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DURHAM CITY-COUNTY PLANNING DEPARTMENT
CITY OF DURHAM | DURHAM COUNTY
NORTH CAROLINA

DURHAM COUNTY

Date: November 5, 2012

To: Thomas J. Bonfield, City Manager
Through: Keith Chadwell, Deputy City Manager
From: Steven L. Medlin, AICP, Planning Director
Subject: Overview of Wireless Communication Facility Approval Process in Durham

Summary. A summary of, rationale for and alternatives to the City's wireless communication facility (WCF) review and approval process is provided, in response to concerns raised by a citizen (Ms. Donna Rudolph).

Recommendation. Receive this report and provide any direction to the Department deemed appropriate.

Background. The preponderance of mobile communication devices (such as tablet computers and smart phones) has led to an explosion in demand for WCFs over the past 20 years. According to the American Planning Association (APA) there were over 256,000 telecommunication towers in the United States in 2011 (see Attachment 1).

Partially in response to what was perceived as highly variable and unpredictable local approval processes in municipalities and counties across the country, the U.S. Congress adopted provisions in the Telecommunications Act of 1996 (47 USC 332) that limit local government's traditional authority in regards to approval of siting of WCFs, including:

1) Requirement that decisions about siting of WCFs be "supported by substantial evidence contained in a written record" (47 USC 332 (c)(7)(B)(iii)); and

2) Prohibiting the basing of WCF siting on "environmental effects of radio frequency emissions" (often known as "EMF" or "radiation"); and

3) Prohibiting WCF siting actions that "prohibit or have the effect of" prohibiting wireless services

Much local authority for WCF siting conditions was retained by local government, however, including allowance of controls on aesthetics, property value impacts, and public safety concerns.

Prior to 2004, the City (and County) of Durham required a Minor Special Use Permit (mSUP) from the Board of Adjustment (or "BOA" - unless adjacent to a scenic highway, which required

a Major Special Use Permit) for erection of a new "ground-built" WCF (not a "co-located" WCF, which is attached to an existing tower or other structure [e.g.: building, water tower]). Several "ground-built" towers were denied by the BOA from 1996 to 2004 and courts subsequently found that the bases for these denials was not in compliance with the Telecommunications Act of 1996.

In 2004, the City (and County) of Durham adopted the current WCF siting standards, currently found in Section 5.3.3.N of the Durham Unified Development Ordinance (UDO).

The purpose of these new standards were primarily to ensure compliance with the Telecommunications Act of 1996 and to provide significant incentives for "co-location" of WCFs on existing towers and other structures and for the development of "concealed" WCFs. The primary incentive provided by these provisions was the administrative (rather than legislative or quasi-judicial) approval of "co-located" WCFs and "concealed" WCFs.

Since the 2004 adoption of the current WCF siting standards, there have been no new, non-concealed, ground-built WCFs. The vast majority (approximately 174 of 189 or of new WCFs or 92.1%) have been co-located on existing towers and other structures. The remainder (15 of total in over 8 years) have been concealed structures (see Attachment 2).

The State of North Carolina adopted a new law regarding telecommunications in 2007 (NCGS 160A-400 et seq) which further clarified issues that may be legally reviewed in WCF siting decisions. Legitimate areas of local government review include "aesthetics, landscaping, land-use based location priorities, structural design and fall zones", as well as public safety issues excluding radio frequency emissions (see 160A-400.52).

Issues. As is indicated by the data provided above (and in Attachment 2), the City's 2004 policy's on WCF siting have resulted in all WCFs being co-locates and the remainder being concealed structures. Additionally, there has been no litigation claiming that the City (or County) have violated State or Federal telecommunication law, as there was in the years proceeding adoption of these provisions. In these regards, the aforementioned 2004 WCF siting provisions have been a resounding success.

Furthermore, there has, to date, not been any evidence provided to the Planning Department to suggest that there are any unmitigated public safety concerns regarding concealed tower siting.

Several issues have been raised by citizens in the wake of the recent approval of a concealed structure at 8306 NC 751 Highway, as follows:

1) *Public notice and input*. Our current WCF siting process is administrative and does not required public notice if WCFs are concealed or co-located. Citizens in a recent WCF siting case have expressed frustration about the lack of public notice and our inability to receive and consider information they believe is germane to the safety of the tower and its impact on property values.

2) *Lack of explicit review of off-site safety considerations*. Our current WCF siting process requires an applicant certification of the structural integrity of structures carrying WCFs and this certification is verified at the time of building permit issuance. The WCF siting provisions, however, do not allow consideration of evidence that there are off-site safety concerns with the siting of structures containing WCFs. As noted above, no evidence has been provided to staff, to date, indicating any such off-site safety concerns.

3) *Administrative versus Quasi-Judicial approval*. Our current WCF siting process does not provide discretion regarding review and approval of WCFs – if all administrative requirements are met, the requested permit must be issued. As noted above, Federal and State law significantly limit local discretion regarding the siting of WCFs, but do allow quasi-judicial (or similar, evidence-based) decision making that would afford some site specific discretion in approval of WCFs.

Alternatives.

1) Status quo – no change or further evaluation of current WCF siting policies; or

2) Referral to the Joint City-County Planning Commission for consideration of modifications to the WCF siting provisions of the UDO. In addition to consideration of procedural changes in WCF siting policy, the UDO needs to be amended to reflect the aforementioned changes to State law and to review compliance with Federal law; or

3) Council direction to the Administration to modify the WCF siting provisions of the UDO

Fiscal Impact. Any modifications to the existing WCF siting policies will require consultation with private firm(s) that specialize in the evaluation of local government compliance with the complex State and Federal telecommunication law regime.

