

**CONCORD WIRELESS
TELECOMMUNICATIONS FACILITIES
ORDINANCE**

Adopted _____ 2008

TABLE OF CONTENTS

1.1 Title	2
1.2 Purposes	2
1.3 Authority	3
1.4 Consistency with Federal Law	3
1.5 Definitions	3
1.6 Permitted and Prohibited Locations	3
1.7 Simplified Procedures	5
1.7.1 Small Scale Facilities	5
1.7.2 Facilities Less Than Thirty Five Feet (35') in Height	5
1.7.3 De Minimus Impact	5
1.8 Application Requirements for Wireless Telecommunications Facilities not covered under Sections 1.7 through 1.7.3	6
1.9 Site Plan Requirements for Wireless Telecommunications Facilities not covered under Sections 1.7 through 1.7.3	8
1.10 Collocation Requirements	9
1.11 Access Roads and Above Ground Facilities	10
1.12 Tower and Antenna Design Requirements	10
1.13 Amendments to Existing Wireless Telecommunications Facility Permit	12
1.14 Tower Lighting and Signage; Noise generated by Facility	12
1.15 Temporary Wireless Telecommunications Facilities	13
1.16 Public Hearing; Site Visit	13
1.17 Findings	14
1.18 Continuing Obligations	14
1.19 Facility Removal	14
1.20 Maintenance Requirements	15
1.21 Insurance Requirements	15
1.22 Fees	15
1.23 Enforcing Agent	16
1.24 Severability	16
1.25 Effective Date	16
GLOSSARY OF TELECOMMUNICATIONS TERMS	17

1.1 Title

This ordinance shall be known as the Wireless Telecommunications Facilities Ordinance of the Town of Concord. Wireless telecommunications facilities shall include all wireless telecommunications providers, licensed and/or regulated by the Federal Communications Commission, and associated equipment and buildings. Nothing in this bylaw shall be construed to restrict amateur ham radio operators and town municipal services, beyond that already covered by the Concord Zoning Regulations.

1.2 Purposes

The purpose of this ordinance is to protect the public health, safety and general welfare of the Town of Concord while accommodating the communication needs of residents and businesses. This bylaw shall:

- A. Preserve the character and appearance of the Town of Concord while allowing adequate wireless telecommunications services to be developed.
- B. Protect the scenic, historic, environmental, and natural resources of the Town of Concord.
- C. Provide standards and requirements for the operation, siting, design, appearance, construction, monitoring, modification, and removal of wireless telecommunications facilities and towers.
- D. Minimize tower and antenna proliferation by requiring the sharing of existing and future communications facilities, towers, and sites where possible and appropriate.
- E. Promote the use of existing structures to provide these services.
- F. Facilitate the provision of telecommunications services to the residents and businesses of the Town of Concord and neighboring communities.
- G. Minimize the adverse visual effects of towers and other facilities through careful design and siting standards.
- H. Encourage through performance standards and incentives, the location of towers away from higher density residential areas and from other sensitive areas such as schools, hospitals and childcare facilities.
- I. Follow the guidelines and regulations set forth in the Concord Town Plan, Zoning Bylaws, and other zoning regulations.

1.3 Authority

Pursuant to 24 V.S.A. §4401 et seq. the Selectboard of the Town of Concord is authorized to review, approve, conditionally approve, and deny applications for wireless telecommunications facilities, including sketch, preliminary and final plans, and installation. Upon submission of an application for a Wireless Telecommunications Facility permit, the Selectboard may retain independent consultants whose services shall be paid for by the applicant. These consultants shall be qualified professionals in telecommunications engineering, structural engineering, monitoring of electromagnetic fields and other such fields as determined by the Selectboard. The consultant(s) shall work at the Selectboard's direction and shall provide the Selectboard such reports and assistance as the Selectboard deems necessary to review an application.

