MCPB
Item No. 9
Date: 6-26-14

Zoning Text Amendment (ZTA) No. 14-04, Accessory Commercial Uses - Antennas

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Completed: 06/19/14

Description

ZTA No. 14-04 would establish a new term "small cell antenna" and would allow small cell antennas to be installed on existing structures under certain circumstances under the limited uses standards of Section 59.3.5.14(C)2 of the newly adopted County Zoning Ordinance (effective October 30, 2014). A small cell antenna would have a maximum height of 3 feet and a maximum width of 2 feet. Currently, the maximum size of an antenna for a directional or panel antenna is 8 feet in height, with the maximum width being 2 feet. The maximum size of satellite or microwave dish antennas is 8 feet in diameter.

Where an antenna on an existing structure is allowed as a limited use, a small cell antenna would be permitted on any structure, at any height, in any zone when located at least 60 feet from a Detached Residential dwelling.

Summary

Staff recommends approval, with modifications, of ZTA No. 14-04 to allow small cell antennas to be installed on any structure, at any height, in any zone when located at least 60 feet from a Detached Residential dwelling. The proposed changes include: plain language clarification that antennas must be located on existing structures; a recommendation requiring a minimum antenna installation height of 15 feet; and a recommendation that a small antenna placement should be 60 feet from a Detached Residential dwelling and a duplex building type.

Background/Analysis

Cellular Technology-In General

The most familiar component of a cellular network is the cell tower and the antenna installations on other tall structures such as multi-story buildings and municipal water towers. These large cell sites, often referred to as "macro" cell sites, form the core of the macrocellular network, enabling wireless service providers to deliver voice, text, and broadband communications to wireless subscribers. Macrocell sites are effective for covering large geographic areas with relatively high capacity, because the antennas are typically mounted on tall towers or the rooftops of tall buildings and transmit radiofrequency (RF) signals at high power levels. They are also typically capable of hosting multiple

wireless service providers (co-locations). However, although a tower or building-mounted macrocell can be upgraded over time, coverage areas cannot typically be expanded.

Various *small cell* technologies are being deployed to provide coverage in targeted locations, moving radios closer to the subscriber, and or to providing additional call and data-handling capacity in areas with concentrated demands for wireless services. It is typically deployed to enhance existing macrocell coverage. Depending on the particular network architecture and the environment in which it is deployed, the small cell may include equipment in addition to the antennas (e.g., amplifiers, remote radio heads, signal converters and power supplies). Small cells are typically mounted or installed in low elevations when deployed outdoors (for example, on a utility pole or the side of a building).

Requirements for Location of Antennas on Privately owned land –Montgomery County

As defined under Section 59.3.5.14(C), an antenna on an existing structure means one or more antennas attached to an existing support structure, such as a building, a transmission tower, a monopole, a light pole, a water tank, a silo, a barn, or an overhead transmission line support structure. Antenna on Existing Structure includes related equipment.

Under the provisions of Section 59.3.5.14(C)2d, an antenna may be installed on a rooftop or structure based on the following limited provisions: a) the building is at least 30 feet in height in any Residential Multi-Unit, Commercial/Residential, Employment, or Industrial zone; (b) the building is at least 50 feet in height in any Residential Detached zone and the structure is not a detached house, duplex building type or a building or structure accessory to either; or (c) the antenna is mounted on the facade of the building at a height of at least 30 feet in any Residential Multi-Unit, Commercial/Residential, Employment, or Industrial zone, and at a minimum height of 50 feet in any Residential Detached zone where the building or structure is not a detached house, duplex building type or a building or structure accessory to either. As introduced in ZTA 14-04, these parameters would not be required of a small cell antenna.