The precise budgetary impact of this consultation will depend on the extent to which current WCF siting provisions of the UDO wish to be modified. State law authorizes fees to be charged to applicants of WCFs, but since this fee must be a "flat" fee (rather than a case-by-case fee based on the extent of third party consultation necessary), some general fund impact is likely.

SDBE Impact. None.

Attachments.

Attachment 1. Pestle, John W. *Practice: Telecommunications,* Zoning Practice, Issue 8, August, 2011, American Planning Association

Attachment 2. Durham City-County Planning Department. *Summary of Approved Concealed WCFs since 2004.*

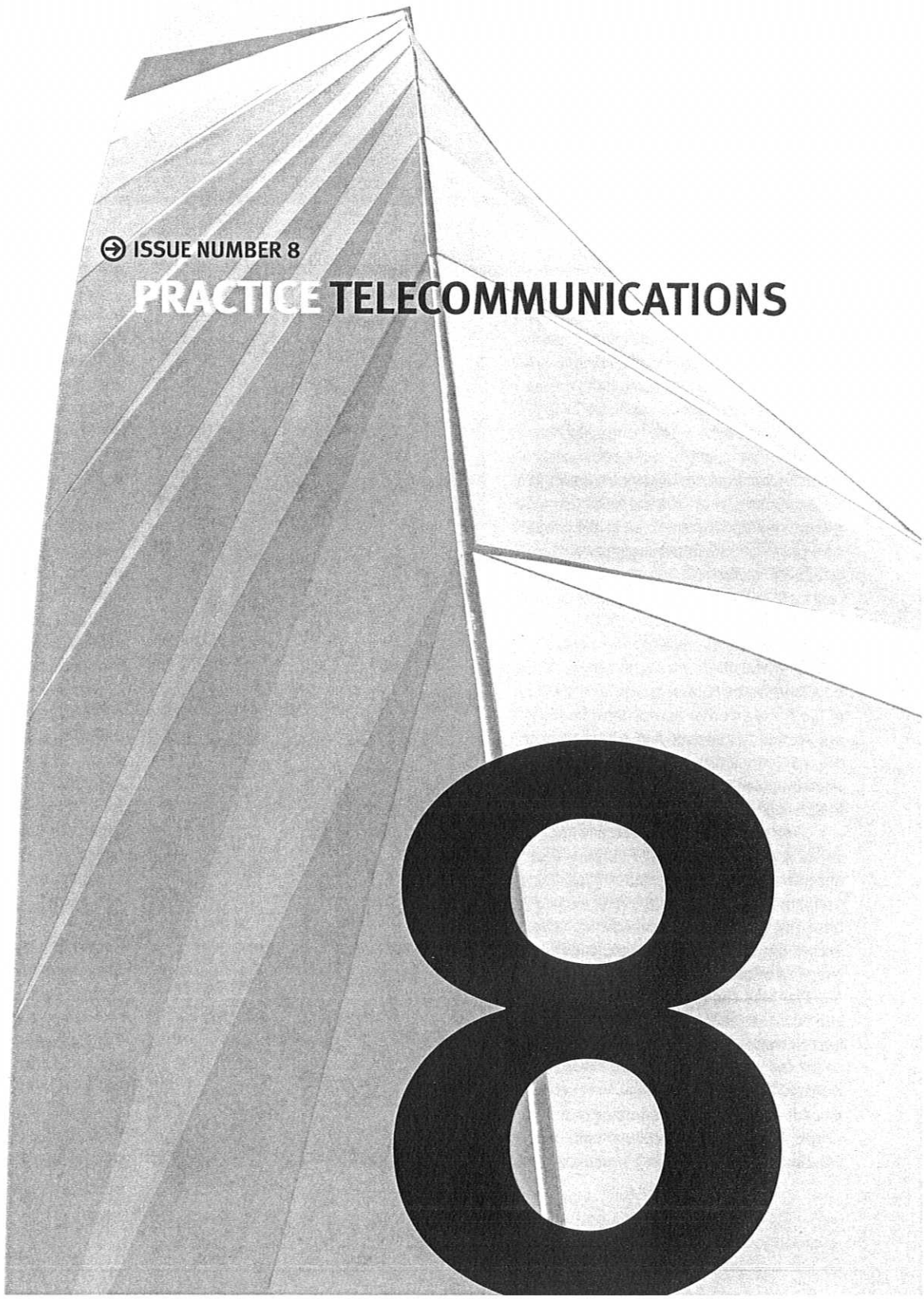
SM/poy

cc: Michael Ruffin, County Manager
Patrick Baker, City Attorney
Lowell Siler, County Attorney
Don O'Toole, Deputy City Attorney
Patrick O. Young, AICP, Assistant Planning Director

