

Albemarle County Planning Commission
June 2, 2015

The Albemarle County Planning Commission held a public hearing on Tuesday, June 2, 2015, at 6:00 p.m., at the County Office Building, Auditorium, Second Floor, 401 McIntire Road, Charlottesville, Virginia.

Members attending were Bruce Dotson, Karen Firehock, Tim Keller, Mac Lafferty, Vice Chair; Thomas Loach, Cal Morris, Chair; and Richard Randolph. Julia Monteith, AICP, Senior Land Use Planner for the University of Virginia was absent.

Staff present was Bill Fritz, Manager of Special Projects, Sarah Baldwin, Senior Planner, Amelia McCulley, Director of Zoning/Zoning Administrator; Wayne Cilimberg, Director of Planning; Sharon Taylor, Clerk to Planning Commission and Greg Kamptner, Deputy County Attorney.

Call to Order and Establish Quorum:

Mr. Morris, Chair, called the regular meeting to order at 6:00 p.m. and established a quorum.

Public Hearing Items

ZTA 2015-00006 Wireless – Antenna size and mounting standards. The Planning Commission will hold a public hearing to receive comments on its intent to recommend adoption of an ordinance that would amend Sec. 18-5.1.40, Personal wireless service facilities; collocation, replacement, and removal of transmission equipment, of Chapter 18, Zoning, of the Albemarle County Code. This ordinance would amend Sec. 18-5.1.40 by increasing the maximum antenna size allowed from 1152 to 1400 square inches, and by increasing the maximum distance an antenna may project from the structure to which it is attached from 12 inches, measured from the face of the antenna, to 12 inches for the closest point and 18 inches for the farthest point, measured from the back of the antenna. A copy of the full text of the ordinance is on file in the office of the Clerk of the Board of Supervisors and in the Department of Community Development, County Office Building, 401 McIntire Road, Charlottesville, Virginia. (Bill Fritz)

Mr. Fritz presented a PowerPoint presentation to summarize the executive summary regarding ZTA-2015-06 Wireless – Antenna size and mounting standards. (See PowerPoint presentation)

Proposal

This is an applicant initiated zoning text amendment to:

- Increase the by-right size of an antenna from 1,152 square inches to 1,400 square inches. It is an increase of 248 square inches.
- Change the measurement for standoff from the front of the antenna to the back of the antenna.

The applicant provided photographs that show what an antenna size would look like at different distances. He pointed out a photograph taken at 50 feet, 100 feet and 150 feet. They also provided some photo simulations where they took an existing tower and array and provided information to show what the new antenna sizes would look like.

The applicant recommended that the ordinance be amended to change the measurement from the front to the back of the antenna. There was no maximum distance. Staff is proposing this maximum distance. He just wanted to be clear that is not something the applicant proposed. He pointed out the antenna is not always pointed in a straight direction, but are tilted in both the X and the Y axis. What staff is proposing is that there be both a 12 inch and an 18 inch so they could be set off 12 inches, but the back could not be more than 18 inches that would allow these kind of angles. It would also allow a down tilt.

This is something the Planning Commission has discussed in the past. Staff is recommending approval of it. In the staff report staff notes that the sizes have not changed since the original adoption of the ordinance. There have been some substantial changes in technology since the adoption of the Wireless Policy, which goes back to 2000, and staff believes this to be an appropriate text amendment. Staff recommends approval of ZTA 2015-06.

Mr. Morris invited questions for staff.

Mr. Loach asked on the 18" maximum staff says it covers both the rotation and tilting. He asked does it cover all of the potential that they have now with the equipment or what percentage of that would it cover. In other words, is the 18 inches is that 80% of what they could do.

Mr. Fritz replied that he would let the applicant say what sort of limitations it might place on them. What staff was trying to do was still maintain that concept of keeping it close and minimizing the visibility.

Mr. Lafferty asked if the antenna on the right bottom showing the 12" and 18" be compliance

Mr. Fritz replied that it was intended to be drawn that way and he hoped it does. The idea is that no portion of the back of that antenna is supposed to be more than 18" away. He sees what Mr. Lafferty is saying there the lower left is a little bit more than 12". The idea there was that it would have to be 12".

Mr. Lafferty asked how restrictive is this be to the present antenna design.

Mr. Fritz replied it was more permissive than the existing because right now it is measured to the front of the antenna. So whatever the depth of that antenna is included in that 12". So if they had an 8" deep antenna you would only have 4" to do all the mounting brackets and equipment between the back of the antenna and the tower itself.