ZTA 14-04 Provisions and Staff Comments

Under Subsection "(e)", a small cell antenna would be allowed on any structure, and at any height in any zone where antennas are permitted as a limited use when the antenna is located at least 60 feet from a Detached Residential dwelling. Staff is concerned that the size of a small antenna (as proposed) could become a visual obstruction considering the blanket flexibility being afforded its location on a structure. For example, an unlimited number of 3 feet by 2 feet antennas installed on the façade of an existing 20-foot high building would not be visually appealing. In addition, staff is concerned with not having a minimum height for installation of small antennas and how this could allow a visual nuisance as well as create a safety issue if the antenna is mounted too low (especially when located on utility or light poles along public rights of way –sidewalks, etc.). *Staff recommends that a small cell antenna be installed at a minimum height of 15 feet, consistent with the maximum height permitted for a freestanding light fixture located within 35 feet of the lot line of any detached house building type not in a CR or Employment zone*.

Staff is also not clear of the intent of the phrase "any structure" under Subsection "(e)". Given that the subject provision is located under the subsection addressing "antennas on existing structures", *staff believes that the language under subsection "(e)" should be clarified to reflect the allowance of small*

antennas on any existing structure. Staff believes that to replace a light pole with a new structure for the purpose of placing on it a small cell antenna (and its associated equipment) would constitute a change in use to a telecommunications tower which requires approval of a conditional use permit by the Hearing Examiner.

Staff further believes that a small antenna placement should be 60 feet from a Detached Residential and a duplex building type, consistent with the location prohibition language for antennas other than small cells (Section 59.3.5.14(C)2(d)(i)).

M-NCPPC, Montgomery Parks Comments (Attachment 2)

Summary:

- The addition of small cell antennas to the proposed zoning text amendment would allow small cell telecommunications facilities to be placed quickly, without adequate review, including historic preservation, and environmental review.
- Requests to install small cell facilities on M-NCPPC property are required to follow the same application and review process in accordance with the 2014 Telecommunications Facility Siting on Park Property policy and administrative procedures. Small cell facilities are telecommunications facilities and may be treated as 'new' facilities, or in certain cases 'collocations.'

Conclusion

With the proposed changes to the ZTA language as depicted in Attachment 1 (plain language clarification that antennas must be located on existing structures; recommendation requiring a minimum antenna installation height of 15 feet and a recommendation that a small antenna placement should be 60 feet from a Detached Residential and a duplex building type), staff recommends approval of ZTA 14-04.

Attachments

1. ZTA No. 14-04 as modified by staff
2. Montgomery Parks Comments

ATTACHMENT 1

Zoning Text Amendment No.: 14-04
Concerning: Accessory Commercial Uses - Antennas
Draft No. & Date: 4/8/2014
Introduced: April 22, 2014
Public Hearing:
Adopted:
Effective:
Ordinance No.:

COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND SITTING AS THE DISTRICT COUNCIL FOR THAT PORTION OF THE MARYLAND-WASHINGTON REGIONAL DISTRICT WITHIN MONTGOMERY COUNTY, MARYLAND

By: Councilmember Floreen

AN AMENDMENT to the Montgomery County Zoning Ordinance to:

- allow small cell antennas under certain circumstances; and
- generally amend the provisions for antennas on existing structures

By amending the following sections of the Montgomery County Zoning Ordinance, Chapter 59 of the Montgomery County Code:

DIVISION 59.3.5 "Commercial Uses"
Section 59.3.5.14. "Accessory Commercial Uses"

EXPLANATION: ***Boldface*** *indicates a Heading or a defined term.*
Underlining indicates text that is added to existing law by the original text amendment.
[*Single boldface brackets****]*** *indicate text that is deleted from existing law by original text amendment.*
Double underlining indicates text that is added to the text amendment by amendment.
[[*Double boldface brackets****]]*** *indicate text that is deleted from the text amendment by amendment.*
* * * *indicates existing law unaffected by the text amendment.*

ORDINANCE

The County Council for Montgomery County, Maryland, sitting as the District Council for that portion of the Maryland-Washington Regional District in Montgomery County, Maryland, approves the following ordinance:

Sec. 1. DIVISION 59.3.5 is amended as follows:

DIVISION 59.3.5 Commercial Uses

*** * ***

Section 59.3.5.14 Accessory Commercial Uses

*** * ***

(C) Antenna on Existing Structure

1. Defined

An Antenna on Existing Structure means one or more antennas attached to an existing support structure, such as a building, a transmission tower, a monopole, a light pole, a water tank, a silo, a barn, or an overhead transmission line support structure. Antenna on Existing Structure includes related equipment.