ATTACHMENT 1

ZONING PRACTICE AUGUST 2011

AMERICAN PLANNING ASSOCIATION



ISSUE NUMBER 8

PRACTICE TELECOMMUNICATIONS

8

Federal Cell Tower Zoning: Key Points and Practical Suggestions

By John W. Pestle

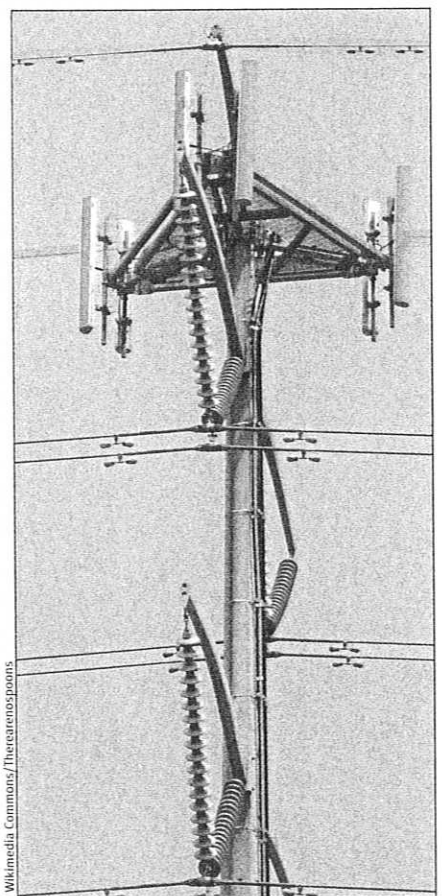
Congress first became involved with cell tower zoning with the passage of the Telecommunications Act of 1996, which added provisions entitled "Preservation of Local Zoning Authority" (47 U.S.C. § 332(c)(7)) to the principal federal telecommunications statute, the Communications Act of 1934.

This article summarizes key points regarding the Act as it has actually been interpreted and applied by the courts and Federal Communications Commission (FCC) during the 15 years since it was passed.

As interpreted by the courts, the Act does not affect many or most substantive provisions of local zoning law. However, it does impose procedural and administrative requirements that are unique to cell tower zoning. It is on these requirements where cell phone companies have been most successful in claims against local governments for violations of the Act.

The stakes are high for planners and public officials because, generally, the remedy imposed by federal courts for violations of the Act is an order approving a zoning application "as applied for" without any of the restrictions that might ordinarily have been imposed in the public interest during the zoning process.

Finally, how the Act is actually applied varies geographically due to different federal appeals courts' interpretations. In addition, how to comply with the Act can vary based on local ordinances and state laws. Accordingly, this article only provides an overview of the main points regarding the Act. Planners and local officials should consult with their municipal attorneys on how best to comply with the Act.



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Many communities encourage or require colocation of cell towers. This example shows how cellular antennas can be added to existing electrical transmission towers.

WHY MORE CELL TOWERS?

A cellular *tower* is a free-standing structure supporting one or more cellular *antennas*. Cellular antennas also can be mounted on buildings, water towers, or other structures. For convenience, the terms *cell tower* and *cellular tower* are used to refer to cell towers, cellular antennas, and associated equipment.

There were over 256,000 cell towers in the United States at the end of 2010. Installations of cell towers continue to increase at a rapid pace due to the demand for increased capacity as cell phones evolve into small mobile computers used to surf the web, receive and transmit videos, pictures, and other data, as well as carry conventional voice conversations. Web surfing, videos, pictures, and data use far more cell tower and provider network capacity than do phone calls. In addition, approximately 100,000 new towers are being added for WiMax, which uses cell phone-type antennas to provide high-speed wireless Internet access on a city or countywide basis, usually for a fee. Finally, the federal government is promoting the expansion of wireless service as one of the main ways to achieve its goal of expanding broadband service availability nationwide.

BACKGROUND ON THE ACT

At the time Congress was considering the Act, the FCC had a proceeding under way to preempt local zoning of cellular towers. The Act terminated that proceeding, and Congress did not generally preempt local zoning or turn the FCC into a federal zoning authority for cellular towers. Instead, the Act basically preserves local zoning while adding some additional federal requirements.

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Go online during the month of August to participate in our "Ask the Author" forum, an interactive feature of Zoning Practice. *John W. Pestle will be available to answer questions about this article. Visit the APA website at www.planning.org and follow the links to the Ask the Author section. From there, submit your questions about the article using the e-mail link. The author will reply, and* Zoning Practice *will post the answers cumulatively on the website for the benefit of all subscribers. This feature will be available for selected issues of* Zoning Practice *at announced times. After each online discussion is closed, the answers will be saved in an online archive available through the APA* Zoning Practice *web pages.*

About the Authors
John W. Pestle is an attorney and chair of the Telecommunications Group at Varnum LLP. He represents municipalities across the country on cable and telecommunications matters. He is a graduate of Harvard, Yale, and the University of Michigan Law School and received the Member of the Year award from the National Association of Telecommunications Officers and Advisors for his representation of municipalities on matters concerning the Federal Telecommunications Act of 1996. Pestle provides model cell tower leases to municipalities (www.varnumlaw.com/lease) and has a frequently updated paper for municipal attorneys that summarizes and provides citations to the various cases that formed the basis for this article. He can be contacted at 616-336-6000, ext. 6725, or by e-mail at jwpestle@varnumlaw.com.

Although the cell tower zoning amendments focused principally on "cell phone service," technically the Act covers "personal wireless services" and facilities used to provide personal wireless services as defined in 47 U.S.C. § 332(c)(7)(C). The terms include the antennas and facilities used to provide not just cell phone service but also "fixed wireless" (similar to microwave point-to-point) services and other similar services.

Finally, municipalities must comply with state and local zoning laws applicable to cell towers. If the state or local law is more restrictive then the Act, then the more restrictive law controls. This follows from the basic principle that the Act is an *overlay* on traditional zoning law, which is largely preserved. For example, in one case, a federal court reversed a local zoning decision because it used aesthetics to deny an application for a cell tower to be located in a public right-of-way. Aesthetics are allowed under the Act, but under the applicable *state law*, municipalities could not consider aesthetics for utility fixtures located in public rights-of-way (cell phone companies were public utilities in the state in question).