What staff is proposing is to push that out and give them the 12" so they can get a proper mounting bracket in there and some angles.

Mr. Lafferty asked if the 18" was to the back of the antenna.

Mr. Fritz replied that everything is measured to the back of the antenna in the proposed ordinance.

Mr. Lafferty asked if the antenna could be as thick as it needs to be.

Mr. Fritz replied yes, the antenna could be as thick it needs to be. Generally he thinks what they are seeing really is a maximum of 10" to 11". That is the thickest one he thinks he has seen. Most of the time it is in the 6" to 8" range. However, the applicant can correct me.

There being no further questions for staff Mr. Morris opened the public hearing for applicant and public comment. Mr. Morris invited the applicant to address the Commission.

Valerie Long, with the firm of Williams Mullen representing Ntelos Wireless, said Ntelos is the applicant on this zoning text amendment. They discussed this issue generally with the Commission on a couple of different occasions over the past few months. It came up particularly during prior review of other wireless ordinance amendments about the fact that Ntelos was working on a large number of equipment upgrades for all of their sites in Albemarle County, which is at least 50. They are working to comply with new technological upgrades. They need to provide better service and more service for long term evolution 4G service in essence for their customers. They are also required under federal law to provide service to their legacy customers, as the industry calls it. So some people don't yet have a smart phone or don't want or need a smart phone. They have an old fashion flip phone perhaps. That is a 2G phone or does not use the same exact technology that maybe Mr. Morris with his I-phone 6 uses or whatever he has.

Ms. Long explained there is different technology and different requirements. So all of those different types of service require a separate internal component of their antenna. In order to find an antenna that worked for all those needs Ntelos had to find one that could handle more ports in its antennas for the different cables that have to go up inside them. As a result they are thicker and wider than they have been in the past. She referred to some photo simulations, some which Mr. Fritz just showed them, where in some of their sites they are replacing antennas that are 17 years old with newer technology. The county approved one application that they had just a few months ago in Piney Mountain. They may recall it was a Crown Castle tower. Ntelos' equipment has been on the tower for 17 years, and they were just upgrading it. The photo simulations did not show a real material difference in terms of visibility.

Ms. Long pointed out generally they are talking about flush mounted antennas that are at tree top tower height. They do have some old towers that were approved prior to the

county's ordinance being adopted in 2004. Even earlier than that Ntelos was actually the first carrier in the county to migrate to a tree top tower design facility on a voluntary basis. So Ntelos started doing that long before any other carrier did and worked very closely with Mr. Fritz and other members of the staff back then to migrate to that design. The zoning text amendment that Ntelos submitted has two parts. The first is to increase the maximum panel area to 1,400 square inches. Right now the ordinance has somewhat of a strange number. It is 1,152 square inches. She was around when that number was established. It was somewhat random. It was back in about 2000. However, in 2004 was when the ordinance was first adopted. That was the largest antenna size that any carrier was using at the time, which was Alltel. Someone literally looked at the plans and said the biggest one they have seen is this big and that will be the number we plug in. So that is why it is not a round number. That worked for all the carriers for a long time. They had to work hard to find antennas that would fit that limit. It worked for a while, but now with the new technology requirements it just no longer works.

Ms. Long pointed out the photos were taken by Ntelos staff outside their offices. (See Power Point presentation) On the right hand side is a panel that meets the 1152 square inches in the current ordinance. On the left side, which was literally a piece of cardboard and not an actual antenna just so they know. That one was 1400 square inches taken at 50 feet. You can tell in the one on the right there is an adult standing behind one of them. It was not actually intentional that person was visible, but it does provide a bit of scale. Likewise, the same photograph was taken at 100' and then again at 150', which is usually about the tallest they will see of any of these treetop towers in our community. Ones at that height are pretty rare. The one at Piney Mountain that they did was a 150' tower. So they wanted to show that just for context. She knew Mr. Fritz showed the photographs Commission already, but she just wanted to kind of walk through them.

