

STAFF REPORT

DOCKET # UDO-244

STAFF: [Kirk Ericson](#)

REQUEST

This text amendment is proposed by American Towers, LLC and New Cingular Wireless PCS, LLC to amend chapters A and B of the *Unified Development Ordinances* to revise existing standards for transmission towers.

BACKGROUND

The number of wireless device users and telecommunications network usage has increased dramatically in the past few years. The adoption of smart phone technology by a large and growing percentage of Forsyth County's citizens has strained existing networks designed primarily for transferring voice data. These networks must now transmit a significant amount of internet data in addition to voice data. Given that, the local network of transmission towers is inadequate for serving these needs. As data carried by individual towers increases, the radius served by these towers gets smaller. To accommodate increased network usage, additional strategically located transmission towers must be added to this network. The petitioners initially approached Planning staff in February 2013 to discuss these concerns as they relate to existing UDO transmission tower regulations.

During these initial discussions, the petitioners stated that in order to meet existing and future customer demand, additional transmission towers must be installed in areas which are currently underserved. Major commercial areas and transportation corridors were the locations where transmission towers were initially installed, due to the origin of mobile phones as a means of voice communication during travel. These locations generally have adequate coverage today. As more people began to use their mobile phones as home phones, and eliminated land line coverage, demand pressures began to mount in residential areas. Consequently, as demand in residential areas has increased, the signal strength and quality of service provided by existing transmission towers has decreased. The invention of smart phones, with their internet access capabilities, has increased demand further. Current UDO standards, however, do not allow towers in single-family residential areas except in GMAs 4 and 5 (Future Growth and Rural Area).

The petitioners shared their concerns with the Planning Board at the Board's April 2013 work session, and staff was directed to provide technical assistance to the petitioners in developing an ordinance amendment that would incorporate requested changes into the existing UDO framework. A draft ordinance was developed in Summer 2013

Planning staff strongly recommended that the petitioners discuss their ordinance concept with community groups prior to formally initiating the text amendment review process. In August 2013, the petitioners presented the draft ordinance to the Winston-Salem Neighborhood Alliance, the TAPR committee of the Community Appearance Commission, and the Legislative Policy Committee of the Winston-Salem Chamber of Commerce to gauge community support. In

NOTE: Items to be deleted are indicated with a ~~strikeout~~; items to be added are indicated with an underscore.
UDO-244 November 2013

general, they received favorable reaction to the ordinance and concepts presented at these meetings.

ANALYSIS

Staff believes the proposed ordinance makes changes to the existing transmission tower regulations which will improve access to telecommunications technology in Winston-Salem and Forsyth County. In general, the amendment expands the places where transmission towers are allowed, while adding a hierarchy of regulation based on zoning district and the type of transmission tower being proposed. The current ordinance does not distinguish between different types of transmission towers. However, as the petitioner has previously stated, different types of transmission towers have differing impacts on adjacent areas. The proposed ordinance includes specific standards for three categories of transmission towers: Towers with concealed antennae (or stealth towers); monopole towers; and lattice towers (see **Exhibit A**, attached).

Tower Types Described

Concealed towers have the least impact on surrounding areas and are allowed in the broadest range of zoning districts in the proposed ordinance. Such towers do not have any exposed antennae, and usually look like flag-less flag poles or can be modified further to look like faux pine trees (monopines). **Monopole towers** consist of a single supporting pole with exposed antennae on top and no supporting structures or guy wires. Monopoles are not allowed in as many situations as concealed towers. **Lattice towers** have the most significant impact of all transmission towers and are allowed in the least number of situations. Such towers consist of a multi-sided open structural frame with exposed antennae, and often reach significant heights which require the inclusion of flashing strobe lights on top of the tower.

Tower Review Processes

The proposed ordinance utilizes two different review processes for transmission towers, depending upon the location and type of tower, as referenced in **Exhibit A**. The zoning permit review process is used in situations where towers would have less of an impact on adjacent property. This process simply requires the applicant to obtain a zoning permit from City-County Inspections staff. The Board of Adjustment (BOA) Special Use Permit process applies to situations where towers could be more impactful on their surroundings or may generate controversy. The Special Use Permit process includes a public hearing allowing citizen comment, requires a sign posting on the subject property and notification of adjacent property owners, and requires the Board to evaluate the request on four findings of fact, which are as follows:

- The use will not materially endanger the public health or safety if located where proposed and developed according to the application and plan as submitted and approved
- The use meets all required conditions and specifications
- The use will not substantially injure the value of adjoining or abutting property, or that the use is a public necessity
- The location and character of the use, if developed according to the application and plan submitted and approved, will be in harmony with the area in which it is to be located and in general conformity with *Legacy*

The Board must find the proposed tower affirmatively addresses all four findings of fact to approve the request. Additionally, the BOA may impose additional reasonable and appropriate conditions to safeguard the public health, safety, and value of neighboring property and residents.