REMEDIES

The most troubling aspect of the Act relates to remedies for violations. In contrast to many state laws, the remedy that wireless providers usually request, and which courts frequently impose, is an order granting the cell tower zoning application "as applied for."

The rationale for this result is a provision that directs the courts to handle cell tower zoning cases "on an expedited basis." Cell phone companies contend this means the remedy for violations must be approval of the zoning application, not a remand with consequent delay. In many instances the courts have agreed.

Such decisions can cause well-intentioned municipal actions to have adverse effects. For example, in a 2005 case, the City of Chattanooga found that seven cell tower zoning applications did not comply with a recent zoning ordinance change. Rather than rejecting them and allowing them to be refiled, the city delayed action on the applications to allow the provider a chance to bring them into compliance with the revised ordinance. After the applications sat for a period of time, the provider sued the city, and the federal court ordered all seven applications to be approved as applied for because the city had been too slow in acting!

More recent federal decisions show some tendency to move away from the "approval order" remedy toward the more traditional remedy of a remand for proceedings in compliance with the court's order. However, as a practical matter, municipalities are well advised to be careful to comply with the Act so as to make sure they do not receive the harsh remedy described above.

On the bright side, it is clear that providers cannot get attorney fees or damages either under the Act itself or Section 1983 (Civil Rights Act) for violations. This was resolved in 2005 by the U.S. Supreme Court, supplemented by later decisions of the federal appellate courts.

PROCEDURAL RULES

As interpreted by the courts, the Act creates procedural requirements for cell tower zoning applications that often differ significantly from typical local practices. As a result, procedural challenges are one of the areas where cellular companies have been most successful in appealing local zoning decisions.

Written Decision/Separate Record

Municipalities can inadvertently violate the Act by running afoul of its "written decision/separate record" requirement. These requirements derive from a provision stating that cell tower zoning decisions "be in writing and supported by substantial evidence contained in a written record" (47 U.S.C. § 332 (c)(7)(B)(iii)). Most courts that have considered this issue have adopted a requirement that a municipality's written decision simply must provide a sufficient explanation for the court to be able to conduct a meaningful review of it.

In a significant deviation from local practice in many municipalities, some courts have required that the written zoning decision be *separate* from the written record or transcript of the local zoning proceeding. This means that local decisions may be open to challenge by providers if they are not clearly separated from the hearing or proceeding at which evidence is taken.

Until there is a clear resolution on the "separate record" issue, a practical approach is for a municipality not to make a formal decision at the zoning meeting or city council meeting where the zoning hearing occurs or an appeal is heard. Instead, following the hearing or the close of an appeal the municipality should direct counsel or staff to prepare a written order or decision along specified lines (for example, denying the application generally or approving

it with conditions) for the municipal body to consider at its *next* meeting. Then, at the next meeting, the municipal body considers the proposed decision, modifies it as necessary, and adopts it. Meeting minutes should reflect this. Proceeding in this fashion ensures that the municipality's decision complies with the written decision/separate record requirement.

Perhaps more important, using the two-step approach helps ensure that a municipality's decision is well documented and conforms with local, state, and federal law, thus providing the maximum assurance that it will be upheld on appeal. For example, in a recent California case, a municipality's carefully reasoned decision resulting from the use of the two-step approach appears to have contributed significantly to a federal court's decision to uphold the municipality's denial of several cell tower zoning applications predominantly on aesthetic grounds.

Timely Actions and FCC Shot Clocks

The Act contains a requirement that cell tower zoning decisions occur in a timely fashion, specifically "within a reasonable period of time after the request is duly filed . . . taking into account the nature and scope of such request." However, the FCC has effectively rejected this *individualized* time period approach by setting blanket time frames for action on all cell tower zoning requests through two orders that have come to be known as the "shot clock" orders.

In late 2009 the first FCC order imposed a 90-day shot clock for colocations and 150 days for new cellular towers, and in August 2010 it followed this up with an order clarifying certain points (and rejecting requests for changes). Because the orders are declaratory rulings, no "rule'" was issued. Instead, municipalities and providers have to examine the approximately 40 pages of text that comprise the two FCC orders to attempt to understand and interpret them. And the two orders are not always entirely consistent.

The FCC decided that 90 days (not 150) was reasonable for *colocations* because they often are easier to process than new towers and may involve little or no new construction. The FCC defined colocations in footnote 146 of its initial shot clock order. Because the definition is both highly detailed and adapted from an unrelated proceeding, it is unlikely to coincide exactly with the definition of colocation in local ordinances.

In general, under the shot clocks a zoning application for an additional antenna at a given location is not a colocation if it involves more than a 10 percent increase in height, more than four new equipment cabinets or one new equipment shelter, extends more than 20 feet from the tower, or if excavation is needed outside the current tower site.

Under the shot clocks municipalities must act on a cell tower zoning application within the 90/150-day time frame. If they take longer, the burden is on them to justify to a court why it was reasonable to take longer. In recognition that zoning applications can be incomplete, the orders state that the time frames do not include the time for an applicant to respond to a request for additional information. However, this extension *only* applies if the municipality notifies the applicant within 30 days of filing that the application is incomplete, which creates practical problems when the need for additional information only appears after the review is well under way.

