



ZONING FOR WIRELESS SERVICE FACILITIES

24

**MUNICIPAL
IMPLEMENTATION
TOOL #24**

SEPTEMBER 2012

This brochure is one in a series of Municipal Implementation Tools available to local governments and planning partners to assist in implementing the region's long-range plan, *Connections: The Regional Plan for a Sustainable Future*. Prepared and adopted by the Delaware Valley Regional Planning Commission (DVRPC), the long-range plan provides a sustainable land use and transportation vision for the region's growth and development through the year 2035. *Connections* establishes four key strategies that are essential to realizing a sustainable future:

- Managing growth and protecting natural resources;
- Developing livable communities;
- Building an energy-efficient economy; and
- Establishing a modern multi-modal transportation system.

Municipal governments have the primary authority and responsibility to implement these policies. The Municipal Implementation Tool (MIT) series is designed to introduce local officials and citizens to planning techniques that may be useful in their communities. Each Municipal Implementation Tool (MIT) covers a different topic and provides an overview of the use of the tool, the benefits, and best practices from within the Greater Philadelphia region.

For additional information about DVRPC and the *Connections* planning process, please visit www.dvrpc.org/Connections.

To learn about and download additional Municipal Implementation Tool brochures, visit www.dvrpc.org/municipaloutreach.

Why Should Municipalities Zone for Wireless Service Facilities?

Despite the clear and relentless progress of mobile technology, the proliferation of wireless service facilities is an issue that has caught both municipalities and their citizens unprepared. Popularly known as cell towers, these facilities sustain the regional and nationwide grids that mobile phone and wireless internet users depend on. As multiple providers compete to expand their services and construct new towers, local governments can find themselves caught in contentious disputes between legally-savvy corporations and discontented citizens. Unlike other controversial land uses, however, the placement of wireless services facilities is governed by a body of federal laws, Federal Communications Commission (FCC) rulings, and judicial cases that can confound uninformed attempts to regulate it through traditional zoning. Fortunately, these rulings have also served to clarify the 1996 Telecommunications Act to the point that municipalities can develop a precise understanding of their rights and limitations for siting wireless towers. This brochure seeks to provide a thorough overview of issues surrounding the zoning of wireless service facilities, including legislative and regulatory background, a list of best practices for municipalities, and a review of cases relevant to communities in the Greater Philadelphia region.



A typical wireless service facility, or “cell tower.”

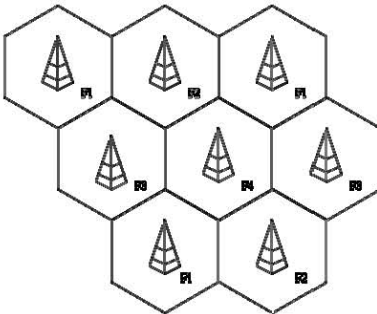
What are Wireless Service Facilities?

A wireless service facility is, in the broadest sense, an installation of antenna-bearing equipment that permits local mobile communications devices to connect to a larger wireless network. These facilities are typically arranged in a honeycomb pattern across the service area, with the concentration of facilities varying according to local topography and demand. In particularly hilly terrain, for instance, more facilities will be required for a provider to maintain a uniform level of service. The nature of a specific facility can also vary according to local conditions. Large, *free-standing towers* are most often found in rural and suburban areas, where land availability and area service needs favor their construction. In more populated areas, it is often more efficient for companies to *co-locate* facilities by mounting antennas on existing tall structures or by leasing space on an existing tower from another provider. Wireless service companies can also increase the capacity of a facility by adding multiple channels to an antenna and by subsequently splitting these channels (Levitt). Yet another variety of facilities—*distributed antenna systems (DAS)*—consists of an array of smaller, low-power antennas scattered throughout an area and linked by a fiber-optic network or similar medium of communication (Ramachandran 7).

The need for more wireless service facilities has been fueled not only by competition between service providers seeking to build superior coverage networks, but also by the increase in customers using cell phones as their primary telecommunications connection (as compared to traditional landlines). At the same time that more people are adopting mobile phones and wireless internet service, high-functioning devices have entered the mainstream. Currently, “approximately 12,000 new cell phone towers and antennas are added each year to fill gaps and add capacity (as cell “phones” become more like mini laptop computers, with video, data, pictures, email and Internet surfing), plus roughly 100,000 new antennas and towers for [Wi-Fi] service” (Pestle, *WiMAX/Wi-Fi*). The FCC has also characterized the

expansion of wireless networks as an issue of public safety on at least one occasion, noting that mobile phone coverage can allow people in remote locations to call 911 and access emergency services.

Wireless towers are constructed across an area in a honeycomb pattern in order to provide local service and relay signals within a **network**.



