

- A. Towers, antennas and any necessary support structures shall be designed to blend into the surrounding environment through use of color camouflaging and architectural treatment, except in cases which the Federal Aviation Authority (FAA), state or federal authorities have dictated color. Use of stealth design, including those which imitate natural features may be required in visually sensitive locations, and are highly recommended for all installations.
- B. In order to protect public safety and to preserve the scenic character and appearance of the area, the height limit for towers, antennas and tower-related fixtures shall be not more than 20' (twenty feet) above the average height of the tree line measured within 100' (one hundred feet) of the highest vertical element of the telecommunications facility. Notwithstanding the above, additional height may be approved upon a finding by the Selectboard that the additional height is necessary in order to provide adequate coverage in the Town of Concord or to accomplish collocation of facilities and that the additional height will not cause an undue visual impact on the scenic character or appearance of the area.
- C. Towers, antennas and any necessary support structures shall be designed to avoid having an undue adverse aesthetic impact on prominent ridgelines and hilltops. In determining whether a tower's aesthetic impact would be undue and adverse, the Selectboard will consider:
  - I. the period of time during which the proposed tower would be viewed by the traveling public on a public highway;
  - II. the frequency of the view experienced by the traveling public;
  - III. the degree to which the tower would be screened by existing vegetation, the topography of the land, and existing structures;
  - IV. background features in the line of sight to the proposed tower that obscure the facility or make it more conspicuous;
  - V. the distance of the proposed tower from the view point and the proportion of the facility that is visible above the skyline;
  - VI. the sensitivity or unique value of a particular view affected by the proposed tower;

- VII. significant disruption of a viewshed that provides context to a historic or scenic resource.

The Selectboard shall have the authority to impose conditions consistent with the purpose of this section in approving a proposed facility. Furthermore, the Selectboard may designate an alternative location for the tower to be evaluated by the applicant if it is determined that the proposed location would result in undue adverse aesthetic impacts. In consideration of this, the applicant may revise its application to include such a site, assuming it is available to the applicant and reasonably technically feasible to meet the applicant's communication objectives.

- D. All buildings and structures accessory to a tower (except for electric power poles where specifically exempted by the Selectboard) shall meet the minimum setback requirements of the underlying zoning district or setback requirements specified in this bylaw. If the minimum setbacks of the underlying zoning district are less than the height of the tower, including antennas or other vertical appurtenances, the minimum distance from the tower to any property line shall be no less than the height of the tower, including antennas and other vertical appurtenances.
- E. Ground mounted equipment or antennas as well as buildings and structures accessory to a tower shall be screened from view by suitable vegetation, except where a design of non-vegetative screening better complements the architectural character of the surrounding neighborhood. A planted or vegetative screen shall be a minimum of 10' (ten feet) in depth with a minimum height of 6' (six feet) and shall have the potential to grow to a height of at least 15' (fifteen feet) at maturity. Existing on-site vegetation outside the immediate site for the wireless facility shall be preserved or improved. Disturbance to existing topography shall be minimized unless the disturbance is demonstrated to result in less visual impact of the facility from surrounding properties and other vantage points.

### **1.13 Amendments to Existing Wireless Telecommunications Facility Permit**

Any change, alteration or addition to a previously approved wireless telecommunications facility shall require a permit amendment. In connection with a request for such a permit amendment, the Selectboard may require that the applicant shall furnish to the Selectboard such information as the Selectboard deems to be necessary to evaluate this request.

### **1.14 Tower Lighting and Signage; Noise Generated by Facility**

Unless required by the Federal Aviation Administration ("FAA"), no lighting of towers is permitted. In any case where a tower is determined to need obstruction marking or lighting, the applicant must demonstrate that it has or will request the least visually

obtrusive marking and/or lighting scheme in FAA applications. Copies of required FAA applications shall be submitted by the applicant. Heights may be reduced to eliminate the need for lighting or another location selected.

No commercial signs or lettering shall be placed on a tower or facility. Signage shall be limited to that required by federal or state regulation.