The Board of Adjustment Special Use Permit review process seems the best fit for review of these towers, as it allows public input and a greater level of review scrutiny. The Elected Body Special Use Permit review process may not achieve all that citizens may hope for with that process since it does not allow *ex-parte* communication, and would therefore not allow citizens to discuss or communicate in any other way their concerns regarding a proposed tower with their elected representatives prior to the sworn testimony that is required for the actual public hearing. This process could also greatly increase the work load of elected officials, as many new towers could be proposed in future years.

Concealed Tower Standards

The proposed ordinance incentivizes the use of shorter, concealed towers by making the review process easier for such towers. Concealed towers up to 150 feet in height are allowed with zoning review in residential districts, **but only on sites with non-residential uses** (such as churches, schools, or fire stations). The height of such towers may be increased to 180 feet with a Special Use Permit from the Board of Adjustment. Residential sites with non-residential uses were identified by staff and the petitioners early on in the ordinance development process as locations with the least potential impacts on residential neighborhoods.

Concealed towers on residentially zoned lots which are either vacant or contain residential uses would also be permitted only through the BOA Special Use Permit process. During preliminary discussions, the petitioners agreed to staff's recommendation to require Special Use Permit review for such parcels (rather than zoning permit review), as they would most likely be found within existing residential areas. Setbacks for such towers adjacent to residential zoning districts would be equal to the height of the proposed tower, with a minimum setback of 100 feet (**Exhibit B** shows a cross section of tower height and setbacks). This minimum setback was suggested by staff to help ensure greater compatibility with and separation from surrounding residential property. These towers would only be allowed in GMAs 3 (Suburban Area), 4 (Future Growth Area), and 5 (Rural Area), and would have a maximum height of 180 feet. They would not be allowed in residentially zoned districts in GMA 2 (Urban Neighborhoods) because of the closer proximity of other zoning districts which allow towers.

Concealed towers up to 180 feet would be allowed with a zoning permit in the IP district, and concealed towers up to 199 feet would be allowed with a zoning permit in other nonresidential districts.

Monopole Tower Standards

The proposed ordinance would require monopole towers in most nonresidential zoning districts to obtain zoning permit review (such towers would have a maximum height of 199 feet). Monopoles up to 180 feet would be allowed in the IP district and on residentially zoned sites with non-residential uses through the BOA Special Use Permit process.

Lattice Tower Standards

Lattice towers would be allowed in the proposed ordinance with a maximum height of 300 feet. Such towers could only be located in nonresidential zoning districts. Lattice towers in the IP, LO, CPO, PB, LB, and NSB districts would require a BOA Special Use Permit, while other more intense nonresidential zoning districts (such as GB or HB) would allow lattice towers with a zoning permit.

Tower Setbacks

Generally, the ordinance requires transmission towers to be setback 40 feet from adjacent nonresidentially zoned areas, and 100 feet from residentially zoned areas. However, alternative compliance may be requested through the Board of Adjustment Special use Permit process where unique site constraints exist (such as topography, existing vegetation/buffering, and surrounding development plans).

Proposed Ordinance Compared to Existing Standards

Existing UDO Transmission Tower standards allow towers in RS-20, RS-30, RS-40, MH, and AG with a Board of Adjustment Special Use Permit, only in Growth Management Areas (GMAs) 4 and 5. Towers are also currently allowed with BOA approval in all residential multifamily districts (RM-5, RM-8, RM-12, RM-18, RM-U), in all GMAs (**Exhibit C** summarizes residential tower requirements under both the current UDO standards and the proposed ordinance). These towers are allowed with no limits on tower height or tower type. The current ordinance also allows towers in most non-residential districts with Planning Board review (IP currently requires Board of Adjustment review). Planning Board review is simply a site plan review, not a discretionary decision like a proposed rezoning.

Overall, the proposed ordinance provides for a more purposeful approval process for transmission towers than the existing ordinance. The proposed ordinance would allow zoning permit review for towers in intense zoning districts, where Planning Board review is currently required. Less intense nonresidential districts, on the other hand, may require a more stringent Board of Adjustment review process (where lattice towers are proposed), rather than the currently required Planning Board review process.

The proposed ordinance allows transmission towers in a greater amount of residential areas (the current ordinance does not allow towers at all in RS-7, RS-9, RS-12, RS-15, and RS-Q, and only allows towers in RS districts in Growth Management Areas 4 and 5), but limits such towers to a height of 180 feet and incentivizes the use of stealth technology and location on non-residential sites to minimize impacts on surrounding residential properties. Lattice towers are not allowed at all under the proposed ordinance standards.

Proposed Ordinance Compared to Other Peer Communities

The proposed ordinance's provisions are more restrictive than some comparable NC Communities' transmission tower regulations, yet more flexible than others (See **Exhibit D**). The proposed ordinance is very similar to the standards recently adopted by the town of Cary.