The Telecommunications Act of 1996

The primary law governing the siting of wireless service facilities is the Telecommunications Act of 1996. The objectives of this legislation are revealed by its full title: “An Act to promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.” Although the 1996 Act constrained the power of local governments in many ways, it also precluded further-reaching action by the FCC, which at the time was holding hearings to consider eliminating all state and local zoning powers (including controls on design and placement) in respect to cell towers. Ultimately, Congress exercised its power under the Interstate Commerce Clause to merely limit the regulatory power of state and local governments over wireless service facilities, entrusting oversight to the FCC.

Section 704 of the Act—“Facilities Siting; Radio Frequency Emission Standards”—is of the most interest to municipal governments and zoning boards. The key regulations in the Section are summarized as follows:¹

- Zoning regulations cannot discriminate among equivalent service providers and cannot prohibit, or have the effect of prohibiting, wireless service provision.
- States and local governments must act on applications to construct wireless service facilities within a reasonable period of time.
- Denials of wireless service facility applications must be in writing and be accompanied by a written record of evidence supporting the decision.
- Regulation of facilities cannot be based on concern over the effects of radio frequency emissions.
- Applicants who wish to contest a regulatory decision must do so within 30 days, and be heard on an expedited basis, and may also petition the FCC for relief.
- These limitations apply to states, local governments, and all instrumentalities thereof.

¹ The full text of Section 704 of the Telecommunications Act of 1996 may be found in Appendix A of this guide.

Section 703 of the Act—“Pole Attachments”—amended §224 of Title 47 of the United States Code, which “the Supreme Court has clarified...[applies] to wireless providers who are seeking access to poles and rights-of-way” (Ramachandran 35). Section 224 stipulates the *state-level* process by which wireless service companies can access public utility infrastructure.

- The company proposing to construct wireless service facilities must obtain certification as a Competitive Local Exchange Carrier (CLEC)² from the Public Utility Commission (PUC) of the state in question.
- The state PUC must also issue the company a Certificate of Public Convenience and Necessity (CPCN) (known as a Competitive Access Provider certification in Pennsylvania) (Ramachandran 36).
- CLEC and CPCN certifications do not exempt a company from having to apply for routine construction permits with the local municipality.
- In keeping with the Section 704 prohibition against discriminating among equivalent service providers, “The United States Supreme Court asserts that municipalities do not have the [right] to grant exclusive franchises” for utility pole attachments (Ramachandran 52).

Municipalities should be aware that there is currently a legal grey area surrounding the applicability of local zoning laws to wireless service providers that receive public utility classification. “According to the basic definitions of zoning authorities in the [1996] Telecommunications Act, utilities and incumbent local exchange carriers (ILECs) in the rights-of-way are not subject to zoning requirements,” although an identical telecommunications company without utility designation is subject to zoning requirements under the Act. This ambiguity has led to an uneven application of zoning regulations at the local level as well as a number of lawsuits (see Northampton Township, PA in *State & Local Regulations* on page 15). Distributed antenna systems (DAS) are especially well-suited to public utility designation since they can connect to underground fiber optic cable networks and utilize existing utility poles for mounting.

² In U.S. telecommunications regulations, there are two types of *local exchange carriers* (LECs). An *incumbent local exchange carrier* (ILEC) is any telephone company that was made responsible for providing service to a defined geographic area upon the 1984 settlement of the *United States vs. AT&T* antitrust case. A *competitive local exchange carrier* (CLEC) is any other telephone company that competes with established ILECs.

Controversies

Opposition to the siting of wireless service towers in communities has been significant, with the New York Times estimating that “more than 500 cell tower disputes around the country ha[d] ended up in court” in only the first ten years after the passage of the 1996 Telecommunications Act (Haffner). Historically, conflicts have galvanized around several main contentions:

- **Aesthetics and noise:** Some homeowners dislike the placement of cell towers in residential areas due to their height, utilitarian appearance, and the noise produced by their required backup generators.
- **Impact on property values:** Free-standing cell towers have been alleged to exert a negative effect on neighboring property values.
- **Effects of radio frequency emissions:** Some communities are uncomfortable admitting a wireless service facility due to insufficient research into the health and environmental impact of radio frequency emissions, which increase in proportion to the number of channels on a cell tower. (The FCC does require facilities to operate at or below a designated “safe” level of emissions, although controversy persists that it is set too high.)
- **Abridgment of local zoning powers:** Some state/local governments and zoning boards view federal laws protecting towers as interference with their authority to regulate land uses.
- **Conflict with private property rights.** Where wireless service is legally designated a public utility, equipment can be installed on public rights-of-way that cross private property without the consent of the owner.



A notice posted at a wireless service facility, warning of electromagnetic radiation.