Ms. Long said what are they talking about is 1152 square inches and an increase to 1400 square inches. They did the math and it is 248 square inches. She was a very visual person and asked what does that mean. That is why she liked the pictures that Ntelos prepared. She pointed out the difference between 1152 square inches and 1400 square inches. They tried to be very modest with our proposal and only ask for what they really needed. It may seem silly that they need to go through a whole zoning text amendment just for increases of this size. If they don't meet this requirement and the ordinance is not changed, then every one of Ntelos' applications to upgrade its antennas that application will go from being a Tier I building permit to a Tier III special use permit application. That is why they had to bring the Piney Mountain application to you. They are hopeful because the Commission has made comments in the past that they did not think it was necessary for all of those applications to be a full blown special use permit especially when they have at a minimum 50 of them. She knows this is a challenge for other carriers in the community as well.

Ms. Long explained the second component of the Ntelos zoning text amendment is to update the way that flush mounting standards are considered and applied. Right now, as Mr. Fritz indicated, the flush mounting requirement it has to be no more than 12" to

the outside of the panel antenna. It is a very simple diagram obviously. It does not show the mounting brackets that are required. That is why they included the photograph to try to show it is not like the antennas can be glued to the pole. They wish they could because it would be a lot easier to comply. But, they are extremely heavy due to all of the cables that are required. On one of the newer ones, there are two rows of ports which is why it is thicker. Early generation antennas only had to have one row of ports, and did not need to be as thick. She pointed out a pipe mount that goes up the side of the pole and the antennas get attached to it. There is a mounting bracket. She has another diagram she will show in a minute. It has always been measured to the outside of the panel antenna. They have been able to work with a lot of effort to comply with that over the last 11 years since the ordinance was created in 2004. But, as the panel antennas have become thicker in order to comply with the technology needs it is just no longer possible to meet that requirement. This is an exhibit. She would show the Commission a blow up of each of these in a minute that Ntelos prepared to better explain how these panel antennas get mounted to the pole. She noted the pole, the mounting brackets the pipe mount that is part of the mounting bracket that permits the tilting of the antennas and the antenna itself. There could be three different antennas that go on each of their poles right now. However, it depends on the site because sometimes they can do it all in one antenna and sometimes they need different antennas on each pole. This is one where measured to the outside face of the antenna is 20 1/2 ". But, if you measure to the inside of the antenna they can just barely make it work at 12". Likewise, this is a different antenna that they use that is 18 1/2" to the outside face, which is not quite as thick. Then there is an earlier 16" version that they use which is easier to work with.

Ms. Long explained some simulations of sites they have submitted to staff, which are some of the handfuls they have mentioned that are now called exempt collocations. Next is one where Ntelos is upgrading its equipment. Because of the new FCC regulations this is one that accounts as being an exempt collocation. It is challenging to now explain the way the ordinance is now interpreted and handled. But, it does not violate the concealment elements of this tower; therefore, it is exempt. It is our opinion that there is no visual difference in the antennas. In another example that has been submitted and the Commission has not seen, it shows the difference. The antenna on the left is the one that is larger than the ordinance permits. The one on the right is in compliance. So it is a very small difference. Next, she noted a photo simulation of equipment upgrades Ntelos is planning to a building in Crozet. (See PowerPoint presentation presented by Valerie Long) She would be happy to answer questions. They very much appreciate your consideration of this proposal.

Mr. Morris invited questions for Ms. Long. There being none, Mr. Morris invited public comment.

Lori Schweller, an attorney with LeClair Ryan representing Verizon Wireless, said she had a few slides that she wanted to bring up. (See PowerPoint presentation) First, they certainly do support an increase in the size of antennas and the standoff from the monopole. They probably will recall in 2012 through 2014 she visited the Commission and the Board of Supervisors pretty much monthly as Verizon Wireless was adding LTE

antennas to provide 4G service from all of its existing facilities. As Ms. Baldwin and Mr. Fritz know well it takes a lot of work to do a very simple thing that she thinks this ordinance will help Ntelos do much quicker. However, they have a simple request and she did not know whether it can be accommodated in this process or if readvertising is necessary. She did not think so. However, as they brought up in a meeting of April 8th Verizon Wireless' LTE antenna is the larger one as shown in the picture on the slide. This is its LTE antenna. They have seen us many times asking for special exceptions at the Board, and they have always been approved every time. The antennas are just a little bit larger, 18" X 18" larger than the size that is being proposed in the zoning text amendment. So our request, of course, is that the maximum be 1800 square inches to make this meaningful for Verizon Wireless.