The Selectboard may impose conditions to minimize the effect of noise from the operation of any machinery or equipment upon adjacent properties.

### **1.15 Temporary Wireless Telecommunications Facilities**

Any wireless telecommunications facility designed for temporary use is subject to the following:

- A. Use of a temporary facility is permitted only if the owner has received a temporary use permit from the Town of Concord Selectboard.
- B. Except for emergencies, temporary facilities are permitted for no longer than five (5) days use.
- C. Emergency temporary facilities are permitted for no longer than fifteen (15) days. However, this fifteen (15) day period may be extended by the Selectboard if necessary, after notice and hearing.
- D. The maximum height of a temporary facility is 50' (fifty feet) from grade.
- E. Temporary facilities must comply with all applicable portions of these regulations.

### **1.16 Public Hearing; Site Visit**

Within 45 (forty-five) days of the filing of a complete application, the Selectboard shall hold a public hearing. Notice for the public hearing shall be given not less than 15 (fifteen) days prior to the date of the public hearing by all of the following:

- 1. Publication of the date, time, place, and purpose of the hearing in a newspaper of general circulation in the municipality affected.
- 2. Posting of the same information in three (3) or more public places within the municipality in conformance with 1 V.S.A. §312(c)(2), including posting within view from the public right-of-way most nearby the property on which the Facility will be located.



3. Written notification to the applicant and to owners of all properties adjoining the property on which the Facility will be located, without regard to any public right-of-way.

The Selectboard may recess the hearing on any application, pending submission of additional information.

After commencement of the hearing, and before issuance of a written decision, the Selectboard shall conduct a site visit.

### **1.17 Findings**

Within 45 (forty-five) days after completion of the hearing, the Selectboard shall issue a written decision approving, approving with conditions, or denying the application. Any decision by the Selectboard to deny an application for a permit under this ordinance shall be in writing and supported by substantial evidence contained in a written record, in conformance with 47 U.S.C. § 332(c)(7)(B)(iii). In approving an application, the Selectboard may impose permit conditions consistent with the purpose of this ordinance.

A written decision approving an application, or approving an application with conditions, shall constitute the permit for purpose of this ordinance.

### **1.18 Continuing Obligations**

Prior to operation, the applicant's qualified engineer must certify to the Selectboard that the facility was built as permitted by the Town of Concord, and the applicant's qualified engineer must annually thereafter certify to the Selectboard that the facility is in compliance with its permit issued hereunder. Upon receiving a permit, the permittee shall annually demonstrate that he or she is in compliance with all FCC standards and requirements regarding radio frequency exposure, and provide the basis for his or her representations. The permittee shall annually demonstrate that the bond for facility removal and landscape remediation is active, adequate, and meets the approval of the Selectboard, and that the premiums have been paid. The permittee shall also annually demonstrate that the insurance policy is active, and that the premiums have been paid.

### **1.19 Facility Removal**

Abandoned, unused, obsolete, or noncompliant towers or facilities under this bylaw shall be removed as follows:

- A. The owner of a facility/tower shall annually, on January 15, file a declaration with the Town of Concord's Administrative Officer certifying the continuing safe operation of every facility/tower installed subject to these regulations. Failure to file a declaration shall mean that the facility/tower is no longer in use and considered abandoned.



- B. Abandoned or unused towers or facilities shall be removed within 180 (one hundred eighty) days of cessation of operations at the site unless a time extension is approved by the Selectboard. In the event the tower/facility is not removed within 180 (one hundred eighty) days of the cessation of operations at a site, the municipality shall notify the owner and any applicable bonding company and may remove the tower or facilities. Costs of removal shall be assessed against the property or tower owner.
- C. Towers and facilities which are constructed in violation of permit conditions or application representations shall be removed within 60 (sixty) days of notification of such a violation unless a time extension or negotiated solution is approved by the Selectboard. In the event the tower or facility is not removed within 60 (sixty) days of notification of such a violation, the municipality may remove the tower or facilities. Costs of removal shall be assessed against the property or tower owner.
- D. An owner who has failed to file an annual declaration with the Administrative Officer by January 15 may, by February 15, file a declaration of use or intended use and may request the ability to continue use of the facility/tower.
- E. The Applicant shall, as a condition of the conditional use permit, provide a financial surety bond payable to the Town of Concord and acceptable to the Selectboard to cover the cost of removal of the facility and remediation of the landscape, should the above clauses be invoked.