1.4 Consistency With Federal Law

In addition to other findings required by this bylaw, the Selectboard shall find that its decision regarding an application is intended to be consistent with federal law, particularly the Telecommunications Act of 1996. The bylaw does not:

- A. Prohibit or have the effect of prohibiting the provision of personal wireless services;
- B. Unreasonably discriminate among providers of functionally equivalent services;
or
- C. Regulate personal wireless services on the basis of the environmental effects of radio frequency emissions to the extent that the regulated services and facilities comply with the Federal Communications Commission (FCC) regulations concerning such emissions.

1.5 Definitions

[See Glossary of Terms included with this packet.]

1.6 Permitted and Prohibited Locations

Wireless telecommunications towers or facilities may be permitted as conditional uses upon compliance with the provisions of this bylaw in the Low Density "LD" and Rural Lands "RL" zoning districts.

Within the High Density, Medium Density, and Lakeshore districts the only facilities that will be allowed will be the following:

- a) Facilities imposing no impact or merely a de minimus impact as defined in Section 1.7.3 below.
- b) Small scale facilities as described in Section 1.7.1 below.

Additionally, freestanding telecommunications towers or antennas not defined as small scale facilities may not be located in any of the following locations:

- A. Within 100' (one hundred feet) or the height of the tower, whichever is greater, of a State or Federally designated wetland.
- B. The habitat of any State listed Rare or Endangered Species.
- C. Within 300' (three hundred feet) horizontally from any historic district, historic landmark and structures listed on the state or national register of historic places or property eligible to be listed on the federal/state historic register.
- D. Closer than 200' (two hundred feet) horizontally, or the height of the tower, whichever is greater, to the boundary of the property on which the tower is located.
- E. Closer than 500' (five hundred feet) horizontally to any structure existing at the time of the application which is used as either a primary or secondary residence, to the property of any school, or to any other building.
- F. Within 100' (one hundred feet) or the height of the tower, whichever is greater, horizontally of any river or perennial stream.
- G. Within 500' (five hundred feet) horizontally of any known archeological site.
- H. Within 1000' (one thousand feet) horizontally of a designated scenic road or highway.

1.7 Simplified Procedures

1.7.1 Small Scale Facilities

No permit shall be required for placement of antennae used to transmit, receive, or transmit and receive communications signals on that property owner's premises (1) if the aggregate area of the largest faces of the antennae is not more than eight (8) square feet, and (2) if the antennae and any mast support do not extend more than twelve (12') feet above the roof of that portion of the building to which the roof is attached.

1.7.2 Facilities Less Than 35' (thirty five feet) in Height

The placement of wireless telecommunications antennae, repeaters or micro cells on existing buildings, structures, roofs, or walls, and not extending more than 12' (twelve feet) from the same, 8 (eight) square feet mast limitation, or the installation of ground based facilities less than 35' (thirty five feet) in height, may be approved by the Selectboard, provided the antennae meet the applicable requirements of this bylaw, upon submission of:

- A. A final site and building plan.
- B. A report prepared by a qualified engineer indicating the structure's suitability for the telecommunications facility, and that the proposed method of affixing the antenna or other device to the structure complies with standard engineering practices. Complete details of all fixtures and couplings and the exact point(s) of attachment shall be indicated, as well as any additional supporting equipment or facilities.
- C. For a facility to be installed on or within an existing structure, a copy of the applicant's executed contract with the owner of the existing structure.
- D. However, no such device in excess of 12' (twelve feet), may be located closer than 50' (fifty feet), or the height of the tower, whichever is greater, to any existing dwelling as listed under permitted or conditional uses.

1.7.3 De minimis Impact

The Selectboard shall grant a permit to a property owner to install a wireless telecommunications facility, if after a hearing and site visit the Selectboard determines that the facility will impose no impact or merely a de minimis impact on the surrounding area and the overall pattern of land development.