Due to the short time periods involved, municipalities should require a provider to state in its zoning application which shot clock (90- or 150-day) it contends applies to its request. And if the provider contends that it is the 90-day shot clock, it should be required to identify the specific criteria in the FCC shot clock order it meets. By doing this, municipalities will know which time frame the provider contends is applicable and will be able to decide if the claim is accurate. More importantly, municipalities will avoid the harmful situation where the municipality believes that it has 150 days to act while the provider contends that the 90-day shot clock applies.

The FCC orders state that the shot clocks can be extended ("tolled") by mutual agreement. As a practical matter, both parties may want to extend the applicable time periods to avoid a provider having to refile because a municipality believes it needs to deny a zoning application (without prejudice) due to incompleteness, or to prevent a shot clock from expiring.

In response to the shot clocks, some municipalities have adopted detailed application forms for cell tower zoning matters to better ensure that all requisite documents and other information are provided at the outset. In addition, some municipalities are conducting a more detailed check for the presence and completeness of all relevant attachments and signatures at the filing counter *before* a cell tower zoning application will be accepted.

In seminars about the FCC shot clocks, the most frequently asked question is how the shot clocks apply when a municipality has a two-step zoning process—for example a planning commission makes an initial zoning decision and a disaffected party has the option of an internal (not court) appeal to a board of zoning appeals or city council. Municipalities frequently ask: Do the shot clocks apply just to the first step—the planning commission decision—or do they apply to the entire process?

The short answer is that the FCC has refused to address this question, although it was asked do so in its August 2010 order.

With this in mind, municipalities should carefully calendar and compute the 90- and 150-day time periods from the outset and then work backward to make sure that they act within the requisite time period after allowing for all notices, possible internal appeals, preparation of written orders, and the like.

Under the Act there are good legal grounds (not as yet ruled on by the courts or FCC) for contending that the shot clocks legally can *only* apply to a municipality's initial zoning decision (the planning commission decision in the example above). If it is not possible to complete the second step (appeal to board of zoning appeals or equivalent) of the zoning process within the appropriate time frame, then municipalities should seek a mutually agreed-upon extension from the provider.

It may help to point out to the provider that under the Act it has only 30 days from the expiration of a shot clock to file suit for exceeding the clock. In some cases it may be possible to get the provider to agree to an extension (including where only the board of zoning appeals has the authority to grant a needed variance) because the municipality will otherwise contend that the shot clock was met when the planning commission issued its decision. And by the time the board of zoning appeals rules, which is more than 30 days later, the provider will have lost its right to go to federal court, unless it agrees to an extension.

Additionally, the municipality should carefully keep track of any events that might cause the shot clocks to be exceeded. For example, if additional information is needed from the provider, the municipality should request it in writing with a very short time to respond, stating that this is due to the shot clocks and that any delay may cause a delay in the municipality's decision. Careful records such as this can provide a solid basis for either a mutually agreed-upon extension or for justifying to a court the reasonableness of a municipality taking more than 90 or 150 days to act.

Finally, some courts have specifically allowed the "written decision" by a municipality explaining the reasons for denying a zoning request to occur *after* it acts on a zoning request by denying it. In the appropriate circumstance, this may allow a municipality to comply with the shot clocks by issuing a denial within the appropriate time period and then issuing the separate written decision shortly thereafter.

Even though, as of mid-2011, the shot clock orders are currently in effect, there is serious doubt as to their validity. In part this is due to language at the start of the Act preventing any provision of the Federal Communications Act of 1934 from being used to "limit or affect" a municipality's zoning authority other than as set forth in the Act. The Act also indicates that there should be individualized time periods for each application, and the committee report accompanying the Act states that in terms of timing it is not intended to give "preferential treatment" to cell tower zoning applications compared to other zoning matters. Finally, the committee report emphasizes that the time for action should be the "usual time period under the circumstances."

A court appeal of the shot clock orders on these (and other) grounds is currently pending and is likely to be decided in late 2011. Municipalities should periodically check as to the outcome of this appeal, *City of Arlington v. FCC*, No. 10-60039 (5th Cir.).

Substantial Evidence

The Act requires that there be "substantial evidence" supporting a municipality's cell tower zoning decisions. The cases are all in agreement on this; specifically, the courts have formulated the standard that there must be "more than a scintilla but less than a preponderance" of evidence in the written record supporting a municipality's decision. The courts have emphasized that this standard means they must uphold a municipality's decision if the facts meet the preceding low standard *even if* the court would have reached a different conclusion were it free to consider the matter afresh.

In other words, the courts have stated that they cannot substitute their judgment for that of the municipality and try the zoning case anew. However, this deference only applies to factual support for substantive matters such as the impact of a cell tower on property values, the environment, or fragile environmental areas. It does not apply to claims for violations related to the radio frequency emissions or "prohibition of service" provisions of the Act.

The federal court covering mid-Atlantic Coast states has emphasized that the views of residents or laymen should be considered and may be given some weight by a municipality. It also emphasized that the "predictable barrage" of expert testimony from a cell phone provider does not necessarily trump or mandate approval of a cell tower zoning request over the objections of residents. Other courts have also allowed citizen testimony to be used as evidence to support a denial of a cell tower zoning request. However, the issue of how much weight to give to the testimony of ordinary citizens tends to be case-specific and can vary greatly depending on factors such as the number of statements and how detailed and persuasive they are in terms of their facts and reasoning.

Radio Frequency Emissions Preemption

The Act (47 U.S.C. § 332(c)(7)(B)(iv)) prevents municipalities from denying or conditioning cell tower zoning based upon the "environmental effects of radio frequency emissions" (often pejoratively termed "radiation") from cell towers, to the extent they comply with FCC emission rules (47 C.F.R. § 1.1307 *et seq.*). This provision is part of the more general federal preemption of states and municipalities from regulating matters relating to radio frequency (RF) emissions. What municipalities *may* do is enforce the FCC's emission rules, including reviewing a tower's planned compliance with the rules.

