings in the area generally have two or three stories.

5. Impacts of Proposal: Three of the antennas would be replacing existing antennas so their impact would not change. The two backhaul antennas due to their shape and location would be a noticeable change to the rooftop equipment. The backhaul antennas are two feet in diameter and would be conditioned to be painted to match the building in order to reduce the impact of their appearance. The proposed equipment cabinet would be visible from a distance on Highland Ave. This appears to be the least impactful location because it would be grouped with the other equipment cabinets on the roof and the change would not be as noticeable as it would be for a single cabinet in a new location.

6. Green Building Practices: None

7. Comments:

Fire Prevention: Has been contacted but has not provided comments.

Ward Alderman: Has been contacted but has not provided comments.

II. FINDINGS FOR SPECIAL PERMIT (SZO §5.1 & §14):

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 Staff 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.
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."

Staff find that minimal harm would be imposed upon the health, safety and welfare of the surrounding neighborhood.

Guidelines in Section 14.3 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 to the maximum extent feasible. While these guidelines have not been strictly met by two of the newly proposed antennas (2 backhaul dishes), staff find that the unusual height of the penthouses, the existence of other antennas in the areas where these new antennas are proposed, the placement of the antennas on existing penthouse structures, and conditions placed on the proposal in this report would limit the visual impact of the proposal that the guidelines are meant to preserve. Conditions imposed by this report include painting of the antennas to match the building. Clearwire's Radio Frequency Engineer submitted an affidavit stating that the 79 foot height of the antennas would be able to alleviate a gap in the company's coverage. The affidavit does not address if a lower height would also work to achieve the same end; however, the proposed location below the panel antenna would consolidate the antennas in the upper portion of the penthouse. A lower height for the backhaul antenna may appear visually more cluttered.

The guidelines in section 14.3.1a also state service providers should co-locate with other service providers, which Clearwire would be doing with Sprint. The panel and backhaul antennas also meet the guidelines under section section 14.3.1d as they are side-mounted onto existing structures and painted to match the surrounding materials and colors.

Review Criteria for Telecommunications Facilities:

- a) *Height of proposed facility:* The existing building has an approximately 62 ft high roof top. Proposed antennas would not extend above existing penthouses on the roof top, which are 82 feet in height.
- b) *Proximity of facility to residential structures and residential zoning districts:* 114 Highland Ave is in a Residence C district and abuts a Residence A district. Since Clearwire is collocating with Sprint, they chose this location, despite its location in a residential district. Three of the antennas would be replacing existing antennas so there would be no new impact. The two backhaul antennas due to their shape and location will be a noticeable change to the rooftop equipment. The backhaul antennas are two feet in diameter and will be conditioned to be painted to match the building in order to reduce the impact of their appearance. The proposed equipment cabinet would be visible from a distance on Highland Ave. This appears to be the least impactful location because it would be grouped with the other equipment cabinets on the roof and the change would not be as noticeable as it would be for a single cabinet in a new location.
- c) *Nature of uses on adjacent and nearby properties:* Along Highland Ave the property is in close proximity to religious institutions and multifamily homes. It directly abuts an American Legion building and a residential property. There are primarily one- and two-family homes to the south of the property. There is a five story building across the street. The other buildings in the area generally have two or three stories so the proposed equipment would not block any views.

- d) *Surrounding topography and prominence of proposed facility:* The topography slopes downward towards the back of the property. There are no other buildings of comparable height or prominence in the surrounding area. Though the proposed rooftop antennas are visible from several vantage points, the proposal to match them to the color of the building would reduce their prominence from any public way.
- e) *Surrounding tree cover and foliage:* There are a few trees on the property and on a lot to the south of the property that are significantly lower in height than the proposed antennas and would be unaffected by this proposal.
- 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 the existing curb cut for the property and use existing parking and circulation patterns. There is access to the roof from the penthouses.
- i) *Distance from existing facilities:* Clearwire is currently establishing several sites in Somerville. The accompanying map shows the eight proposed future locations of Clearwire antennas in Somerville.
- j) *Availability of suitable existing towers, poles, other structures, or alternative technologies, as discussed in Section 14.5.2:* The site is an existing wireless site for Sprint. Clearwire and Sprint have a relationship where Clearwire is able to use Sprint's existing arrays and penthouses. This relationship minimizes the impact that this new company's equipment has on the appearance of the building.

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."

Staff find that the proposal, as conditioned, **is consistent** with the purposes of the SZO, specifically "to facilitate the adequate provision of ...other public requirements; to ...increase the amenities of the municipality" (SZO §1.2), and with the specific purposes of Article 14 as noted below:

- 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- collocating in a residential district facilities consistency with c and d below;*
- 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."