After vocal opposition from some voters, bills to repeal Section 704 of the 1996 Telecommunications Act were entered in the U.S. Senate and House of Representatives, but neither one advanced past legislative committees. Judicial arguments regarding the constitutionality of the provision have likewise failed to sway the courts, although they have produced several rulings narrowing and specifying the extent of the law.

The “Shot-clock Ruling”

“The real winners here will be American consumers and businesses, who will soon be able to experience mobile broadband speeds and capacities that rival what many fixed broadband customers receive at home today. These new wireless networks will change how we communicate and how we engage in commerce. And they hold the promise of improving our quality of life.”—Statement by FCC Chairman Julius Genachowski, 2009 Declaratory Ruling

The next major piece of legislation to affect the expansion of wireless service facilities was the American Recovery and Reinvestment Act of 2009, which “direct[ed] the [FCC] to create a national broadband plan by February 17, 2010, that seeks to ensure that every American has access to broadband capability and establishes clear benchmarks for meeting that goal” (FCC 2009 Declaratory Ruling). When the FCC released a Notice of Inquiry to investigate how it could meet this objective, it concluded that the development of a national broadband network was being stymied by ambiguities in the 1996 Telecommunications Act.

Out of “more than 3,300 pending personal wireless service facility siting applications before local jurisdictions...approximately 760 [were] pending final action for more than one year. More than 180 such applications [were] awaiting final action for more than 3 years” (FCC 2009 Declaratory Ruling). Finding that local governments and zoning boards were using the imprecise requirement to address wireless facility permits within a “reasonable period of time” to delay construction, it issued a declaratory ruling on the subject on November 18, 2009.



FCC regulations now require municipalities to process applications for wireless service facilities within 90-150 days, depending on the type of facility.

Informally dubbed the “shot-clock ruling,” it used a nationwide review of municipalities’ permit processing times as a basis for defining a “reasonable period of time” for taking action on an application: 90 days for co-locations of antennas on existing facilities, and 150 days for new wireless towers. It also specified “that the shot clocks cannot apply to (or must be [stopped] during) administrative appeals of cell tower zoning decisions” (Varnum, *Recent Developments*).

Therefore, unless a municipality and the applicant enter into a mutual agreement to extend processing periods for special circumstances, the applicant is entitled to seek relief in court upon their expiration (FCC 2009 Declaratory Ruling). Although the wireless communications industry had asked that all applications delayed beyond these periods be granted automatic and unconditional approval, the U.S. Fifth Circuit Court of Appeals ruled in January 2012 that this power would be reserved for the judicial system (Varnum, *Recent Developments*). Finally, the November 2009 declaratory ruling was notable for affirming municipalities’ right to designate wireless towers a special use that requires a variance, thereby rejecting the telecommunications industry’s petitions to invalidate this requirement for additional review.



The FCC and various courts have clarified additional details surrounding the regulation of wireless service facilities:

- “Under the current policy of the FCC, local zoning rules which are predicated on land use preservation, including preservation of agriculturally-zoned land and scenic vistas, would not be preempted by the Commission” with respect to construction of “new broadcast towers in certain rural areas and height restrictions in other” areas (Pestle 15).

- The prohibition on unreasonable discrimination among providers does not preclude a municipality from taking different amounts of time to approve different applications, or from applying differing levels of scrutiny to providers' due diligence, as appropriate.
- In addition to cellular service providers, private landowners who are petitioning to construct a tower on their property and lease it to providers are also eligible to sue under Section 704, if they feel their application has been improperly denied.
- Damages and attorneys' fees are not eligible remedies that service providers can seek from local governments under Section 704 cases.
- Section 704 only requires that Federal property be made available for wireless service facilities, so carriers cannot construct towers on local or state property as of right.
- Although some municipalities have incorrectly interpreted the provision barring permit denials based on radio frequency emissions to also preclude hearing testimony on that subject, local governments cannot infringe on citizens' First Amendment rights to speak about it at public hearings. Officials are simply barred from considering that testimony when making their decision.

Finally, it is important to note that none of the legislation or rulings regarding wireless service facilities overrules private property rights. The public benefit afforded by improved cellular service has never successfully been used as a justification for condemning a tract of land, and a company's ability to construct a tower is as dependent on arranging a lease or sale with the property owner as it is on local zoning approval. In 2007, for example, Abington Township, Pennsylvania approved a zoning application to build a T-Mobile tower in an unused SEPTA railroad right-of-way, but construction was canceled after the transit authority denied their approval for the project (Abington Citizens Network).

Municipal Zoning Regulations: Best Practices

Given the federal regulations and developing body of judicial rulings surrounding the issue, municipalities and zoning boards must walk a fine line when regulating wireless service facilities. The following set of best practices illustrates how communities can fully exercise their zoning powers to integrate these structures into their built environments, while cautioning against common errors that can lead them astray of the law.