Future Need for Transmission Towers

In addition to researching comparable existing tower ordinance standards, staff also researched the future of transmission towers themselves to ensure that the proposed ordinance would remain

relevant in light of projected industry trends. A 2011 article in Popular Mechanics magazine quoted an engineer with Bell Labs predicting a thirty-fold increase in mobile data demand by 2015, while acknowledging that there will not be 30 times as many cell towers as there currently are. Bell Labs sees future solutions in the form of smaller antennae combined with signal amplification technology. Such antennae could be placed on tall buildings, bus stops, and similar structures to serve densely populated areas. However, according to an October 2013 article in PC World magazine, the trends underlying mobile data point to new capabilities coming online continually for years, and full-size cell towers are likely to remain critical infrastructure for decades. Small cells will allow carriers to better serve dense areas, but longer-range towers will still be needed for broad coverage. There will still be a need for additional transmission towers for at least the next few decades.

Summary

Overall, Planning staff believes the proposed ordinance will improve access to telecommunications technology for the citizens of Winston-Salem and Forsyth County while providing necessary safeguards for property owners, and is generally supportive of the changes being proposed.

RECOMMENDATION

APPROVAL

CITY-COUNTY PLANNING BOARD PUBLIC HEARING MINUTES FOR UDO-244 OCTOBER 10, 2013

Kirk Ericson presented the staff report.

During discussion by the Planning Board, the following points were made:

Jurisdictions are very different in how they approach this situation, but compared to similar jurisdictions, this proposal is somewhere in the middle regarding where towers are allowed.

This amendment would allow the cell tower industry to place towers in areas which they are currently prohibited in.

This is a petitioner initiated text amendment so to comply with State Statutes, it must be forwarded to the elected body within 90 days.

Staff provided technical assistance to the petitioners at the request of the Planning Board. The petitioners developed an ordinance which would allow towers where needed while providing safeguards for community aesthetics. Various groups have been briefed along the way and their opinions taken into consideration in developing the current proposal.

PUBLIC HEARING

FOR:

Tom Johnson, 4141 Parklake Avenue., Suite 200, Raleigh, NC 27612

- This proposal is more restrictive than the one which Cary adopted.
- The only real process change is to allow 150' stealth towers in residential districts with just a site plan or zoning office approval. *[NOTE: Stealth towers up to 150' would only be allowed in the proposed ordinance with zoning approval for residentially zoned sites with non-residential uses such as churches and schools.]*
- The industry sacrifices height and some types of use of these poles to have these allowed in residential areas and provide the services needed to residents in those areas.
- The demand for wireless services has increased dramatically in recent years.
- An average of 75% of emergency 911 calls in Winston-Salem and Forsyth County come from cell phones.
- Wireless data usage has also increased drastically with smart phones, tablets, etc.
- Under the current ordinance there is no incentive to use short towers or concealed towers. This amendment would provide incentives which would benefit the neighborhoods.

NOTE: Items to be deleted are indicated with a ~~strikeout~~; items to be added are indicated with an underscore.
UDO-244 November 2013

- We worked with staff and met with the Planning Board, the Community Appearance Commission, the Winston-Salem Neighborhood Alliance, and the Legislative Affairs Committee of the Greater Winston-Salem Chamber of Commerce. Our intent was to make sure the community understood the problem and the proposed solution and had the opportunity to ask questions.

- Non-residential uses in residential districts would be on large lots, primarily in places such as churches and schools. If we go onto vacant land in residential districts we have the oversight of the Zoning Board of Adjustment and the tower would have to be placed on large tracts of land, frequently heavily wooded.

Yvette Jones, 201 W. 5th Street, Winston-Salem, NC 27101

- Represented Keith Grandberry, President and CEO of the Winston-Salem Urban League and read statement by him.
- Many low income persons use their cell phones for basic phone and internet connections.
- Minority Americans face obstacles when trying to access mobile broadband and its associated benefits. Allowing them to access mobile communication is critical..
- We ask you to support this request in order to keep our most vulnerable citizens from being left behind in this information age.

AGAINST:

Melynda Dunigan, 1875 Mallard Lakes Drive, Winston-Salem, NC 27106

- I'm concerned about the lack of notification to property owners who are affected by it.
- It would change the way homeowners could develop the land they own and it would change the way their neighbors could change the land around them.
- This has an equivalent or greater impact than a zoning change which requires notification to nearby property owners.
- Staff is usually very conscientious about notifying principal parties impacted by text amendments. Yet no official notice has been given to owners of single family residential property that is affected by this amendment.
- This is similar to an overlay district which doesn't change the underlying zoning district but changes the way land can be developed. However, a change to an overlay district requires very extensive notification.
- There was an article in today's newspaper but that didn't provide ample opportunity for people to read the information, understand the impact of it, and make plans to come to today's meeting.
- Please deny this and send it back to Planning to do a staff initiated ordinance in a similar way to what was done for the tree ordinance and the sign ordinance.

Carolyn Highsmith, 3335 Anderson Drive, Winston-Salem, NC 27127

- I'm speaking on behalf of a community coalition which represents multiple neighborhoods in GMAs 2 and 3.
- We unanimously recommend that this text amendment be slowed down to include broader and more direct citizen input and citizen education.
- We want to see the best possible ordinance which will benefit the citizens of Winston-Salem.

