

CHAPTER 1280
Personal Wireless Service Facilities

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CROSS REFERENCES

- Interrupting or repairing television, radio, telephone, telegraph
or other mass communication service - see Ohio R.C.
2909.04
Telegraph and telephone companies - see Ohio R.C. Ch. 4931
Powers and restrictions of public utility services - see
Ohio
R.C. 4931.11
Telecommunications - see Ohio R.C. Ch. 4937
Cable Advisory Panel - see ADM. Ch. 280
Threatening or harassing telecommunications - see GEN. OFF.
636.16
Personal wireless service facilities policy - see B.R. & T.
Ch. 876

1280.0 PURPOSE.

The purpose of this chapter is to:

- (a) Direct the location of personal wireless service facilities into appropriate areas of the Village.
- (b) Establish criteria designed to protect the health, safety and general welfare of the residents of the Village.
- (c) Protect residential areas and other land uses from potential adverse impact of said facilities.
- (d) Ensure that personal wireless facilities are compatible, to the greatest extent feasible, with surrounding land uses.
- (e) Promote and encourage co-location of existing and new personal wireless service facilities as a primary option rather than the proliferation of single-use facilities.
(Ord. 98-4. Passed 7-6-98.)

1280.02 DEFINITIONS.

As used in this chapter:

- (a) "Antenna" means any panel, whip, dish or other apparatus designed for communications through the sending and/or receiving of electromagnetic waves, excluding any support structure other than brackets.
- (b) "Co-location" means the use of a personal wireless service facility by more than one service provider.
- (c) "DBM" means a unit of measurement of the power level of an electromagnetic signal expressed in decibels referenced to one milliwatt.
- (d) "EMF" means electromagnetic frequency, which is the frequency at which a particular electromagnetic wave is moving.
- (e) "Equipment shelter" means any structures in which the electronic receiving and relay equipment for a personal wireless service facility is housed.
- (f) "FAA" means the Federal Aviation Administration and any legally appointed, designated or elected agent or successors.
- (g) "FCC" means the Federal Communications Commission and any legally appointed, designated or elected agent or successor.
- (h) "GOS" means Grade of Service, as it relates to personal wireless service facilities. GOS is a measurement of the percentage of calls which are able to connect to the service facility during the busiest hour of the day. GOS is expressed as a number, such as p.05 which means that ninety-five percent of callers will connect to the facility on their first attempt. A lower number (i.e. p.04) indicates a better GOS. GOS shall be determined by the use of standard Erlang B calculations.
- (i) "Lattice" means a framework or structure of crossed metal strips typically resting on three members constructed vertically, to which antennas are affixed.
- (j) "Monitoring protocol" means an approved testing protocol as defined in the most current FCC regulations.
- (k) "Monopole" means a single support structure constructed to a single, self-supporting vertical structure securely anchored to a foundation and to which antenna support structures are affixed.
- (l) "MW" means microwave, which is an electromagnetic wave of extremely high frequency, usually having one wavelength from 1 millimeter to 50 centimeters.
- (m) "NIER" means non-ionizing electromagnetic radiation.
- (n) "Personal wireless service facilities" means all components necessary to support communication (transmitting and/or receiving) equipment utilized by commercial mobile services, unlicensed wireless services and common carrier wireless exchange services. These facilities are not defined as public utilities. These facilities shall include, but are not limited to, antennas, mounts, equipment cabinets, switching offices, buildings, cell sites,

transceiver stations, monopoles, lattice towers and all other elements that are part of a cell site. This definition excludes amateur radio communications antennas; antennas and dishes limited exclusively to home use; and building support antennas limited exclusively to home use, which are less than thirty-five feet in height, measured from the grade where the building is constructed.

(o) "Personal wireless service support facility" means any structure associated with and complementary to the sending and receiving components of wireless service operations.

(p) "Radial plots" means a computer generated estimate of the radiation emanating from antennas or repeaters sited on a specific wireless service facility.