Municipalities can face emotional requests that a cellular zoning application be denied due to RF-related health concerns. The best legal advice in these circumstances is three-fold: First, state at the start of a zoning hearing that comments or claims about the adverse health effects from "cell tower radiation" will not be allowed (because federal law prohibits the municipality from considering them). Second, if a speaker attempts to raise such issues, he or she should promptly be stopped on the same grounds. Third, if attempts persist, it may be desirable to point out that allowing testimony against the tower based on RF health effects actually increases the likelihood that the cell tower will be approved. This is because the cases are clear in holding that if the court believes the real reason for denial of a zoning application was on RF-emissions grounds, it will usually order that the zoning application be granted. At a minimum, allowing such testimony gives the cell tower applicant clear grounds to appeal a denial to federal court.

Numerous cases under the Telecommunications Act hold that the allowable grounds for local zoning decisions on cellular towers include aesthetics, impact on property values, proximity to a historic district, safety, environmental impacts, and the impact of a commercial operation on a residential neighborhood.

SUBSTANTIVE ZONING RULES

Because the Act does not affect traditional local substantive zoning principles, it is generally a local decision to choose between having fewer, taller towers with more colocations or more, shorter towers with less colocation. Similarly, numerous cases under the Act hold that the allowable grounds for local zoning decisions on cellular towers include aesthetics, impact on property values, proximity to or view from a historic district or structure, safety (if the tower fell, property or persons could be hurt, especially on adjacent properties), environmental impacts (e.g., fragile areas, wetlands), and the impact of a commercial operation on a residential neighborhood.

The courts have rejected tower company complaints that local zoning requirements can increase the cost of a tower, for example, by requiring that it be camouflaged, or rejecting a single tower to be placed at the top of the scenic ridge in favor of shorter towers on either side that have a less prominent visual impact. Aesthetic objections tied to scenic vistas, proximity to historic districts, or views

from national parks are particularly likely to be upheld by the courts.

The Act prohibits "unreasonable discrimination" in cell tower zoning. The courts have interpreted this to mean that differences in the treatment of cell towers are allowed as long as there is a valid, articulated basis for the difference. For example, just because a cell tower has been allowed in *one* residential area does not mean that they must be allowed other residential areas if there are legitimate reasons for the difference (e.g., visibility, height, impact on the neighborhood or property values, etc.).

CAMOUFLAGING

Well-camouflaged cell towers are nearly invisible. Cellular companies can object due to their increased cost, but camouflaged towers are a very effective way to allow a cell tower to be placed where it is needed with little or no impact on aesthetics, historical sites and views, or property values.

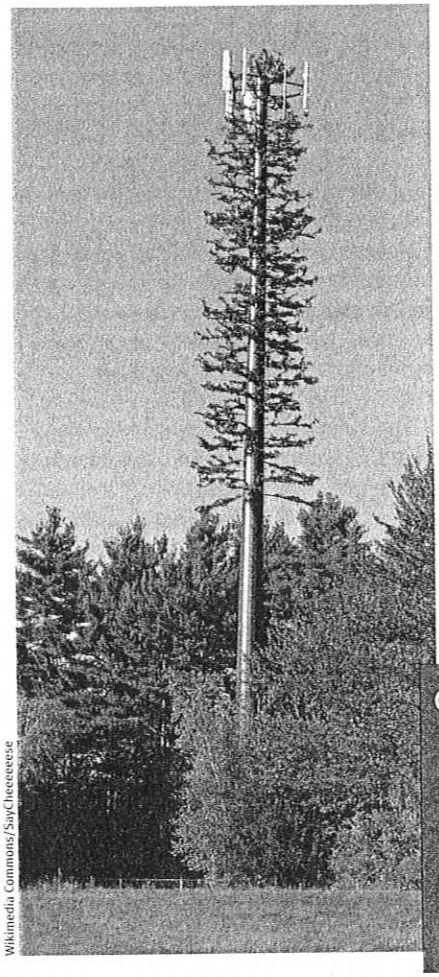
In urban settings, cell phone antennas are routinely concealed in sculptures, signs, billboards, church steeples, water tanks, crosses, and parapets of buildings. Meanwhile, in rural and suburban areas, towers are effectively concealed as trees and are nearly indistinguishable from the real thing (apart from being taller than nearby trees). In the southwest, cell towers are effectively camouflaged as large cactuses (e.g., saguaro cactuses). Many pictures of camouflaged cell towers are available at http://CellularPCS.com/gallery.

From a legal standpoint, there have been virtually no cases under the Act challenging camouflaging requirements in local zoning decisions. However, municipalities are well advised to be highly specific in any camouflaging requirements they impose and to require compliance with photo simulations, as there are examples of unsuccessful camouflaging.

GAPS IN SERVICE AND ALTERNATE SITES

The Act bars municipalities from taking zoning actions that "prohibit or have the effect of" prohibiting personal wireless services. As a practical matter this provision usually refers to claims by providers of gaps in coverage and that there are no feasible alternate sites for the tower proposed to fill the gap. Several points should be noted.

First, small gaps in coverage are expressly allowed by the FCC, and the courts have noted this. It is only "significant" gaps that typically trigger a "prohibition in service" requirement.