### **1.20 Maintenance Requirements**

The Applicant shall maintain all facilities. Such maintenance shall include, but not be limited to painting, structural integrity and landscaping. In the event the applicant fails to maintain the facility, the Town of Concord may undertake such maintenance at the expense of the applicant or landowner.

### **1.21 Insurance Requirements**

The facility owner shall maintain a general liability insurance policy on each and all facilities. The Town of Concord shall be a named insured. The amount of the policy shall be \$2,000,000.00 (two million dollars).

### **1.22 Fees**

Fees for filing an application to build, change, alter, or add to a wireless telecommunications facility shall be \$500.00 (five hundred dollars) for each small scale facility (see Section 1.7.1) and \$1,000.00 (one thousand dollars) for each other facility. Additional fees may include the reasonable costs of an independent technical assessment of the application that may be incurred during the review and permitting process.

### 1.23 Enforcement and Penalties

This ordinance is a civil ordinance. A violation of this ordinance shall be a civil matter which may be enforced in the Vermont Judicial Bureau or in the Essex County Superior Court, at the election of the selectboard. The selectboard chair shall be the designated enforcement officer. A civil penalty of not more than \$500.00 per violation may be imposed for violation of this ordinance. Each day that the violation continues shall constitute a separate violation of this ordinance. Costs incurred by the Town in any enforcement action, including but not limited to attorney fees, court costs, and removal of the Wireless Telecommunication Facility or parts of the Facility, shall be assessed against the Facility owner.

Violations enforced in the Judicial Bureau shall be in accordance with the provisions of 24 V.S.A. §§ 1974a and 1977 et seq. The enforcement officer shall issue tickets and may be the appearing officer at any hearing. For purposes of enforcement in the Judicial Bureau, the waiver fee shall be \$450.00.

Violations enforced in the Superior Court shall be in accordance with the Vermont Rules of Civil Procedure. The Town of Concord may pursue all appropriate injunctive relief.

### 1.24 Severability

If any portion of this ordinance is held unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be affected.

### 1.25 Effective Date

This ordinance shall become effective 60 days after its adoption by the Concord selectboard. If a petition is filed under 24 V.S.A. § 1973, that statute shall govern the taking effect of this ordinance.

Adopted this 6<sup>th</sup> day of FEBRUARY, 2009.

Signatures of Selectboard:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## GLOSSARY OF TELECOMMUNICATIONS TERMS

**Adequate Coverage:** Coverage for wireless telephony is "adequate" within that area surrounding a base station where the predicted or measured median field strength of the transmitted signal is such that most of the time, transceivers properly installed and operated will be able to communicate with the base station without objectionable noise (or excessive bit-error-rate for digital) and without calls being dropped. In the case of cellular communications in a rural environment, this would be signal strength of at least -90dBm. It is acceptable for there to be holes within the area of adequate coverage as long as the signal regains its strength further away from the base station. The outer boundary of the area of adequate coverage, however, is that location past which the signal does not regain.

**Affiliate:** When used in relation to an operator, another person who directly or indirectly owns or controls, is owned or controlled by, or is under common ownership or common control with the operator, or an operator's principal partners, shareholders, or owners of some other ownership interest. When used in relation to the municipality, any agency, board, authority or political subdivision affiliated with the municipality or other person in which the municipality has legal or financial interest.

**Alternative Design Tower Structure:** Artificial trees, clock towers, bell steeples, light poles, silos and similar alternative-design mounting structures that camouflage or conceal the presence of antennas or towers (see also Stealth Facility).

**Antenna:** A device for transmitting and/or receiving electromagnetic waves, which is attached to a tower or other structure.

**Antenna Height:** The vertical distance measured from the base of the antenna support structure at grade to the highest point of the structure, including any antennas or other attachments. If the support structure is on a sloped grade, then the average between the highest and lowest grades shall be used in calculating the antenna height.