(q) "Receiver" means a device or apparatus that receives electronic or radio signals and renders them perceptible to the senses.

(r) "Repeater" means a device capable of receiving one- or two-way communication signals and delivering corresponding signals.

(t) "RF" means radiofrequency, which is the frequency of the transmitting wave of a given message or broadcast.

(u) "Transmitter" means a device for sending electromagnetic waves which generates and modulates the radiofrequency current and conveys it to a receiver.

(Ord. 98-4. Passed 7-6-98.)

1280.03 GENERAL PROVISIONS.

(a) No facility shall exceed 100 feet in height, except when co-location agreements have been executed. If a facility is designed to serve more than one receiver, transmitter or repeater, then the following height limitations apply:

- (1) 100-119 feet for two users
- (2) 120-150 feet for three users
- (3) 150-199 feet for four or more users.

(b) The location of any personal wireless service facility shall be such that adjacent residential areas and land uses are not adversely impacted by the activities occurring on the site. Such impacts shall include, but not be limited to, noise, light, visibility, emissions and signage.

(c) The applicant shall provide written certification from a professional engineer that the location and construction of the proposed facility shall comply with all applicable Federal, State and local regulations pertaining to construction, operation and natural resource protection standards established either in this Zoning Code or in other applicable regulations, including those for flood plains, wetlands, groundwater protection, and steep slopes. Copies of all submittals and showings pertaining to FCC licensing, environmental impact statements, FAA notices of construction or alteration,

aeronautical studies, and all data, assumptions and calculations relating to service coverage and power levels, regardless of whether categorical exemptions from routine environmental evaluation under FCC rules are claimed, shall be provided.

A copy of a pending application for any required permit or approval with regard to said regulations shall be included with an application. Formal notification regarding final approval of said pending application shall be provided for final zoning approval.

(d) All facilities shall be monitored to demonstrate continued compliance with FCC NIER standards. The monitoring protocols for monitoring for emissions from personal wireless service facilities shall be based on generally recognized current industry standards. The testing shall take place at the closest publicly accessible point of the site. After transmission begins, the owner/operator of any personal wireless service facility shall pay for an independent consultant, hired by the Village, to conduct testing and monitoring of EMF radiation, as follows:

(1) Within sixty days of activation of a new facility or an existing modified facility with operational or physical modifications or additional permitted channels or repeater. A report of the monitoring results shall be prepared by the independent consultant and submitted to the Zoning Administrator.

(2) If the measured levels reported pursuant to paragraph (d)(1) hereof exceed eighty percent of the NIER standard, continued monitoring shall occur once every twelve months by the independent consultant and be submitted to the Zoning Administrator.

(3) If the measured levels reported pursuant to paragraph (d)(1) hereof are less than eighty percent of the NIER standard, continued monitoring shall occur once every thirty-six months by the independent consultant and be submitted to the Zoning Administrator.

(e) The location of any personal wireless service facility must be such that it minimizes the adverse visual impacts of any and all facilities/structures as viewed from adjacent land.

(f) Towers shall either maintain a galvanized steel finish or, subject to any applicable FAA standards, be painted a neutral color, so as to reduce visual obtrusiveness

(g) Personal wireless service support facilities (i.e. vaults, equipment rooms, equipment enclosures) shall be constructed of non-reflective materials (visible exterior surfaces only) and shall be placed in underground vaults to every extent possible.

(h) Personal wireless service support facilities shall, when located above-ground, have a maximum height of fifteen feet.

(i) The location of any personal wireless service facility shall support and accommodate shared use/co-location of existing and new personal wireless service facilities. The applicant shall provide the Village with a written and notarized statement agreeing to make said wireless service facility available for use by others without discrimination at fair market rates subject to reasonable technical limitations.