- We ask you to deny this amendment and have a City-initiated amendment which will address the transmission tower issues brought before you today. We should also look at the broad reaching needs and benefits to residents.
- We propose that you create an ordinance and schedule meetings in every ward in the City to explain the impacts to the citizens of the City about cell phone transmission towers and how they would impact neighborhoods.
- The Coalition would also like to ask the petitioners to create three dimensional architectural models simulating GMAs 1, 2, and 3 of the residential areas in the City which would show the different types of cell phone towers and how the towers would be positioned.
- From these meetings we would ask that a citizens advisory committee be created to examine the issue, including looking at the Planning Board and City Council review process.

Eric Bushnell, 2113 Walker Road, Winston-Salem, NC 27106

- I live down the road from a new tower which didn't require the kind of notification I would like to have had.
- I also represent the Winston-Salem Neighborhood Alliance.
- There is interest in having a process which is staff initiated and citizen driven.
- The Alliance has 15 years of experience working with these issues. We've seen some decision making processes that ensure folks that their interests are adequately represented and some that leave people frustrated and angry.
- We've had the benefit of some time to think about this.

Greg Munger, 1629 Turfwood Drive, Pfafftown, NC 27040

- I represent 250 homeowners in the Wedgewood area.
- The staff report notes some safeguards for residents such as "allowing public input and a greater level of review scrutiny."
- However our main objection is summarized in another statement from the staff report: "The proposed ordinance incentivizes the use of shorter, concealed towers by making the review process easier for such towers."
- We would be opposed to the fast-track of any tower at all including stealth towers for four reasons:
 - It reduces or loses citizen control. It makes it easier for these companies to sneak in and install towers without people nearby being made aware of it.
 - It would decrease the value of our properties.
 - The possible long-term health effects.
 - Within four miles of where I live there are already 29 towers and 75 antenna.

WORK SESSION

During discussion by the Planning Board, the following points were made:

It would be helpful to give everyone impacted an opportunity to understand what is being proposed. The petitioner noted that even though they have already sought out as much community input as possible, they would be glad to continue the amendment request for 30 days in order to answer questions, provide more information, and get more input.

It would be helpful if the petitioner and some of the neighborhood representatives could come up with some ideas and venues where this could be discussed for the benefit of folks who feel like they haven't heard about this before.

We have written all the known neighborhood association contacts and urged them to have a zoning "watchdog" to check our website regularly for new zoning cases or proposed UDO text amendments. The website doesn't have to be checked every day - it could be at a specific time each month.

MOTION: Paul Mullican moved continuance of the UDO text amendment to November 14, 2013.

SECOND: Lynne Mitchell

VOTE:

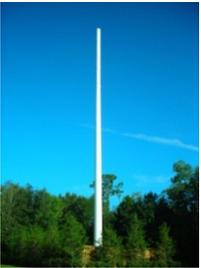
FOR: Arnold King, Clarence Lambe, Barry Lyons, Lynne Mitchell, Paul Mullican, Brenda Smith, Allan Younger