Recommendations

- **Mandate design controls.** While municipalities cannot choose whether wireless service facilities are permitted in their communities, they can regulate the details of their design and placement. Many zoning codes require towers to have evergreen foliage screens, limited non-essential lighting, fencing, and design elements that mimic trees or telephone poles. They may also prescribe setback requirements, minimum lot sizes, and mandatory spacing between towers.³
- **Utilize incentives and special exceptions.** Although lower courts have ruled differently on the subject, appeals courts have generally upheld the right of a municipality to restrict wireless service facilities to certain zoning districts (as long as those restrictions are not effectively exclusionary). Additionally, zoning codes can incentivize their construction in appropriate areas by offering reduced approval times for applications in industrial or commercial districts. Likewise, they can disincentivize construction in residential districts by making approval subject to



Cell towers can be designed to mimic trees and blend in with their surroundings.

³ For an example of such regulations, see the Wireless Facilities section of the Philadelphia Zoning Code in Appendix B of this report.

a special exception process, in which the company is required to submit detailed studies showing why other options (co-location, alternate sites) are not feasible.

- **Historic and environmental context matter.** Both the courts and the FCC have consistently upheld denials of zoning applications based on maintaining the integrity of historic buildings/districts. In one recent example, the FCC prohibited the construction of a cell tower that would have overlooked the Gettysburg battlefield. In cases where tower construction would cause harmful soil erosion, jeopardize an endangered species (e.g. a bird population), or bring about some other significant environmental detriment, the courts have likewise upheld denials of zoning applications.
- **Narrowly define wireless service facilities in ordinance.** When writing zoning regulations, wireless service facilities should be narrowly defined so as not to overlap with utility uses. In this way, "municipalities can address cellular company claims that they are "utilities" or "essential services" entitled to preferential treatment (for example, placement of towers [by] right in all zoning districts) under zoning ordinances" (Pestle 5).
- **Process zoning applications expeditiously.** Following the FCC's declaratory ruling on the matter, wireless service providers can seek relief in court if their applications for co-location of an antenna or construction of a new tower are delayed more than 90 or 150 days, respectively. (See *Legal and Declaratory Rulings* above for more information.)
- **Consider alternative sites.** Municipalities should work with property owners and wireless service providers to identify locations where antennas can be mounted less invasively on existing infrastructure (tall buildings, church steeples, silos, water towers). Depending on local network demand and topography, these alternate locations may be able to offer the same service level as a free-standing tower.
- **Consider locations on municipally-owned land.** Siting a wireless service facility on municipal land can potentially lead to a simpler permitting process and can generate lucrative leasing payments for local governments. Municipalities can also construct their own tower with public funds and then lease both the facility and land to wireless providers—an option which requires greater up-front investment, but also generates significantly higher revenues.

- **Consider Independent analysis.** Wireless service companies sometimes propose default tower designs that can be excessively large for some areas. If the height of a specific tower is especially controversial, municipalities can commission an independent engineer to determine if the height requested in the application is needed. Such analysis can lead to design changes, and can support the local zoning board's decision if it is subsequently questioned in court.



Where height and geography meet coverage requirements, existing structures can provide viable alternatives to the construction of new cell towers.

Cautions

- **Don't prohibit wireless service facilities outright.** Faced with the arrival of an unfamiliar and controversial land use in their communities, some municipalities initially responded by outlawing the construction of cell towers. However, as it is contrary to federal law, local governments who take this action are likely to be taken to court, have their ordinance deemed illegal, and possibly have the contested zoning application approved without opportunity for revision.
- **Use moratoria judiciously.** Responding to early lawsuits on the subject, the FCC has ruled that municipalities can only declare a moratorium on wireless service facility construction on a temporary basis while zoning regulations are being developed. While it does not mandate a formal limit, the FCC suggests that "in many cases,

the issues that need to be addressed during a moratorium can be resolved within 180 days,” and notes that longer moratoria may leave municipalities open to lawsuits.

- **Consider each wireless service provider separately.** While municipalities may be inclined to view local wireless service coverage from the perspective of existing major providers, the 1996 Telecommunications Act safeguards free market competition by prohibiting application denials based on that criterion. As the FCC states in its 2009 Declaratory Ruling, “it is a violation of Section 332(c)(7)(B)(i)(II) of the Communications Act for a State or local government to deny a personal wireless service facility siting application because service is available from another provider” (FCC 2009 Declaratory Ruling).
- **Don't concentrate towers unnecessarily.** In addition to potentially limiting local coverage and risking lawsuits, requiring several towers to be constructed in a small area can cause it to exceed FCC regulations for maximum allowable radiation.