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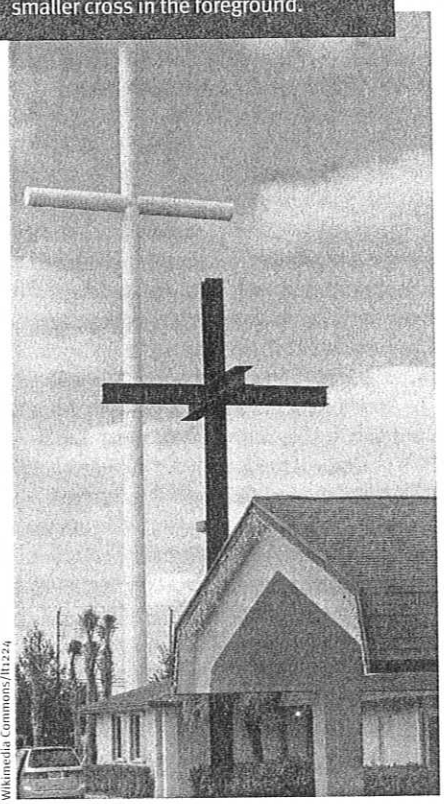
Second, there are differences between the federal appellate courts on how they apply the "prohibition of service" provision. Municipalities should consult their attorneys to make sure they are following the Act as interpreted by the federal courts in their area.

Third, and perhaps most important, gap analysis deals with radio frequency propagation and computer models that try to *predict* both whether there is a gap and the height and location of the cell tower that will fill the gap. These maps are comparable to a weather map for the day after tomorrow—predictions based upon a range of factors—and for that reason are rarely completely accurate. The computer programs used to generate the map take the topography and buildings in the area and then apply a range of "typical" factors and assumptions selected by the wireless applicant to generate a map showing how RF signals will likely propagate in the area in question. The resulting map costs relatively little to create, is sensitive to its inputs, and can be skewed in favor of the provider's zoning request.

Municipalities should require providers to set forth *all* evidence supporting a gap/prohibition of service claim so that the municipality can consider it. This will prevent providers from withholding significant evidence until a court challenge, or, if they do, will allow the municipality to seek a remand so it can consider the new evidence.

Requiring the applicant to make actual RF measurements in the field is the *only* way to accurately determine the actual size and contours of a gap and the shortest tower at a specific location that will fill it. Typically, a small antenna is suspended from a crane at a given location and height; technicians then measure the signal strength in a variety of directions and distances. They repeat the process with the antenna at different heights to determine the shortest tower height that will

(Left) Although taller than surrounding trees, towers camouflaged as evergreens can be a logical aesthetic compromise in rural New England. (Below) This 100-foot cross at Epiphany Lutheran Church in Lake Worth, Florida, houses a cell tower. After the new camouflaged tower was completed, the church removed the smaller cross in the foreground.



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fill the gap. Often this test is combined with a "balloon test," where a balloon approximating the cubic footage of the antennas is suspended at different heights to determine the visual impact of the proposed tower.

Related technical analyses are needed when the claim is that existing antennas are overloaded and a tower must be added to increase the capacity of the system in the area.

In these cases the courts typically require a showing by the provider (or rebuttal by the municipality) to the effect that there are "no feasible alternate sites" for the cell tower in question. This analysis usually involves *both* technical and economic considerations. From an engineering perspective there *rarely* is only one site for an antenna that would fill a gap. However, while a given site may be technically feasible, the provider may reject it because the cost to build or rent is too high. Municipalities are not bound to approve the "least cost" site if a reasonable alternate site (or sites) with greater cost or rent is preferable. Also, some courts give consideration to minimizing the impact or intrusion by the cell tower.

The bottom line is that in "significant gap" or "prohibition of service" cases a municipality usually needs technical assistance to knowledgeably review, comment on, and (where appropriate) challenge a provider on the issues of whether and to what extent there is a gap, its contours, the location and minimum height of a tower necessary to fill a gap, and the feasibility of alternate sites. In a number of states, municipalities can obtain this technical assistance at the provider's expense through local ordinances requiring a deposit for experts and studies at the time of application.

A qualified expert can evaluate a cellular zoning application and provide an analysis and recommendations (e.g., camouflaging suggestions) that will assist in deciding the zoning application. However, because there are cases where municipalities have lost in the courts due to assistance from unqualified experts, municipalities should obtain the names of cases where proposed experts have testified and review any opinions where a court has commented on their credentials. This will help ensure that the experts' work for the municipality will be persuasive with the provider and stand up in court.

DISTRIBUTED ANTENNA SYSTEMS

Distributed Antenna Systems (DAS) are often an attractive alternative to cell towers. Essentially, they involve a series of microcells, each with a small antenna and box mounted on a utility pole. The boxes often are smaller than other boxes or transformers on utility poles and sometimes can be put underground.

DAS is an attractive alternative for providing cell phone service, especially in residential areas, although multiple DAS antennas are required to serve the same geographic area typically served by one cell tower. Another advantage of DAS systems is that *one* set of DAS antennas can serve *all* cell phone companies licensed to serve a community. The downside is that DAS systems are sometimes more expensive to install than towers because of the need for multiple DAS sites to cover the same area as a tower, with the sites interconnected by fiber optic cables.

The cellular industry has resisted some municipal attempts to encourage or force the use of DAS. In one case, the industry mounted a major challenge and was successful in overturning (on federal preemption grounds) a local ordinance that expressed a preference for DAS. The court found that a municipality could not impose such a blanket legislative requirement; however, later decisions from the same court upheld a community's right to consider DAS on a case-by-case basis.