AGAINST: None

EXCUSED: None

UDO-244 Exhibit A

Proposed Transmission Tower Regulations

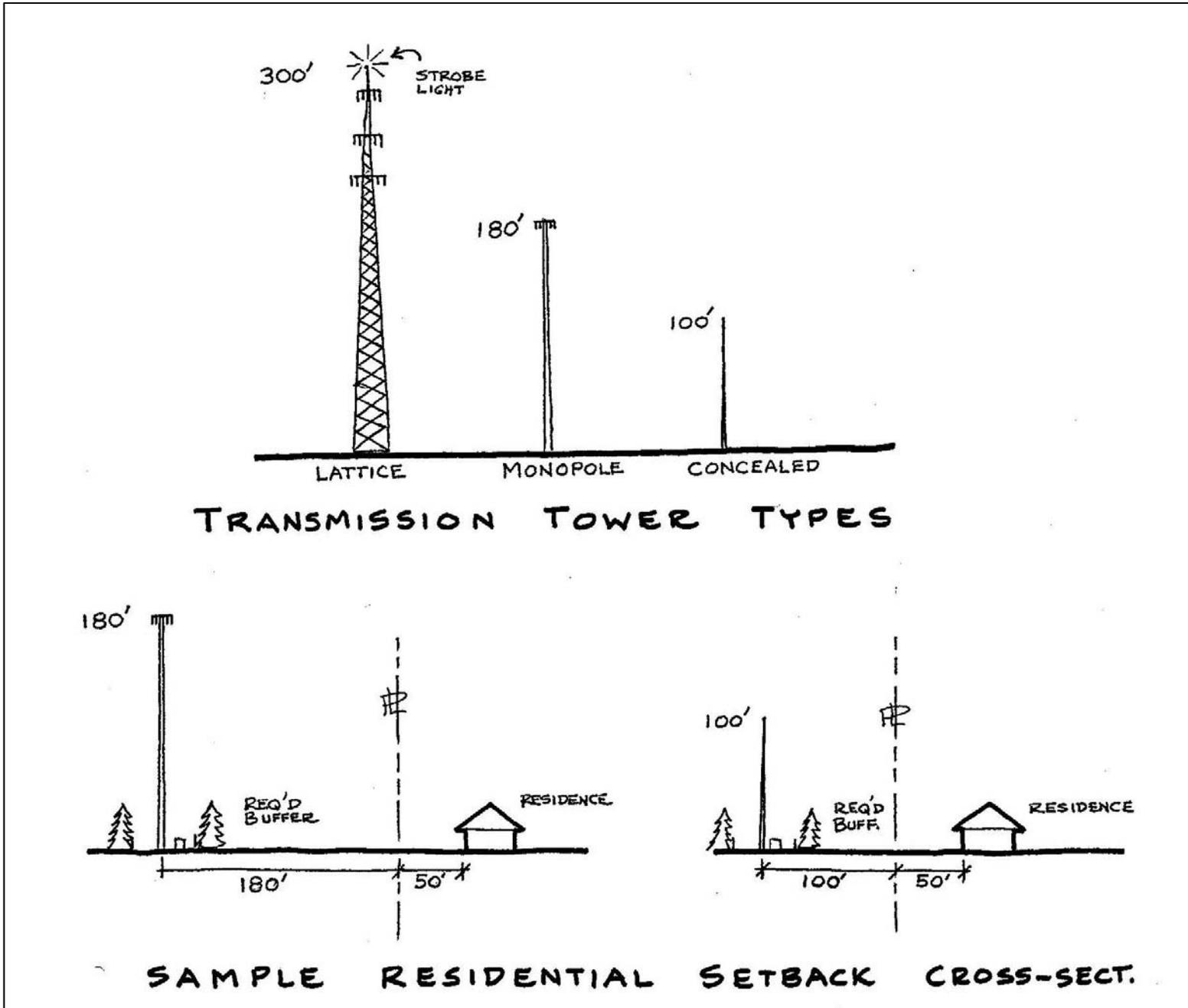
Zoning		Residential (with non-residential uses) ¹	Residential (vacant or with residential uses) ^{2 3}	IP ¹	LO, CPO, PB, LB, NSB ¹	Intense non-residential districts ¹
Tower Type						
Concealed	Maximum Height	Approval Process				
	199'	--	--	--	Z	Z
	180'	A	A	Z	Z	Z
	150'	Z	A	Z	Z	Z
Monopole	Maximum Height	Approval Process				
	199'	--	--	--	Z	Z
	180'	A	--	A	Z	Z
Lattice	Maximum Height	Approval Process				
	300'	--	--	A	A	Z

¹ 100' required setbacks from RS, RM, YR, AG, or H; 40' setbacks from other districts

² Tower height (100' minimum) required setbacks from RS, RM, YR, AG, or H; 40' setbacks from other districts

³ Only GMAs 3, 4 or 5

Transmission Tower Size and Setback Illustrations



Comparison of Residential Transmission Tower Standards

Zoning District	Existing Ordinance				Proposed Ordinance							
					On Sites with Non-Residential Uses				On Vacant Sites or Sites with Residential Structures			
	Max Height	Review Process Required	Allowed GMAs	Allowed Tower Types	Max Height	Review Process Required	Allowed GMAs	Allowed Tower Types	Max Height	Review Process	Allowed GMAs	Allowed Tower Types
YR	--	--	--	--	--	--	--	--	--	--	--	--
AG	Unlimited	BOA SUP	4, 5	All	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RS40	Unlimited	BOA SUP	4, 5	All	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RS30	Unlimited	BOA SUP	4, 5	All	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RS20	Unlimited	BOA SUP	4, 5	All	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RS15	--	--	--	--	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RS12	--	--	--	--	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RS9	--	--	--	--	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RS7	--	--	--	--	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RSQ	--	--	--	--	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RM5	Unlimited	BOA SUP	All	All	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RM8	Unlimited	BOA SUP	All	All	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RM12	Unlimited	BOA SUP	All	All	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RM18	Unlimited	BOA SUP	All	All	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
RMU	Unlimited	BOA SUP	All	All	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed
MH	Unlimited	BOA SUP	All	All	150'/180'	Zoning Permit/ BOA SUP	All	Concealed, Monopole	180'	BOA SUP	3, 4, 5	Concealed

UDO-244 Exhibit D

Summary of Comparable NC Residential Cell Tower Standards

City	Required Tower Review Process	Maximum Tower Height	Stealth/Concealed Tower Required	Notes
Winston-Salem (Proposed)	By right up to 150' for concealed towers on sites with non-residential uses; BOA Special Use Permit between 150'-180' for concealed towers with non-residential uses; BOA Special Use Permit for monopole with non-residential uses, up to 180'; BOA Special use Permit up to 180' for vacant residential lots and lots with residential uses in GMAs 3, 4, and 5	180'	No	100' minimum setback required for towers adjacent to residential zoning (towers over 100' require 1' of additional setback per 1' of tower height)
Cary	By right up to 199' with non-residential uses; By right up to 150' for vacant residential lot or with residential use; BOA Special Use Permit between 150'-175' for vacant residential lot or with residential use; Council SUP between 175'-199' for vacant residential lot or with residential use; Council SUP for non-concealed tower	199'	No	Non-concealed tower only allowed in large lot residential
Raleigh	Up to 250' By-Right; 250-510' BOA Special Use Permit	510'	No	
Durham	Development Review Board for concealed towers; BOA Special Use Permit for non-concealed towers	120' for large lot districts; 25' above max. building height for other residential districts	No	Non-concealed towers only allowed on 5+ acre lots in large lot residential districts; not allowed at all in other residential districts
Greensboro	By-Right	80'	Yes , if located within 1500' of a residential use	Only allowed in residential with nonresidential uses; not allowed on vacant residential land