FCC-designated Processing Times for Wireless Service Facilities

<u>Item</u>	<u>Time Limit</u>
Application for co-location of an antenna	Process within 90 days
Application for construction of a new cell tower	Process within 150 days
Moratorium on wireless service facilities (only while new zoning regulations are being written)	In effect for no longer than 180 days (recommended)

State & Local Regulations

Since legislation controlling wireless service facilities exists at the federal level, it cannot be superseded by contradictory laws from lower levels of government. However, there are some regulations and judicial rulings specific to the Greater Philadelphia area which may be of interest to local municipalities:

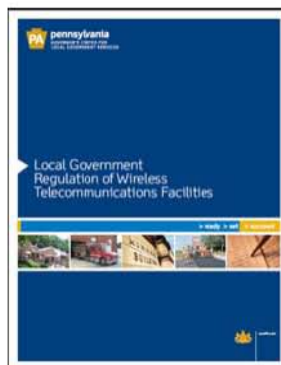
- In the New Jersey Pinelands—a U.S. Biosphere Reserve that includes portions of seven counties and 56 municipalities—wireless service facilities are regulated according to special criteria established by the New Jersey Pinelands Commission. In 1995, the Commission amended the Comprehensive Management Plan to permit cell towers to exceed the reserve's 35-foot height limit, with the requirement that they be sited according to a comprehensive telecommunications plan. This document, which was created with wireless industry input, identifies areas where towers can be constructed with the least ecological impact while still meeting local service needs. In order for an existing service provider to expand its siting array or for a new provider to construct one in the Pinelands, the company must submit a detailed plan for the Commission's consideration (NJPC).
- Collingswood, NJ's zoning ordinance facilitates the construction of wireless service facilities on existing structures by stipulating that they do not count as part of a building's height.
- In 2007, Pennsylvania's Commonwealth Court rejected an argument by Verizon that a cell tower should be considered a "municipal structure," a designation which could have permitted a condemnation of private property for "public benefit" (*Celco Partnership v. North Annville Tp. Zoning Hearing Bd.*).
- The Commonwealth Court of Pennsylvania has ruled that cell towers constitute taxable real estate (*Shenandoah v. Dauphin*).
- In 2008, the Pennsylvania Public Utility Commission provided American Tower Corporation (ATC) with authorization to construct a fiber optic-based DAS wireless network in public rights-of-way. After the company applied to construct twelve 25-foot towers in Northampton Township, Bucks County, where public rights-of-way extend up to ten feet into property lines, public outcry led the township to deny ATC its permits in



2012 (MSNBC). Work commenced after the denial was reversed by the Bucks County Court of Common Pleas, but the township subsequently revoked the permits again, leaving the dispute awaiting mediation as of May 2012.

Further Information

A number of public and private entities offer online resources that can be valuable sources of information for municipalities grappling with the incorporation of wireless service facilities into their communities. Users should be conscious of when materials were published, as even comprehensive documents may lack updates reflecting the latest legal and declaratory rulings on the subject.



- The Pennsylvania Governor's Center for Local Government Services periodically provides publications on wireless zoning issues, including the 2nd Edition of *Local Government Regulation of Wireless Telecommunications Facilities* (2002) (http://www.newpa.com/webfm_send/1544), which contains a Model Zoning Ordinance for municipalities.
- The Third Edition of the Pennsylvania Legislator's Municipal Deskbook (2006) also contains a section on *Regulation of Wireless Telecommunications Facilities* (http://www.lgc.state.pa.us/deskbook06/Issues_Land_Use_03_Regulation_Wireless_Telecom_Facilities.pdf).
- *Cellular Tower Zoning, Siting, Leasing and Franchising: Federal Developments and Municipal Interests*, produced by Varnum Riddering Schmidt Howlett, Attorneys at Law, is a free 2009 publication that offers a thorough review of wireless facility zoning issues for local governments. (http://www.varnumlaw.com/files/documents/publications/Cellular_Tower_Zoning_Siting_Leasing_and_Franchising.pdf)
- Many state governments and private law firms publish model zoning ordinances for the benefit of their municipalities, combining best practices and a sound legal framework to give local governments a simple means of addressing this complex zoning issue.

Appendix A: Section 704 of the 1996 Telecommunications Act
SEC. 704. FACILITIES SITING; RADIO FREQUENCY EMISSION STANDARDS.

(a) NATIONAL WIRELESS TELECOMMUNICATIONS SITING POLICY- Section 332(c) (47 U.S.C. 332(c)) is amended by adding at the end the following new paragraph:

(7) PRESERVATION OF LOCAL ZONING AUTHORITY-

(A) GENERAL AUTHORITY- Except as provided in this paragraph, nothing in this Act shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless service facilities.