**Antenna Support Structure:** Any pole, telescoping mast, tower tripod, or any other structure which supports a device used in the transmitting and/or receiving of electromagnetic waves.

**Applicant:** A person who applies for a telecommunications facility siting. An applicant can be the telecommunications service provider or the owner of the property.

**Available Space:** The space on a tower or structure to which antennas of a telecommunications provider are both structurally able and electromagnetically able to be attached.



**Base Station:** The primary sending and receiving site in a telecommunications facility network. More than one base station and/or more than one variety of telecommunications provider can be located on a single tower or structure.

**Bulletin 65:** Published by the Federal Communications Commission (FCC) Office of Engineering and Technology specifying radiofrequency radiation levels and methods to determine compliance.

**Cell Site:** A tract or parcel of land that contains a cellular communication antenna, its support structure, accessory building(s), and parking, and may include other uses associated with and ancillary to cellular communications transmission.

**Cellular Service:** A telecommunications service that permits customers to use wireless, mobile telephones to connect, via low-power radio transmission sites called cell sites, either to the public switched network or to other mobile cellular phones.

**Cellular Telecommunications:** A commercial Low Power Mobile Radio Service bandwidth licensed by the FCC to providers in a specific geographical area in which the radio frequency spectrum is divided into discrete channels which are assigned in groups to geographic cells within a service area and which are capable of being reused in different cells within the service area.

**Cellular Telecommunications Facility:** Consists of the equipment and structures at a particular site involved in receiving telecommunication or radio signals from mobile radio communications sources and transmitting those signals to a central switching computer which connects the mobile unit with the land-based telephone lines.

**Channel:** The segment of the radiation spectrum to or from an antenna which carries one signal. An antenna may radiate on many channels simultaneously.

**Collocation:** Locating wireless communications equipment from more than one provider on a single site.

**Common Carrier:** An entity licensed by the FCC or a state agency to supply local and/or long distance telecommunications services to the general public at established and stated rates.

**Communication Equipment Shelter:** A structure located at a base station designed principally to enclose equipment used in connection with telecommunications transmissions.

**Communication Tower:** A guyed, monopole, or self-supporting tower, constructed as a free standing structure or in association with a building, other permanent structure or equipment, containing one or more antennas intended for transmitting and/or receiving television, AM/FM radio, digital, microwave, cellular, telephone, or similar forms of electronic communication.

**Communications Facility:** A land facility supporting antennas and/or microwave dishes that sends and/or receives radio frequency signals. Communications facilities may include structures, towers or accessory buildings.

**dBm:** Unit of measure of the power level of a signal expressed in decibels above 1 (one) milliwatt.

**Directional Antenna:** An antenna or array of antennas designed to concentrate a radio signal in a particular area.

**Dish Antenna:** A dish-like antenna used to link communications sites together by wireless transmission of voice or data. Also called microwave antenna or microwave dish antenna.

**Facility Site:** A property, or any part thereof, which is owned or leased by one or more telecommunications facility(s) and where required landscaping is located.

**FCC:** Federal Communications Commission. The government agency responsible for regulating telecommunications in the United States.

**Frequency:** The number of cycles completed each second by an electromagnetic wave measured in hertz (Hz).

**GHz:** Gigahertz. One billion hertz.

**Hertz:** (Hz) One hertz is the frequency of an electric or magnetic field which reverses polarity once each second, or one cycle per second.

**Location:** References to site location shall be the exact longitude and latitude, to the nearest tenth of a second. Bearing or orientation should be referenced to true North.

**MHz:** Megahertz, or one million hertz.

**Micro-cell:** A low power mobile radio service telecommunications facility used to provide increased capacity in high call-demand areas or to improve coverage in areas of weak coverage.

**Microwave Antenna:** A dish-like antenna manufactured in many sizes and shapes used to link communication sites together by wireless transmission of voice or data.

**Monitoring:** The measurement, by the use of instruments in the field, of radiofrequency exposure from telecommunications facilities, towers, antennas or repeaters.