UDO-244
AN ORDINANCE REVISING
CHAPTERS A AND B OF THE *UNIFIED DEVELOPMENT ORDINANCES*
TO AMEND REGULATIONS CONCERNING TRANSMISSION TOWERS

Be it ordained by the _____, North Carolina, that the *Unified Development Ordinances* is hereby amended as follows:

Section 1. Chapter A, Article II of the *UDO* is amended as follows:

Chapter A - Definitions Ordinance

Article II – Definitions

TRANSMISSION TOWER. A structure, either freestanding or attached to a building, principally intended to support and/or radiate or receive a source of non-ionizing electromagnetic radiation (NIER), and accessory equipment related to broadcast services, private radio services, cellular telephone services, and common carriers (as regulated by the Federal Communications Commission), including AM, FM, two-way radio, television and cable antenna television transmission and reception, and microwave transmission.

For purposes of this definition, broadcast services include AM and FM radio and high and low power television signals which can be received by anyone with a radio or television. Private radio services include land-mobile or two-way radio, fixed-point microwave, fixed wireless, and amateur public club station signals which can be received only with special equipment. Common carriers provide two-way and one-way paging services on the same frequency to many users.

The term transmission tower does not include electrical or telephone transmission lines or supporting structures, antennas of amateur radio (ham) operators, amateur club services licensed by the Federal Communications Commission, satellite dishes, and antennas less than sixty (60) feet in height with transmitting power of two hundred fifty (250) watts or less.

For the purposes of this ordinance, Concealed Antennae (Stealth Towers), Monopole, and Lattice Transmission Towers are all “Transmission Towers”.

TRANSMISSION TOWER WITH CONCEALED ANTENNAE (STEALTH TOWER). A telecommunications tower which completely conceals any associated antennae within the structure of the tower itself. Examples of stealth towers include, but are not limited to, towers intended to look like trees, unipoles without appurtenances/slick sticks, and bell towers.

TRANSMISSION TOWER, MONOPOLE. A self-supporting telecommunications tower consisting of a single pole without guy wires or other supporting devices, with exposed, attached antennae.

TRANSMISSION TOWER, LATTICE. A self-supporting multi-sided telecommunications tower generally characterized by an open structural frame and exposed, attached antennae.

Section 2. Chapter B – Zoning Ordinance, Article II – Zoning Districts, Official Zoning Maps and Uses is amended as follows:

NOTE: Items to be deleted are indicated with a ~~strikeout~~; items to be added are indicated with an underscore.
UDO-244 November 2013

manner that minimizes adverse effects including visual impacts on the landscape and adjacent properties.

- (i) Towers with concealed antennae with a height up to one hundred fifty (150) feet located on lots containing non-residential uses including but not limited to churches and schools in residential districts, up to one hundred eighty (180) feet in the IP district, and up to one hundred ninety-nine (199) feet for all lots in other nonresidential districts shall receive approval from the Zoning Officer.
- (ii) Towers with concealed antennae with a height of between one-hundred fifty (150) and one hundred eighty (180) feet located in residential zoning districts on lots containing non-residential uses, including but not limited to churches and schools, shall be approved through the Board of Adjustment Special Use Permit Process.
- (iii) Towers with concealed antennae with a height up to one hundred eighty (180) feet on vacant lots in residential districts or lots in residential districts containing a residential structure shall be approved through the Board of Adjustment Special Use Permit Process. In addition, such towers may be located in GMAs 3, 4, and 5, but not in GMAs 1 or 2.
- (iv) Monopine towers or any tower designed with the appearance of a tree shall only be located within existing stands of trees.

(b) Monopole Towers With Exposed Antennae. New monopole towers with exposed antennae shall be configured and located in a manner that minimizes adverse effects including visual impacts on the landscape and adjacent properties.

- (i) Monopole towers with exposed antennae with a height up to one hundred eighty (180) feet in the IP district or residential districts shall be approved through the Board of Adjustment Special Use Permit Process. Such towers shall only be allowed in residential districts on lots containing non-residential uses such as schools, churches, and similar facilities.
- (ii) Monopole towers with exposed antennae with a height up to one hundred ninety-nine (199) feet in nonresidential districts shall receive approval from the Zoning Officer.

(c) Freestanding Lattice Towers. Lattice towers and other freestanding telecommunications facilities not described in sections (a) or (b) above shall be configured and located in a manner that minimizes adverse effects including visual impacts on the landscape and adjacent properties.