1.8 Application Requirements for Wireless Telecommunications Facilities not Covered Under Sections 1.7 through 1.7.3

In connection with a wireless telecommunications facility not covered under Sections 1.7 through 1.7.3 of this ordinance, an applicant for a permit must be a personal wireless service provider or FCC licensee, or must provide a copy of its executed contract to provide land or facilities to such an entity, to the Selectboard at the time that an application is submitted. A permit shall not be granted for a tower or facility to be built on speculation.

No construction, alteration, modification, (including the installation of antennas for new uses) or installation of any wireless telecommunications tower or facility shall commence without a conditional use permit first being obtained from the Selectboard after notice, site visit and hearing.

In addition to information otherwise required in the Town of Concord's Town Plan, Zoning Bylaws, or other zoning regulations, applicants for wireless telecommunications towers or facilities shall include the following supplemental information:

- A. The name and address of the applicant, the record landowners and any agents of the landowners or applicants as well as an applicant's registered agent and registered office. If the applicant is not a natural person, the name and address of the business and the state in which it is incorporated and has its principal office shall be provided.
- B. The name, address and telephone number of the person to be contacted and who is authorized to act in the event of an emergency regarding the structure or safety of the facility.
- C. The names and addresses of the record owners of all abutting property.
- D. A report from qualified engineers that:
 - I. Describes the facility height, design and elevation, from a structural engineer.
 - II. Documents the height above grade for all proposed mounting positions for antennas to be collocated on a telecommunications tower or facility and the minimum separation distances between antennas, from a radio frequency engineer.

- III. Describes the tower's proposed capacity, including the number, height and type(s) of antennas that the applicant expects the tower to accommodate, and any other equipment that is to be attached to the proposed tower, from a structural engineer.
- IV. In the case of new tower proposals, demonstrates that existing telecommunications sites and other existing structures, or other structures proposed by the applicant within 5 (five) miles of the proposed site cannot reasonably provide adequate coverage and adequate capacity to the Town of Concord. The documentation shall include, for each facility site or proposed site within such radius, the exact location, ground elevation, height of tower or structure, and sufficient additional data to allow the independent reviewer to verify that other locations will not be suitable.
- V. Demonstrates that the applicant has analyzed the feasibility of using "repeaters" or micro-cells in conjunction with all facility sites listed in compliance with Section 1.8 D. IV (above) to provide coverage to the intended service area.
- VI. Describes potential changes to those existing facilities or sites in their current state that would enable them to provide adequate coverage.
- VII. Describes the output frequency, number of channels, sector orientation and power per channel, as appropriate for each proposed antenna.
- VIII. Includes a written explanation for use of the proposed facility, including reasons for seeking capacity in excess of immediate needs if applicable, as well as plans for additional development and coverage within the Town.
- IX. Demonstrates the tower's compliance with the municipality's structural standards and setbacks for towers and support structures.
- X. Provides assurance that at the proposed site the applicant will establish and maintain compliance with all FCC rules and regulations, particularly with respect to radio frequency exposure.

- XI. Includes other information required by the Selectboard that is necessary to evaluate the request.
- XII. Includes an engineer's stamp and registration number, where appropriate.
- XIII. A letter of intent committing the facility owner and his or her successors to permit shared use of the facility if the additional user agrees to meet reasonable terms and conditions for shared use.
- E. For a facility to be installed on an existing structure, a copy of the applicant's executed contract including option agreements with the owner of the existing structure (to be provided to the Selectboard at the time an application is submitted).
- F. To the extent required by the National Environmental Policy Act (NEPA) as administered by the FCC, a complete Environmental Assessment (EA) draft or final report describing the probable impacts of the proposed facility.
- G. A copy of the application or draft application for an Act 250 permit, if applicable.

The permit application shall be signed under pains and penalties of perjury.