NOTICE OF INQUIRY

In April 2011 the FCC issued a Notice of Inquiry on "key challenges and best practices in expanding the reach and reducing the cost of broadband deployment by improving government policies for access to rights of way *and wireless facilities siting*" (emphasis added). Such notices are normally followed by rulemakings addressing issues revealed by the notice.

Among many other things, the notice asks about challenges or problems that the wireless industry claims has occurred with local zoning and with leasing land from municipalities for cell towers. In the notice, the FCC basically claims that it has the legal authority to further restrict local zoning of cell towers. Likely areas for rulemaking flowing from this notice are (a) preventing municipalities from allowing cell towers in residential areas only by variance; (b) greatly restricting or eliminating zoning approvals for colocations; and (c) putting limits on what must be included in a cell tower zoning application and the fees that may be charged.

CONCLUSION

In 1996 Congress for the first time created federal requirements for cell tower zoning. As interpreted by the courts, the Act creates some challenges for municipal compliance, in part because some of the procedural provisions are quite different from local zoning practice and in part because federal courts often order zoning applications approved when the Act is violated.

By careful attention to the matters described in this article, and by paying attention to the specific interpretations of the Act by the courts in their area, municipalities can ensure that cell tower zoning decisions comply with federal, state, and local law as well as the public interest.

"Truly Twisted Cell Tower" is a multi-carrier cell tower constructed in Albuquerque, New Mexico, by architect Dekker/Perich/Sabatini. Photograph © 2010 Kramer.Firm, Inc. Used with permission; design concept by Lisa Barton.

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ATTACHMENT 2

Concealed Wireless Communication Facilities in Durham Since 2004

ADDRESS	CASE NO.	DATE APPROVED	HEIGHT	TYPE	ZONING
2670 Durham Chapel Hill Boulevard	D04-078	06/04/2004	90'	Monopine	CG/RS-M
1101 Hamlin Road	D05-695	12/16/2005	170'	Flagpole	IL
242 Nobel Drive	D05-697	12/16/2005	120'	Flagpole	RS-20
4907 Garrett Road	D05-696	01/06/2006	120'	Monopine	RS-20
1814 Bahama Road	D06-537	11/03/2006	120'	Monopine	RR/RS-20
3023 North Roxboro Street	D0700445	10/26/2007	150'	Monopine	CG
3720 Brightwood Lane	D0800234	03/20/2009	120'	Monopine	RR
2142 East Geer Street	D0800231	06/05/2009	198'	Monopine	CN
7619 Fayetteville Road	D0900134	08/21/2009	120'	Monopine	RR
5266 Kerley Road	D0900155	10/16/2009	120'	Monopine	RS-20
4610 Cole Mill Road	D0900212	04/01/2010	120'	Monopine	RR
4915 Barbee Road	D1000075	08/13/2010	120'	Monopine	RS-20
5302 Old Chapel Hill Road	D1000171	02/04/2011	120'	Monopine	RR/RS-20
202 Woodcroft Parkway	D1000133	03/24/2011	150'	Monopine	OI
8306 NC 751 Hwy	D1200005	07/06/2012	120'	Monopine	RR

As of 11/02/2012

Young, Patrick

From: Doty, Dennis
Sent: Friday, November 02, 2012 11:24 AM
To: Young, Patrick; Burdick, Jeffrey; O'Toole, Don
Cc: Medlin, Steve; Whiteman, Scott; Danner, Teri; Luck, Keith
Subject: RE: Request from Dolly Fehrenbacher (Good Neighbors of 751 rep)
Attachments: Concealed Wireless Communication Facilities in Durham.docx

Pat, attached is the list of approved concealed towers since the 2004 ordinance change. The list is by date approved. Let me know if you think other information needs to be included.

Also, a quick review of both databases shows (ballpark) 147 collocate cases in the same time period where new users installed antennae on existing towers or other structures such as buildings, water towers, etc.

If you need anything else, please let me know.

Dennis Doty
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Durham City-County Planning Department
101 City Hall Plaza
Durham, NC 27701
(919)560-4137 ext 28252
Dennis.Doty@durhamnc.gov
www.durhamnc.gov

From: Young, Patrick
Sent: Wednesday, October 31, 2012 3:20 PM
To: Burdick, Jeffrey; O'Toole, Don
Cc: Medlin, Steve; Whiteman, Scott; Doty, Dennis; Danner, Teri; Luck, Keith
Subject: RE: Request from Dolly Fehrenbacher (Good Neighbors of 751 rep)

Don and Jeff:

I have asked Dennis Doty to work on this list for a separate purpose ....he will provide to me on Monday (11/5).....just let me know how it needs to be transmitted to Ms. Fehrenbacher ...thanks

Patrick O. Young, AICP
Assistant Director - Development
Durham City/County Planning Department
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Durham, North Carolina 27701
(919) 560-4137 x28273 (office)
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patrick.young@durhamnc.gov (e-mail)

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From: Burdick, Jeffrey
Sent: Wednesday, October 31, 2012 3:12 PM
To: O'Toole, Don
Cc: Medlin, Steve; Young, Patrick; Whiteman, Scott
Subject: Request from Dolly Fehrenbacher (Good Neighbors of 751 rep)

Don,

Dolly Fehrenbacher from the Good Neighbors of 751 came into to Planning today and asked for a list of all freestanding concealed cell towers in Durham County. As this case is in litigation, should all of these types of requests be made through their attorney? No information has been provided to her, we want to run this by you to determine how to proceed.

Thanks,
Jeff

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