- (i) Lattice towers, up to three hundred (300) feet in height, shall receive approval from the Zoning Officer in general use nonresidential districts, except for LO, CPO, PB, LB, NSB, and IP. Such towers in the aforementioned districts shall be approved through the Board of Adjustment Special Use Permit Process.
- (ii) New lattice towers shall not be permitted in residential districts.

(B) Prohibited Districts

~~Transmission towers shall not be permitted as a principal or accessory use in RS Districts in GMAs 1, 2, or 3.~~

(1) No Transmission Towers or antennae are allowed in the CB and CI Districts unless they are attached to buildings. No freestanding Transmission Towers are allowed in the CB or CI Districts. No transmission towers or antennae are allowed in the H or HO Districts. (W)

(C) **Fencing**

Security fencing at least six (6) feet in height shall be installed around the tower and any ground equipment or buildings.

(D) **Setback**

~~All towers, except concealed towers on vacant lots in residential districts. The tower shall be set back a minimum one hundred (100) feet from any adjacent zoning lot zoned RS, RM, YR, AG, HO, or H; and a minimum forty (40) feet from any other adjacent zoning lot or public street. Concealed (stealth) towers on vacant lots in residential districts shall be set back the height of the proposed tower but in no event less than one hundred (100) feet from any adjacent zoning lot zoned RS, RM, YR, AG, HO or H; and a minimum of forty (40) feet from any other adjacent zoning lot or public street. Buildings must meet the setback requirements for principal structures of the underlying district.~~

Alternative compliance. A developer may propose a setback that varies from the strict application of the provisions of this section in order to accommodate the unique character of the site and the surrounding area. Application for alternative compliance shall be made in an application to the Board of Adjustment. When evaluating alternative compliance, the Board of Adjustment may consider the following factors and should only approve the request upon a finding that the proposed setback fulfills the intent and purposes of this section as well or better than would strict conformance with the requirements of this section:

- a. Topography
- b. Surrounding development plans
- c. Existing or proposed development on the property
- d. Existing and proposed screening and buffering
- e. Distance to existing residential structures
- f. Vegetation and tree canopy
- g. Visibility of the tower from the proposed location from public rights of way
- h. Other site development issues

(E) **Signage**

No business signs, billboards, or other advertising shall be installed on the tower.

(F) **Bufferyard**

~~Where the transmission tower is located within two hundred (200) feet of an adjacent zoning lot or street and there is no intervening structure to block the view of the tower base and improvements, a type IV bufferyard as described in Section B.3-5 shall be installed around the outside of all improvements on the site, including the tower, any ground buildings or equipment, and security fencing, so as to provide spatial separation and create a visual block from adjacent properties and streets.~~

(1) Transmission towers adjacent to residential zoning. Where the transmission tower is located within two hundred (200) feet of an adjacent

residential zoning lot or street and there is no intervening structure to block the view of the tower base and improvements, a type IV bufferyard as described in Section B.3-5 shall be installed around the outside of all improvements on the site, including the tower, any ground buildings or equipment, and security fencing, so as to provide spatial separation and create a visual block from adjacent properties and streets.

(2) **Transmission towers adjacent to nonresidential zoning.** Where the transmission tower is located within two hundred (200) feet of an adjacent nonresidential zoning lot or street and there is no intervening structure to block the view of the tower base and improvements, the security fencing required by Section B.2-5.79(C) shall be opaque, and no vegetative screening shall be required.

(G) Control of Land

All land necessary for improvements, including the transmission tower, buildings, fencing, and landscaping, shall be in ownership of or under lease by the tower operator.

(H) Exemptions

(1) **Attached or Incorporated in a Structure.** Transmission towers located on nonresidential structures or incorporated into other structures, which structures are devoted to a use not related to the transmission tower, are exempt from the security fencing, setback, bufferyard, and control of land requirements of this section provided they are located in a nonresidential zoning district that permits a Transmission Tower as a principal use. All ground equipment or buildings shall be placed underground or screened from view. These towers are also exempt from any requirements for a Special Use Permit or Planning Board Review as an accessory use.

(2) **Utilities Rights-of-Way.** Transmission towers located within electrical utility company right-of-way are exempt from the setback and bufferyard requirements of this section.

(3) **Telecommunications Antennae Completely Within Buildings or Structures.** Telecommunications antennae completely enclosed within buildings or structures (such as church steeples) are exempt from the requirements of Section B.2-5.79, except all exterior ground equipment or buildings shall be placed underground or screened from view.

(I) Co-Location

(1) **Other Structures.** Co-location of antennas of more than one service provider on individual transmission towers is encouraged, subject to the verified structural and mechanical capabilities of the tower. If no other towers, buildings, or other structures exist within the applicant's tower site search area that are structurally capable of supporting the intended antenna or configuration of antennas or meeting the applicant's necessary height criteria or provide a location free from interference of any nature, then satisfactory

evidence to that effect shall be submitted by a qualified expert at the time of application for the earliest required approval.