Staff find the project to be compatible with the surrounding area and land uses. The antennas proposed are 1ft by 3.5ft (Panel), 2 ft in diameter (backhaul), or 1 ft by 1.5 ft (RRH) and would be placed on penthouses that are approximately 76 ft above street level. A condition that the antennas be camouflaged will reduce any impacts on the site and surrounding area.

III. RECOMMENDATION**Special Permit under §5.1 & §14**

Based on the above findings and subject to the following conditions, the Planning Staff recommends **CONDITIONAL APPROVAL** of the requested **SPECIAL PERMIT**.

#	Condition	Timeframe for Compliance	Verified (initial)	Notes										
1	Approval is for the replacement of 3 penthouse façade mounted antennas and the installation of 2 additional penthouse façade mounted backhaul antennas, 1 GPS antenna, 3 remote radio head (RRH) antennas on ballast mounts, a new coax cable run and an additional cabinet on the roof. This approval is based upon the following application materials and the plans submitted by the Applicant:	BP/CO	Plng.											
	<table><tr><th>Date (Stamp Date)</th><th>Submission</th></tr><tr><td>Oct 29, 2009 (incomplete) – Feb 9, 2010 (complete)</td><td>Initial application submitted to the City Clerk’s Office</td></tr><tr><td>Oct 2009 & Dec 2009</td><td>Photosimulations</td></tr><tr><td>Dec 1, 2009</td><td>Modified plans submitted to OSPCD (A-1-5, S-1, E-1-2)</td></tr><tr><td>February 9, 2010</td><td>RF Engineering Affidavit</td></tr></table>				Date (Stamp Date)	Submission	Oct 29, 2009 (incomplete) – Feb 9, 2010 (complete)	Initial application submitted to the City Clerk’s Office	Oct 2009 & Dec 2009	Photosimulations	Dec 1, 2009	Modified plans submitted to OSPCD (A-1-5, S-1, E-1-2)	February 9, 2010	RF Engineering Affidavit
	Date (Stamp Date)				Submission									
	Oct 29, 2009 (incomplete) – Feb 9, 2010 (complete)				Initial application submitted to the City Clerk’s Office									
	Oct 2009 & Dec 2009				Photosimulations									
	Dec 1, 2009				Modified plans submitted to OSPCD (A-1-5, S-1, E-1-2)									
	February 9, 2010				RF Engineering Affidavit									
Any changes to the approved plans that are not <i>de minimis</i> must receive ZBA approval.														
2	The antennas shall be painted to match the color of the penthouse to which they are attached.	Final Inspection	Plng.											
3	The Applicant or Owner shall meet the Fire Prevention Bureau’s requirements.	CO	FP											

4	<i>Compliance with Noise Control Ordinance.</i> Prior to the issuance of a Certificate of Use and Occupancy Permit for the installation of the wireless telecommunications facility, the Applicant shall submit to the Inspectional Services Division, with a copy to the Zoning Board of Appeals, a sound level measurement certified as accurate by a professional acoustician and shall perform such sound level measurements six months after issuance of the certificate of occupancy, with subsequent sound level measurements annually on or before the anniversary date of the original six month measurement to document that all of the Applicant's installed equipment complies and continues to comply with the decibel level standards established by the City of Somerville, Noise Control Ordinance. The Applicant shall provide the results of such measurements and certify that the facility complies with the decibel level standards established by the City of Somerville, Noise Control Ordinance, with a copy to the Zoning Board of Appeals.	CO and annually	ISD	
5	Compliance with Federal Communications Commission Guidelines for Human Exposure to Electromagnetic Fields. To ensure compliance with the standards established by the Federal Communications Commission Office of Engineering and Technology ("FCC") in OET Bulletin 65 as adopted by Massachusetts Department of Public Health under 105 CMR 122.021, the Applicant shall perform measurements, within two (2) months of the date that the Applicant's wireless telecommunications facility commences operation and at intervals of twelve (12) months thereafter, to establish that the Applicant's wireless telecommunications facility complies and continues to comply with the FCC guidelines and applicable state regulations for human exposure to radio frequency electromagnetic fields for human exposure to radio frequency electromagnetic fields. The Applicant shall provide the results of such measurements with certification of compliance to the City of Somerville Health Department, with a copy to the Zoning Board of Appeals.	Annually	BOH	
6	Any antenna that is not operated continuously for a period of twelve (12) months shall be considered abandoned, and the owner of such antenna shall remove the same. Failure to remove may result in a fine or penalty.	Perpetual	ISD	
7	Any antennas on the premises that are not currently in use shall be removed prior to the issuance of a certificate of occupancy.	CO	ISD	

8	The Applicant shall contact Planning Staff at least five working days in advance of a request for a final inspection by Inspectional Services to ensure the proposal was constructed in accordance with the plans and information submitted and the conditions attached to this approval.	Final inspection	Plng.	
---	---	------------------	-------	--