1.9 Site Plan Requirements for Wireless Telecommunications Facilities not Covered Under Sections 1.7 through 1.7.3

In connection with a wireless telecommunications facility not covered under Sections 1.7 through 1.7.3 of this Ordinance, in addition to site plan requirements found elsewhere in the Town of Concord's Zoning Bylaws and other zoning regulations, site plans for wireless telecommunications facilities shall include the following supplemental information:

- A. Location Map: a copy of a portion of the most recent USGS Quadrangle map showing the area within at least a two (2) - mile radius of the proposed facility site.
- B. Vicinity map showing the entire vicinity within a 2500' (two thousand five hundred foot) radius of the facility site, including the facility or tower, topography, public and private roads and driveways, buildings and structures, water bodies, wetlands, landscape features, historic sites and habitats for endangered species. It shall include the property lines of the proposed facility site

parcel and all easements or rights of way needed for access from a public way to the facility.

- C. Proposed site plans of the entire development indicating all improvements including landscaping, utility lines, guy wires, screening and roads.
- D. Elevations showing all facades and indicating all exterior materials and color of towers, buildings and associated facilities.
- E. Computer generated photo simulations of the proposed facility showing the facility from all public rights-of-way and any adjacent property from which it may be visible. Each photo must be labeled with the line of sight, elevation and with the date taken imprinted on the photograph. The photos must show the color of the facility and method of screening.
- F. In the case of a proposed site that is forested, the approximate average height of the existing vegetation within 200' (two hundred feet) of the tower base.
- G. Construction sequence and time schedule for completion of each phase of the entire project.

Plans shall be drawn at a minimum at the scale of one (1) inch equals fifty (50) feet.

1.10 Collocation Requirements

An application for a new wireless telecommunications facility shall not be approved unless the Selectboard finds that the facilities planned for the proposed structure cannot be accommodated on an existing or approved tower or structure due to one of the following reasons:

- A. The proposed antennas and equipment would exceed the structural or spatial capacity of the existing or approved tower or facility, as documented by a qualified engineer licensed to practice in the State of Vermont. Additionally, the existing or approved tower cannot be reinforced, modified, or replaced to accommodate planned or equivalent equipment, at a reasonable cost, to provide coverage and capacity comparable to that of the proposed facility.
- B. The proposed antennas and equipment would cause interference materially impacting the usefulness of other existing or permitted equipment at the existing

or approved tower or facility as documented by a qualified engineer and such interference cannot be mitigated at a reasonable cost.

- C. The proposed antennas and equipment, alone or together with existing facilities, equipment or antennas, would create excessive radio frequency exposure.
- D. Existing or approved towers and structures cannot accommodate the planned equipment at a height necessary to function reasonably or are too far from the area of needed coverage to function reasonably as documented by a qualified engineer.
- E. Aesthetic reasons make it unreasonable to locate the planned telecommunications equipment upon an existing or approved tower or building.
- F. There is no existing or approved tower in the area in which coverage is sought.
- G. Other unforeseen specific reasons make it unreasonable to locate the planned telecommunications equipment upon an existing or approved tower or building.

Towers must be designed to reasonably provide for future placement of antennas upon the tower and to accept antennas mounted at varying heights when overall permitted height allows. Towers shall be designed structurally and in all other respects to reasonably provide for both the applicant's antennas and additional antennas when overall permitted height allows.

1.11 Access Roads and Above Ground Facilities

Where the construction of new wireless telecommunications towers and facilities requires construction of or improvement to access roads, to the extent practicable, roads shall take into consideration the contour of the land, and be constructed or improved within the forest fringe areas, along the edge of open fields, and not in open fields. Utility or service lines shall be designed and located so as to minimize or prevent disruption to the scenic character or beauty of the area. The Town may require closure of access roads to vehicles following facility construction where it is determined that site conditions warrant the same and where maintenance can reasonably access the facility site on foot.

1.12 Tower and Antenna Design Requirements

Proposed facilities shall not unreasonably interfere with the view from any public park, natural scenic vistas, historic building or district, or major view corridor. Height and mass of facilities shall not exceed that which is essential for the intended use and public safety.

- 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 Enforcing Agent

The Administrative Officer shall be the agent to enforce the provisions of this ordinance.

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 be effective on _____ 2008.

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.