(2) **Other Users.** All transmission towers installed after the effective date of this Ordinance shall be structurally and mechanically capable of accommodating the antenna or array of antennas of more than one user/transmitter, unless the tower is incapable of supporting more than one user/transmitter due to the design of the tower which is incorporated into another structure in compliance with Section B.2-5.79(H). Monopoles shall accommodate a minimum of two total users, lattice or other types of towers shall accommodate a minimum of three total users. These users shall be in addition to the local jurisdiction which may place devices per Section B.2-5.79(K). Certification as to the tower's structural and mechanical capability to accommodate collocation shall be provided by a professional engineer or other qualified professional.

(3) **Access. (F)** Access to available technically feasible space on any towers shall not be denied to any competitive users or service provider, unless the additional use would cause objectionable interference or present a danger to the structural safety or stability of the tower.

Access. (W) Access to available technically feasible space on any towers shall not be denied to any competitive users or service provider.

(4) **Nonconforming Uses.** Requirements for co-location on transmission towers which are nonconforming are contained in Section B.5-2.3(E).

(5) Co-location shall be defined in conformance with state and federal law.

(J) **Termination of Use**

A tower that is no longer used for communication purposes must be removed within one hundred twenty (120) days of the date it is taken out of service.

(K) **Easement for Public Facilities**

At the request of the local jurisdiction, an easement shall be granted to the jurisdiction to place cameras, monitors, two-way mobile radio equipment, or other desired telecommunications devices; however such devices may be restricted so as not to affect the functioning of the antenna or array of antennas of the tower operator or service provider.

(L) **Placement on or Within Large Public Structures**

Notwithstanding the provisions of Table B.2.6, nonfreestanding transmission towers meeting the provisions of Section B.2-5.79(H) or located on large, non-habitable public or utilities structures, including but not limited to water towers and trestles of major electrical distribution lines, are permitted under the following conditions:

(1) **Zoning Permit.** A zoning permit from the Director of Inspections or his/her designee is required.

(2) **Compliance with Use Conditions.** Use conditions regarding signage must be complied with.

(M) **State Plane Coordinates**

All site plans submitted in conjunction with requests for transmission towers shall include the location of the proposed tower by State Plane Coordinates and above ground level and sea level elevations, based on 1983 North America datum. All towers operated by the applicant in Forsyth County and within one quarter (¹/₄) mile of its borders shall also be similarly located and submitted with the site plan.

(N) **Color, Finish, Lighting**

Unless otherwise required by the Federal Aviation Administration (FAA), the finish of the transmission tower shall be non-shiny or glossy; any painted color shall be muted or neutral; and no lights or strobe lights shall be placed on the tower. If lights are required by the FAA, the least obtrusive lighting option available under FAA guidelines shall be installed; white strobe lights are discouraged from use.

(O) Interdepartmental Plan Review Requirement

Transmission towers requiring a Special Use Permit per Table B.2.6 and further refined in section B.2-5.79(A), shall complete an interdepartmental plan review prior to applying for a Special Use Permit from the Board of Adjustment.

Section 3. Chapter B – Zoning Ordinance, Article VI – Administration and Amendments is amended as follows:

Article VI – Administration and Amendments

6-1 Administration

6-1.4 BOARD OF ADJUSTMENT

(A) **Special Use Permits Authorized by the Board of Adjustment**

- (1) **Board of Adjustment Review.** The Board of Adjustment shall review all requests for permits as designated in Table B.2.6 and Section B.2-5.
- (2) **Planning Board Report.** Applications for special use permits may be approved by the Board of Adjustment after such board receives a report from the Planning Board and holds a duly advertised public hearing in each case, except that the Planning Board shall not be required to review and report on applications for:
 - (a) Riding Stables per Table B.2.6;
 - (b) Kennels, Outdoor per Table B.2.6;
 - (c) Shooting Ranges, Outdoor per Table B.2.6;

NOTE: Items to be deleted are indicated with a ~~strikeout~~; items to be added are indicated with an underscore.
UDO-244 November 2013

- (d) Manufactured Homes Class A, Class B and Class C per Table B.2.6;
- (e) Expansion or Conversion of a Nonconforming Use per Sections B.5-2.3(B) and B.5-2.4(A);
- (f) Accessory Uses as follows:
 - (i) Dwelling, Accessory (Detached) per Section B.2-6.4(C);
 - (ii) Separation, Processing, Storage or Wholesale Sale of Materials in LCID's per Section B.2-5.41(N); or
 - (iii) Home Occupations in Rural Areas (GMAs 4 and 5) per Section B.2-6.4(D)(2)(b);
- (g) Accessory Structures as follows:
 - (i) Exceeding size limits for accessory structures per Section B.3-1.2(E);
- (h) Parking reductions for churches per Sections B.2-5.21(D) and B.2-5.22(C);
- (i) Veterinary Services per Table B.2.6;
- (j) Reserved.
- (k) Keeping of horses, mules, donkeys, goats, sheep, or cattle (W) per Section B.3-11.4;
- (l) Child Daycare, Large Home; ;
- (m) Transmission Towers per Table B.2.6.

Section 4. This ordinance shall be effective upon adoption.