(B) LIMITATIONS-

(i) The regulation of the placement, construction, and modification of personal wireless service facilities by any State or local government or instrumentality thereof—

- (I) shall not unreasonably discriminate among providers of functionally equivalent services; and
- (II) shall not prohibit or have the effect of prohibiting the provision of personal wireless services.

(ii) A State or local government or instrumentality thereof shall act on any request for authorization to place, construct, or modify personal wireless service facilities within a reasonable period of time after the request is duly filed with such government or instrumentality, taking into account the nature and scope of such request.

(iii) Any decision by a State or local government or instrumentality thereof to deny a request to place, construct, or modify personal wireless service facilities shall be in writing and supported by substantial evidence contained in a written record.

(iv) No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions.

(v) Any person adversely affected by any final action or failure to act by a State or local government or any instrumentality thereof that is inconsistent with this subparagraph may, within 30 days after such action or failure to act, commence an action in any court of

competent jurisdiction. The court shall hear and decide such action on an expedited basis. Any person adversely affected by an act or failure to act by a State or local government or any instrumentality thereof that is inconsistent with clause (iv) may petition the Commission for relief.

(C) **DEFINITIONS-** For purposes of this paragraph—

- (i) the term ‘personal wireless services’ means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services;
- (ii) the term ‘personal wireless service facilities’ means facilities for the provision of personal wireless services; and
- (iii) the term ‘unlicensed wireless service’ means the offering of telecommunications services using duly authorized devices which do not require individual licenses, but does not mean the provision of direct-to-home satellite services (as defined in section 303(v)).

(b) **RADIO FREQUENCY EMISSIONS-** Within 180 days after the enactment of this Act, the Commission shall complete action in ET Docket 93-62 to prescribe and make effective rules regarding the environmental effects of radio frequency emissions.

(c) **AVAILABILITY OF PROPERTY-** Within 180 days of the enactment of this Act, the President or his designee shall prescribe procedures by which Federal departments and agencies may make available on a fair, reasonable, and nondiscriminatory basis, property, rights-of-way, and easements under their control for the placement of new telecommunications services that are dependent, in whole or in part, upon the utilization of Federal spectrum rights for the transmission or reception of such services. These procedures may establish a presumption that requests for the use of property, rights-of-way, and easements by duly authorized providers should be granted absent unavoidable direct conflict with the department or agency's mission, or the current or planned use of the property, rights-of-way, and easements in question. Reasonable fees may be charged to providers of such telecommunications services for use of property, rights-of-way, and easements. The Commission shall provide technical support to States to encourage them to make property, rights-of-way, and easements under their jurisdiction available for such purposes.

Appendix B: The Philadelphia Code §14-603(16-17): Wireless Service Facilities⁴

(From Philadelphia's new Zoning Code, effective August 22, 2012).

§(16) Wireless Service Facilities (Freestanding Towers)

Freestanding towers shall meet the following requirements:

(a) Distance from Residential Dwelling Units

(.1) Towers in all Residential and CMX-1 districts shall not be located within 500 ft. of a lot line of any residential dwelling unit, provided that where a fall zone of greater than 500 feet is required, the greater fall zone distance shall apply.

(.2) Towers in all Commercial districts other than CMX-1 and in all Industrial districts shall not be located within 250 feet of a lot line of any residential dwelling unit, provided that where a fall zone of greater than 250 ft. is required, the greater fall zone distance shall apply.

(b) Minimum Lot Size

New towers may be erected only on lots with a minimum area of 2,000 sq. ft.

(c) Setback and Height Requirements

Buildings and structures associated with a newly erected tower (excluding antennas and antenna towers or support structures) must comply with the setback and height requirements of the zoning district in which they are located.

(d) Screening

(.1) A continuous evergreen screen must be provided around all newly erected towers. The screen may consist of a hedge or a row of evergreen trees. The evergreen screen must be a minimum of six ft. in width with a minimum height of six ft. at time of planting, with a minimum 15-foot height at maturity.

(.2) All structures, buildings and equipment accessory to antennas placed on an existing structure that is not located within the existing structure must be screened with materials compatible with the existing structures, buildings, or equipment at the time of planting.

⁴ Freestanding and building-mounted antennas are allowed in all residential districts (with special exception approval) except RSD-1, RSD-2, and RSD-3.

Freestanding towers are allowed as of right in CMX-3, CMX-4, CMX-5, and CA-2; with special exception approval in all others (CMX-1, CMX-2, CMX-2.5, and CA-1). Building or tower-mounted antennas are allowed as of right in all commercial districts.

Wireless service facilities are allowed by right in all industrial districts and special purpose districts, except SP-PO-P and SP-PO-A (active and passive recreation districts), where they are prohibited outright.

(.3) The vegetative species to be used for required screening must be selected from a list of trees recommended by the Commission. If the Commission determines that existing structures, buildings, vegetation, topography, or other natural features achieve the same level of screening as required above and informs L&I in writing of this finding, the requirements of this paragraph may be modified or waived.