(j) Minimum setback requirements from the base of the facility, which includes any permanently-anchored foundation, to any property line shall be equal to the height of the tallest element of the subject facility or the established setback for a principal structure in the subject zoning district, whichever is greater. More than one facility on a site shall be permitted, provided that all setback, design and landscape requirements for each facility are met.

(k) Personal wireless service facilities shall not be artificially lighted except to assure human safety or as required by the Federal Aviation Administration (FAA). Strobe lights are prohibited, except as may be required by Federal regulations.

(l) Personal wireless service facilities shall be enclosed by security fencing not less than six feet in height, and towers shall be equipped with an appropriate anti-climbing device, provided, however, that the Planning Commission may waive such requirements as it deems appropriate. No fence shall be required on the top of a building or other structure, provided that access to the roof or top of a structure is secure.

(m) All facilities shall be constructed in such a manner so as to maintain and enhance existing native vegetation. Additional suitable landscaping shall be installed to screen the facility. A landscape plan that identifies all existing vegetation and whether such vegetation is to be retained shall be submitted. All existing trees larger than four inches in diameter shall be identified, including whether such trees are to be retained or removed as part of the project development. Landscaping shall be required as follows:

(1) For facilities of fifty feet or less in height, at least one row of evergreen shrubs capable of forming a continuous hedge at least five feet in height shall be provided with individual plantings spaced not more than five feet apart, and at least one row of evergreen trees with a minimum caliper of one and three-fourths inches at the time of planting and spaced not more than twenty-five feet apart shall be provided within fifteen feet of the perimeter of the setback area required;

(2) For facilities of more than fifty feet in height, in addition to the requirements for landscaping above, one row of deciduous trees, with a minimum caliper of two and one-half inches at time of planting and spaced not more than forty feet apart shall be provided within twenty-five feet of the perimeter

of the setback area required by items above;

(3) All required landscaping shall be installed according to established planting procedures using good quality plant materials; and

(4) The owners/operators shall be responsible for providing, protecting and maintaining all landscaping in a healthy and growing condition, replacing unhealthy or dead plant materials within one year or by the next planting season, whichever comes first. Replacement material shall conform to the original intent of the landscape plan.

(n) Drainage, erosion, and sediment controls shall be required as necessary to abate soil erosion and sedimentation of nearby waterways. Structures and roads on slopes of ten percent or greater shall be avoided. Erosion control measures shall be incorporated for any proposed facility which involves grading or construction within 200 feet of a waterway or on lands with slopes over ten percent. Natural vegetation and topography shall be retained to the greatest extent feasible.

(o) No commercial advertising material shall be allowed as part of any personal wireless service facility.

(p) Permanent "No Trespassing" signs, the size of which shall not exceed two square feet in area, shall be posted around the site, along with the emergency telephone number of the owner/operator. When antennas are mounted on top of a roof or other structure, the words "DANGER: RF/MW RADIATION HAZARDS; NO UNAUTHORIZED PERSONNEL", or words with a similar meaning, shall also be included with the sign. When those additional words are included, the maximum size of the sign shall be four square feet in area. The owner/operator shall also provide the Yellow Springs Police Department and the Miami Township Fire Department with information on whom to contact in the event of an emergency.

(q) No personal wireless service facility shall be located between any street and the front of any existing principal building.

(r) Any personal wireless service facility and its appurtenances proposed for location on the roof of a building shall be set back one foot from the edge of the roof for each one foot in height of the wireless service facility. This setback requirement shall not apply to antennas that are less than two inches in thickness mounted to the sides of antenna support structures and do not protrude more than six inches from the side of such an antenna support structure.

(s) No new or existing personal wireless service facility shall interfere with public safety telecommunications. All applications for new service shall be accompanied by an intermodulation study which provides a technical evaluation of existing and proposed transmissions and indicates all potential interference problems. Before the introduction of a new service or changes in existing service, telecommunication providers shall notify the Village ten calendar days in advance of such changes and allow the Village to monitor interference levels during the testing process. (Ord. 98-4. Passed 7-6-98.)