Ms. Schweller pointed out Verizon Wireless is licensed to provide four technologies in the county. LTE, which is the 4G service AWS and then as Ms. Long explained the legacy 2G and 3G, which are PCS and Cellular. To provide all of those on one level on a monopole requires two antennas per sector. The reason this is important is because you can then if you provide all of your technologies at one place on the monopole you don't use up several different places. When they came to the Commission asking to install our LTE antennas they were extending the pole or placing the LTE antennas under the existing array. So they using at least two places and sometimes three on one monopole. For a new facility or a complete replacement of all the antennas on a facility it makes a lot of sense to consider these dimensions if they want one carrier to get everything at one point on the monopole. It is just a suggestion. To do that requires not only a greater size in the maximum antenna size but greater standoff. Joseph Nekambuza, the Verizon Wireless RF Engineer who spoke to the Commission in April is here again to explain this drawing in case you have any questions. But, she would be happy to take questions as well.

Mr. Morris invited questions.

Mr. Dotson asked what the standoff distance is that they are proposing as an alternative.

Ms. Schweller replied they were proposing 24". As they can see in the drawing if they have two (2) 18" wide antennas on a face and they have to be separated to avoid interference, that is 52" total on each side you need to have a larger pole than 18" in diameter. It has to be 24" because of the geometry here. If they are going to mount those there and tilt them at all it has got to be more than 18". As they can see they are showing 18.75" as constructed. But, if it is tilted it is going to be more like 24" to the back of the antenna.

Mr. Lafferty asked how many poles they will have to replace so they will have the 24" diameter.

Ms. Schweller replied they don't have any proposal to replace any poles. This suggestion is made because for new structures it makes sense to be able to put everything at one level. They are fully complying with the ordinance now by simply

adding another set extending the height of the existing poles. This proposal would allow us to put everything at one height for a new pole and possibly allow collocation for other carriers below that.

Mr. Lafferty asked what is coming down the road. He asked if 5G is coming down road.

Ms. Schweller pointed out the high priority for Verizon Wireless is small cells right now. They have been working in all the jurisdictions in Virginia to install very small antennas in urban areas. Where there is a lot of demand you need to off load from towers to satisfy all of the data transmission. That is a very high priority. However, they still need coverage in some of the rural areas that simply don't have enough.

Mr. Lafferty asked if in antenna design is there anything coming down the road that will change the antenna design.

Ms. Schweller replied as Joseph Nekambuza can describe more fully the antennas that they are using on towers to provide LTE are bigger and larger than the ones that they have used for PCS and Cellular in the past to better focus the signal. So the trend in the micro sites is bigger antennas at the same time that they are doing micro cells for urban areas. So there are two things happening at the same time.

Mr. Morris invited further public comment. There being none, he closed the public comment to bring the matter before the Planning Commission for discussion and action. He posed Ms. Schweller's question to staff.

Mr. Fritz replied what Ms. Schweller is proposing is different from what is advertised. He noted the Commission could entertain it and direct staff to come back to you and work with the County Attorney's Office and figure out what they need to do in order to have it properly advertised.

Ms. Firehock said that it sounds significant enough that it will have to be re-advertised.

Mr. Morris asked Mr. Kamptner what he thought.

Mr. Kamptner replied that it does have to be re-advertised. He was looking at the resolution of intent which likewise was focused on the point of measurement and the increase as proposed in the zoning text amendment.

Mr. Lafferty asked will Ntelos agree to this since it delays them.

Mr. Morris asked Ms. Long if Ntelos would agree to this.

Ms. Long replied that they certainly have no objection in substance to this. It certainly would provide even greater flexibility. Our only concern is one of timing. Ntelos has a number of applications pending and a large number that they have been holding while this amendment was under review.

Mr. Fritz suggested one thing they might do is move forward with this application and then do another resolution of intent.

Ms. Long said they certainly appreciate that and do not want to do anything that would make it harder for any other providers.

Mr. Morris said they fully understand. He thanked Ms. Long very much.

Ms. Firehock said she was just curious from staff's perspective. She was really surprised to get the email about the additional size. She did not understand how they have spent so long on this and yet here they have a proposal that they don't have the right size in our intent. She was not saying that staff has done anything wrong, but was just trying to understand.

Mr. Fritz pointed out this is one of those topics that they took to the Board of Supervisors and said we would like to work on this. Then what they would have done is they would have gone out and done more research to find out what options there were, what the different providers were doing and so on and so forth. They would have done all of that work. That was not what happened. Instead what happened was staff got a specific request for 1,400 square inches and 12 inches, and that was what they then were reviewing because it was an applicant proposal. So staff was not going beyond that just because that was what they had. Staff had specifically asked the Board to direct us to do this kind of work and they had not. So staff was limited to reviewing what was submitted before us.