(e) Height Limit

Ground- and building-mounted towers may not exceed the greater of 60 ft. in height above the average ground level at the base of the tower or building or the maximum building height allowed in the subject zoning district.

(f) Fall Zone

Within the lot where the facility is located, there shall be a fall zone around the entire tower whose radius is equal to the height of the tower at its highest point.

(g) Fencing

Unless located on an existing building, towers must be completely enclosed by a six-foot tall chain link or similar fence. The entire fence must be located behind the required landscape screen and the required setback.

(h) Guy Wires

All guy wires and guyed towers must be clearly marked so as to be visible at all times. All guy wires shall be a minimum of 10 ft. from a property line of the facility.

(i) Lighting

All lighting, other than required by the FAA, must be shielded and reflected away from abutting properties.

(j) Special Exception Decision-Making Criteria

In all locations in which freestanding towers require special exception approval, the applicant must:

- (.1) submit a definition of the area of service needed for coverage or capacity;
- (.2) submit information showing that the proposed facility would provide the needed coverage or capacity;
- (.3) submit a map showing all alternate sites from which the needed coverage could also be provided, indicating the zoning for all such sites;
- (.4) show why alternate sites that would not require special exception approval have not been proposed;
- (.5) demonstrate that existing facilities cannot accommodate the proposed antennas within the service area and that an existing public, community, or institutional facility cannot accommodate the proposed antennas within the service area;
- (.6) demonstrate that they cannot co-locate the antenna within the service area;

- (.7) demonstrate, by presenting technological evidence, that the tower must be located at the proposed site in order to satisfy the needs of the applicant's wireless grid system;
- (.8) allow other wireless service providers using similar technology to co-locate on the tower;
- (.9) demonstrate how the site will be designed to accommodate future multiple users; and
- (.10) demonstrate that the proposed tower will preserve the preexisting character of the surrounding buildings and land use as much as possible. All components of the proposed tower must be integrated through location and design to be compatible with the existing characteristics of the site to the extent practical. Existing on-site vegetation must be preserved or improved, and the disturbance of the existing topography must be minimized, unless such disturbance would result in less visual impact on the surrounding area; and
- (.11) demonstrate that the applicant has advertised in a newspaper of general circulation, at least 21 days prior to the public hearing, notice of the application, which shall, in addition to the information included on the posting notice, give notice of the pending hearing and of individuals rights to appear at the hearing to apprise the Zoning Board of their concerns regarding the proposed facility. This provision shall be satisfied by presenting to the Zoning Board, at the time of the public hearing, a copy of the newspaper containing the advertisement.

§ (17) Wireless Service Facilities (Building or Tower-Mounted Antenna)

Building- or tower-mounted antennas and supporting electrical and mechanical equipment are subject to the following requirements:

- (a) They are prohibited on a lot containing a single-family or two-family use.
- (b) They must be painted or screened in a way to match the colors or simulate the materials of the building or tower on which they are mounted.
- (c) They may not be artificially illuminated, unless required by the FAA. If lighting is required, the lighting alternatives and design chosen must cause the least disturbance to the surrounding uses.
- (d) They must comply with the height restrictions otherwise applicable to the building or tower on which they are mounted.
- (e) They may not have signs attached to them unless required by the FAA, FCC, or other applicable authority.
- (f) Building-mounted antennas must be flush-mounted to the structure and may not extend above the wall to which they are attached.
- (g) Modification of any tower to accommodate an additional antenna may not cause the height of the tower to be increased more than 10 ft. beyond the tower height originally approved.

Works Cited

"Cell Phone Towers in Abington." *The Abington Citizen's Network*. The Abington Citizen's Network, 18 Sept. 2008. Web. 7 Mar. 2012.
<<http://abingtoncitizens.com/aalISSUES/CellPhoneTower/CellTower.htm>>.

Cellco Partnership v. North Annville Tp. Zoning Hearing Bd. Pennsylvania Commonwealth Court. 17 Dec. 2007. *FindLaw*. Thomson Reuters. Web.
<<http://caselaw.findlaw.com/pa-commonwealth-court/1072764.html>>.

"Editorial: Northampton Fights Attack of the Cellphone Towers." MSNBC: Delaware Valley, PA/NJ. Msnbc.com, 17 May 2012. Web. 21 May 2012.
<http://www.msnbc.msn.com/id/47464319/ns/local_news-delaware_valley_pa_nj/t/editorial-northampton-fights-attack-cellphone-towers/>.

Hafner, Katie. "First Come Cellphone Towers, Then the Babel." *The New York Times*. The New York Times Company, 1 May 2005. Web. 7 Mar. 2012.
<http://www.nytimes.com/2005/05/01/business/01towers.html?_r=1>.