1280.04 DEMONSTRATION OF NEED.

(a) The applicant shall provide written documentation of all facility sites that are within five miles of the proposed site. From each such facility site, the applicant shall demonstrate with written documentation that these facility sites are not already providing, or do not have the potential, by adjusting the site, to provide adequate coverage and/or adequate capacity to the Village. Coverage is considered to be adequate within that area surrounding a base station where the predicted or measured median field strength of transmittal signal is greater than or equal to -95 dbm for at least seventy-five percent of the intended coverage area, which is that area the provider intends to serve with the proposed facilities. Capacity is considered to be adequate if the Grade of Service (GOS) is p. 05 or better for median traffic levels offered during the typical busy hour, as assessed by direct measurement of the personal wireless service facility in questions.

The documentation shall include, for each facility site examined, the exact location of the facility in latitude and longitude, to degrees, minutes and seconds; the ground elevation; the height of the structure; the type of antennas proposed; the proposed output frequency; the proposed number of channels; the proposed power input and the proposed maximum power output per channel; and radial plots from each of these facility sites, as proposed.

(b) Upon submission of an application for a permit under this chapter, the Village shall engage an independent consultant to analyze and review the application. The applicant will assume all costs associated with the review, including any administrative costs incurred by the Village. The consultant shall be qualified in either radiofrequency or telecommunications engineering or monitoring of electromagnetic fields. Among other elements, the engineer shall review and approve the NIER compliance documentation and the applicant's information showing the necessity for and location of the facility, and shall review and approve those elements of the facility indicating its electrical integrity and safety so as to assure the protection of the health, safety and welfare of the public.

(c) The applicant shall demonstrate with written documentation that it has analyzed the feasibility of repeaters in conjunction with all facility sites listed in compliance with subsection (a) hereof to provide adequate coverage and/or adequate capacity for the Village. Radial plots of all repeaters considered for use in conjunction with these facility sites shall also be provided as part of the application.

(Ord. 98-4. Passed 7-6-98.)

1280.05 APPLICATIONS; REQUIRED INFORMATION.

Applications for personal wireless service facilities shall include:

(a) A site plan which includes the following:

- (1) Elevations, sections and details of any proposed appurtenant structure at a scale of no less than one inch equals 100 feet;
- (2) The number and specific locations of antenna(s) and repeaters located on a map as well as by degrees, minutes, and seconds of latitude and longitude;
- (3) The mounting locations on tower(s) and structure(s), including height above ground;
- (4) Antenna type(s), manufacturer(s), and model number(s);
- (5) For each antenna, the antenna gain and antenna radiation pattern;
- (6) The number of channels per antenna, projected and maximum;
- (7) Power input to the antenna(s);
- (8) Power output, in normal use and at maximum output, for each antenna and all antennas as an aggregate;
- (9) The output frequency of the transmitter(s);
- (10) The parking layout and access;
- (11) The landscaped areas and fences; and
- (12) Adjacent land uses within a 200-foot radius.

(b) Written documentation from the Village of Yellow Springs which denies the applicant use of designated, properly zoned, Village-owned land for said use. The statement shall include the specific reasons for the denial and permission from the Village to the applicant to proceed with the allowable conditional use review procedure.

(c) Certification from a structural or civil engineer, registered with the State of Ohio, indicating the height and design, structure, installation and total anticipated capacity of the structure, including the number and types of antennas that could be accommodated, and if applicable, a tower's maximum capacity for additional antennas which can be accommodated. This data shall satisfactorily demonstrate that the proposed structures conform to all structural requirements of the Uniform Statewide Building Code.

(d) A statement from an engineer, registered with the State of Ohio, that the NIER emitted therefrom does not result in ground-level exposure at any point outside such facility which exceeds the lowest applicable exposure standards established by any regulatory agency of the Federal Government or the American National Standards Institute.