Mr. Dotson asked what staff's reaction was and are the numbers compatible or pushing the point.

Mr. Fritz replied his initial reaction was that he would like to do some more work. He was not sure that the size of the antennas is necessarily going to be a big visual impact. This is another one of those things of cumulative impact. So increasing the size alone – okay; increasing the standoff alone – okay; and increasing the tower diameter from 18" to 24" – okay. But, when you take all of that together what is the visual impact going to be. He was not sure it is going to be that great, but that is the kind of thing they would want to analysis. He was not comfortable giving the Commission an answer right now that it is or is not appropriate.

Mr. Loach said if they increase the size as was proposed here, then do they limit it to the one array of towers. When they say visual impact now that she was talking about collocation so now they are not only making it larger they are making it larger by two.

Mr. Fritz pointed out that was one of the things that they talked about when they asked the Board to look at this. They could increase the total antenna size permitted on a tower or increase the individual antenna size or do they allow one array to be one size and another array to be another to minimize those visual impacts. Yes, those are the things that staff should look at. Staff would want to look at those things and give the

Commission the option so that they could see what the different impacts are and make a decision.

Mr. Morris noted right now they need to focus on the application in front of us. He asked if anyone had a motion.

Motion: Mr. Randolph moved and Ms. Firehock seconded to recommend adoption of ZTA-2015-00006 Wireless – Antenna size and mounting standards.

The motion passed by a vote of (7:0).

Mr. Morris noted that ZTA-2015-00006 Wireless – Antenna size and mounting standards would be forwarded to the Board of Supervisors with a recommendation for approval to be heard on July 8th.

Mr. Morris asked if anyone would like to also encourage a recommendation that this be looked at for the additional information to be looked at.

Mr. Lafferty said with the new dimensions they have an opportunity to look at the visual impact, and then he would assume that would come back to the Planning Commission.

Ms. Firehock suggested the Commission needs to make a directive recommendation. She suggested the statements from Verizon Wireless be considered about the size of an additional amount. She suggested that not only that comment or proposal be considered but that the staff have adequate time to research the other issues they brought up tonight so that they are not once again on some very narrow focus when they would also need to look at a couple of other things.

Mr. Lafferty agreed.

Ms. Firehock said she did not want to sit here and list what the staff should do. She thinks staff knows because Mr. Fritz just enumerated that.

Mr. Cilimberg suggested it was probably best if your inclination is to have staff look at that and for us to draft a resolution of intent and bring it back.

Mr. Kamptner suggested that staff could bring the resolution of intent back on June 16th.

Mr. Morris agreed that would be great if they would.

Mr. Randolph said he would totally agree. He was going to say earlier that there are three things. First, how they look at the antennas is as important because if they look at it percentage wise the growth of antennas that the Commission just went ahead and authorized is 22.5'. Some people would go oh my goodness 22.5', but, the common sense rule as the Commission saw visually it does not look that much larger. So it is very important that they be able to look at this in the same way as they just looked at this application. In other words, have the same visuals for the public as well as the

Commission in order to make an informed decision. Secondly, at all costs they need to avoid Tier III special use permits because otherwise they are just going to constantly be sitting here and reviewing applications that they all agree are really pro forma in most cases.

Ms. Baldwin asked to make a small clarification. With our last ordinance changes for Wireless they did make that change that it would be a Tier I with a special exception. So they did slowly get to another process and it is not the special use permit Tier III.

Mr. Randolph noted he thinks currently there is an excellent partnership between Mr. Fritz, the staff, and the industry and they are pursuing policies that are both time and cost effective for the applicants. At the same time they are trying to safeguard the best interest of the public within the constraints created by the 1996 Telecommunications Act where they don't have a lot of local input and local authority. Therefore, he thinks it is a balancing act. However, the balancing act is one where they are pretty comfortable with the changes that are occurring in the industry and situations in most context.

Mr. Morris said it was a good comment. Before moving to the next agenda item Mr. Morris said he would call for a five minute recess.

The Planning Commission recessed at 7:29 p.m. and the meeting reconvened at 7:35 p.m.

(Recorded and transcribed by Sharon C. Taylor, Clerk to Planning Commission & Planning