Levitt, B. Blake. "Cell-Phone Towers and Communities: The Struggle for Local Control." *Orion Afield* Autumn (1998). *EnviroArts: Orion Online*. The Orion Society, 2000. Web. 2 Mar. 2012.
<http://arts.envirolink.org/arts_and_activism/BlakeLevitt.html>.

Pestle, John W. "Cellular Tower Zoning, Siting, Leasing and Franchising: Federal Developments and Municipal Interests." *Varnum LLP, Attorneys at Law*. Varnum LLP, 10 Dec. 2009. Web. 5 Mar. 2012.
<http://www.varnumlaw.com/files/documents/publications/Cellular_Tower_Zoning_Siting_Leasing_and_Franchising.pdf>.

Pestle, John W. "WiMAX/Wi-Fi and Cell Towers." *Varnum LLP, Attorneys at Law*. Varnum LLP, 2012. Web. 5 Mar. 2012.
<<http://www.varnumlaw.com/services/cable-telecommunications/wimax-wi-fi-and-cell-towers/>>.

Ramachandran, Srividya K. Establishing a Regulatory Framework for Distributed Antenna Systems. Diss. University of Colorado, 2008. Social Science Research Network. Social Science Electronic Publishing, Inc., 17 July 2008. Web. 21 May 2012.
<http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1161209>.

"Regional & Statewide Planning: Wireless Communication Facilities." *New Jersey Pinelands Commission*. State of New Jersey, 2007. Web. 5 Mar. 2012. <<http://www.state.nj.us/pinelands/landuse/reg/cellular/>>.

Shenandoah Mobile Company v. Dauphin County Board of Assessment Appeals. Commonwealth Court of Pennsylvania. 1 Feb. 2005. FindLaw. Web. 18 May 2012. <<http://caselaw.findlaw.com/pa-commonwealth-court/1118353.html>>.

United States of America. Federal Communications Commission. *Declaratory Ruling In the Matter of Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances That Classify All Wireless Siting Proposals as Requiring a Variance*. Varnum LLP, 18 Nov. 2009. Web. 7 Mar. 2012. <<http://www.varnumlaw.com/services/cable-telecommunications/wimax-wi-fi-and-cell-towers/>>.

United States of America. Federal Communications Commission. *Guidelines for Facility Siting Implementation*. Federal Communications Commission. Web. 5 Mar. 2012. <<http://transition.fcc.gov/statelocal/agreement.html>>.

United States of America. Federal Communications Commission. *Telecommunications Act of 1996*. Federal Communications Commission. Web. <<http://transition.fcc.gov/Reports/tcom1996.pdf>>.

Varnum LLP, Attorneys at Law. "Recent Developments." Varnum LLP, Jan. 2012. Web. 5 Mar. 2012. <<http://www.varnumlaw.com/cable-telecomm-recent-developments/>>.

Photo Credits

Cover: Photo by *forklift*, Flickr Creative Commons

Page 3: Photo by *Ape*, Flickr Creative Commons

Page 4: Photo by *Andrew pmk*, Wikipedia (Creative Commons license)

Page 7: Photo by *herzogbr*, Flickr Creative Commons

Page 8: Photo by *waltarrrrr*, Flickr Creative Commons

Page 11: Photo by *CathrynDC*, Flickr Creative Commons

Page 13: Photos by *jasoneppink* (left) and *Chris Tengj* (right), Flickr Creative Commons.

The Delaware Valley Regional Planning Commission is dedicated to uniting the region's elected officials, planning professionals and the public with a common vision of making a great region even greater. Shaping the way we live, work and play, DVRPC builds consensus on improving transportation, promoting smart growth, protecting the environment and enhancing the economy. We serve a diverse region of nine counties: Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey. DVRPC is the federally designated Metropolitan Planning Organization for the Greater Philadelphia Region – leading the way to a better future.

DVRPC is funded by a variety of funding sources including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC's state and local member governments. The authors, however, are solely responsible for the findings and conclusions herein, which may not represent the official views or policies of the funding agencies.

DVRPC fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. DVRPC's website (www.dvrpc.org) may be translated into multiple languages. Publications and other public documents can be made available in alternative languages and formats, if requested. For more information, please call (215) 238-2871.



190 N. INDEPENDENCE MALL WEST

8TH FLOOR

PHILADELPHIA, PA 19106-1520

215.592.1800

www.dvrpc.org

Follow us on twitter at twitter.com/DVRPC

Author:	Philip Dawson, Smart Growth Associate
Staff Contact:	Karen Cilurso, AICP, PP, Senior Regional Planner, Office of Smart Growth
Direct Phone:	215.238.2876
Email:	kcilurso@dvrpc.org
Web:	www.dvrpc.org