(e) Measurements of ambient or "existing" radiofrequency (RF) radiation at the site, predictive measurements, or "existing plus proposed" RF radiation at the site, and cumulative measurements, or "existing plus proposed project plus cumulative" RF radiation at the site.

(f) The locations of all existing and proposed sites for similar facilities owned and/or leased by the applicant within a three-mile radius of the Village.

(g) Written approval from the site owner regarding the application submitted, if different from the applicant.

(h) Anticipated maintenance needs, including frequency of service; personnel needs; equipment needs; and traffic, noise or safety impacts.

(i) Documentation which demonstrates that the personal wireless service equipment planned for the proposed facility cannot be accommodated on an existing or approved facility within a one-half-mile radius for facilities that are between eighty-one and 199 feet in height, and one-quarter of a mile for facilities under eighty feet in height of the proposed tower, due to one or more of the following:

(1) The planned equipment would exceed the structural capacity of the existing or approved facility, as documented by a qualified and licensed professional engineer, and the existing or approved facility cannot be reinforced, modified, or replaced to accommodate planned or equivalent equipment at a reasonable cost.

(2) The planned equipment would cause interference materially impacting the usability of other existing or planned equipment at the existing facility or building, as documented by a qualified and licensed professional engineer, and the interference cannot be prevented at a reasonable cost.

(3) Existing or approved facilities and buildings within the search radius cannot accommodate the planned equipment at a height necessary to function reasonably, as documented by a qualified and licensed professional engineer.

(4) Other unforeseen reasons that make it infeasible to locate the planned personal wireless service equipment upon an existing or approved facility or building.

The applicant must verify that an offer to co-locate was made to the owner of an existing, technically-suitable facility and that such offer was not accepted.

(j) All certifications or pending approvals, as required in Section 1280.03.

(Ord. 98-4. Passed 7-6-98.)

1280.06 VACATED/ABANDONED FACILITIES.

All wireless service providers shall notify the Village of Yellow Springs of the use and operation of a facility being discontinued and the specific date the use will cease. Such notification shall be provided in writing to the Village within thirty days prior to the cessation date. If at any time the use of any facility has been discontinued for a period of 180 days, the facility shall be deemed to be abandoned. Determination of the date of abandonment shall be made by the Zoning Administrator who shall have the right to request documentation from the owner/operator regarding the issue of facility usage. Upon such abandonment, the owner/operator shall have an additional 180 days within which to: 1) reactivate the use of the facility or transfer the facility to another owner/operator who makes actual use of the facility; or 2) dismantle and remove the facility; and 3) restore the site to a condition reasonably similar to or better than the condition at the time the original permit was issued.

At the earlier of 181 days from the date of abandonment without reactivation, or upon completion of dismantling and removal, any special exception and/or variance approval for the facility shall automatically expire. The Village may enter into agreements with the appropriate agents for the removal of the facility. Upon the issuance of a zoning permit, the applicant agrees to fulfill its financial responsibility for all costs associated with the removal. No further notice from the Village regarding such action is required. The owner/operator waives all rights to notice and/or consent relating to such action.

(Ord. 98-4. Passed 7-6-98; Ord. 99-10. Passed 11-1-99.)

1280.07 INSURANCE.

Personal wireless service facilities shall provide a certificate of insurance to the Zoning Administrator on an annual basis. These facilities shall be insured by the owner(s) of the facilities against damage to persons or property. If the owner(s) are self-insured, proof of ability to self-insure shall be submitted in lieu of a certificate.

(Ord. 98-4. Passed 7-6-98.)

1280.08 DEMOLITION AND SITE REMEDIATION BOND.

Upon approval of a permit, the applicant shall provide a demolition and site remediation bond to cover the cost of removal of the facility and remediation of the landscape. The bond shall be in the form of a bank or certified check or an insurance bond, the premium of which has been paid in advance for five years and shall be renewed in the same manner. This bond shall be cashed by the Village and held in a non-interest bearing account.

(Ord. 98-4. Passed 7-6-98.)