**Monopole:** A single self-supporting vertical pole with no guy wire anchors, usually consisting of a galvanized or other unpainted metal or a wooden pole with below grade foundations.

**Omnidirectional Antenna:** An antenna that is equally effective in all directions and whose size varies with the frequency and gain for which it is designed.

**Permit:** Embodies the rights and obligations extended by the municipality to an operator to own, construct, maintain, and operate its facility within the boundaries of the municipality.

**Personal Communications Services or PCS:** Digital wireless telephone technology using higher frequency spectrum than cellular.

**Personal Wireless Services:** Commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services.

**Preexisting Towers and Antennas:** Any tower or antenna for which a permit has been issued prior to the effective date of these regulations.

**Radiated-Signal Propagation Studies or Coverage Plots:** Computer generated estimates of the signal emanating, and prediction of coverage, from antennas or repeaters sited on a specific tower or structure. The height above ground, power input and output, frequency output, type of antenna, antenna gain, topography of the site and its surroundings are all taken into account to create these simulations. They are primary tools for determining a need and whether the telecommunications equipment will provide adequate coverage for that site.

**Repeater:** A small receiver/relay transmitter and antenna of relatively low power output designed to provide service to areas which are not able to receive adequate coverage directly from a base or primary station.

**Roof and/or Building Mount Facility:** A facility in which antennas are mounted to an existing structure on the roof (including rooftop appurtenances) or a building face.

**Scenic View:** A scenic view is a wide angle or panoramic field of sight and may include natural and/or manmade structures and activities. A scenic view may be from a stationary viewpoint or be seen as one travels along a roadway, waterway, or path. A view may be to a far away object, such as a mountain, or a nearby object.

**Self-Supporting Tower:** A communications tower that is constructed without guy wires.

**Spectrum:** Relating to any transmissions or reception of electromagnetic waves.



***Stealth Facility:*** Any communications facility which is designed to blend into the surrounding environment. Examples of stealth facilities may include architecturally screened roof-mounted antennas, building-mounted antennas painted to match the existing structure, antennas integrated into architectural elements, antenna structures designed to look like light poles, and structures designed to resemble natural features such as trees or rock outcroppings. (See also Alternative Design Tower Structure.)

***Structurally Able:*** The determination that a tower or structure is capable of carrying the load imposed by the proposed new antenna(s) under all reasonable predictable conditions as determined by professional structural engineering analysis.

***System:*** The communications transmission system operated by a telecommunications service provider in the municipality or region.

***Telecommunications Provider:*** An entity licensed by the FCC to provide telecommunications services to individuals or institutions.

***Temporary Wireless Communication Facility:*** Any tower, pole, antenna, etc., designed for use while a permanent wireless facility is under construction, or for a special event or conference.

***Tower:*** A vertical structure for antenna(s) that provide telecommunications services.

***View Corridor:*** A three dimensional area extending out from a viewpoint. The width of the view corridor depends on the focus of the view. The focus of the view may be a single object, such as a mountain, which would result in a narrow corridor, or a group of objects, such as a downtown skyline, which would result in a wide corridor. Panoramic views have very wide corridors and may include a 360-degree (three hundred sixty degree) perspective. Although the view corridor extends from the viewpoint to the focus of the view, the mapped portion of the corridor extends from the viewpoint and is based on the area where base zone heights must be limited in order to protect the view.

***Whip Antenna:*** A vertical antenna that normally transmits signals in 360 (three hundred sixty) degrees. Whip antennas are typically cylindrical in shape, narrow (less than 6" [six inches] in diameter) and long (often measure 18" [eighteen inches] in height to more than several feet).

***Wireless Telecommunication Facility:*** One or more transmitters or receivers or a combination of transmitters and receivers, including antenna(s) and other accessory equipment, necessary at one location for carrying on a Wireless Telecommunication Service.

***Wireless Telecommunication Service:*** A service involving the transmission, emission and/or reception of signs, signals, writing, images and sounds or intelligence of any nature by means of radio waves or other electromagnetic systems.