2. Use Standards

Where an Antenna on Existing Structure is allowed as a limited use, it must satisfy the following standards:

a. Antennas are limited to the following types and dimensions:

i. omni-directional (whip) antennas with a maximum height of 15 feet and a maximum diameter of 3 inches ;

ii. directional or panel antennas with a maximum height of 8 feet and a maximum width of 2 feet; **[**and**]**

iii. satellite or microwave dish antennas with a maximum diameter of 8 feet**[.]** ; and

iv. small cell antennas with a maximum height of 3 feet and a maximum width of 2 feet.

b. Signs or illumination on the antennas or support structure are prohibited unless required by the Federal Communications Commission, the Federal Aviation Administration, or the County.

c. Associated equipment must be located in an unmanned building, equipment cabinet, or equipment room in an existing building. An equipment building must satisfy the following standards:

i. It is a maximum of 560 square feet in area; however, a single equipment building in excess of 560 square feet, located at ground level, may be used if:

(a) the overall maximum square footage is 1,500 square feet and the maximum height is 12 feet;

(b) the building is used for more than one telecommunication provider operating from the same monopole or tower; and

(c) the building is reviewed by the Telecommunications Transmission Facility Coordinating Group under Chapter 2 (Section 2-58E).

ii. It is a maximum of **[**12 feet in height if located on the ground or**]** 14 feet in height **[**for a rooftop structure**]**, including the support structure for the equipment building.

iii. If the equipment building or cabinet is at ground level in a Residential zone, or the nearest abutting property is in a Residential zone, and the equipment building or cabinet is more than 4 feet in height including the support structure, the building or cabinet must be faced with brick or other compatible material on all sides and surrounded by landscaping providing a screen of at least 3 feet in height.

d. **[**When**]** Except for a small cell antenna that satisfies Subsection 3.5.14.C.2.a.vi., when mounted on a rooftop or structure located on privately owned land, the antenna must meet the following standards:

i. An antenna is prohibited:
   (a) on any detached house or duplex building type or an accessory structure associated with either building type; and
   (b) in any scenic setback indicated in a master plan.

ii. An antenna and a related unmanned equipment building or cabinet may be installed on a rooftop if a building is a minimum height of:
   (a) 50 feet in any Residential Detached zone; or
   (b) 30 feet in any Residential Multi-Unit, Commercial/Residential, Employment, or Industrial zone.

iii. An antenna may be mounted on the facade of a building at a minimum height of:
   (a) 50 feet in a Residential Detached zone; or
   (b) 30 feet in any Residential Multi-Unit, Commercial/Residential, Employment, and Industrial zone.

iv. The antenna must not be attached to the support structure for:
   (a) an antenna that is part of an Amateur Radio Facility licensed by the Federal Communications Commission; or
   (b) an antenna to receive television imaging in the home.

e. When located at least 60 feet from a Detached Residential dwelling or a duplex building type, a small cell antenna that satisfies Subsection 3.5.14.C.2.a.vi may be installed on any existing structure, at **[[**any**]]** a minimum height of 15 feet, in any zone where a small cell antenna is allowed as a limited use.

* * *

Sec. 2. Effective date. This ordinance becomes effective on October 30, 2014.

This is a correct copy of Council action.

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Linda M. Lauer, Clerk of the Council

M-NCPPC, Montgomery Parks Comments on the proposed ZTA-14-04

Summary:
The addition of small cell antennas to the proposed zoning text amendment would allow small cell telecommunications facilities to be placed quickly, without adequate review, including historic preservation, and environmental review.

Requests to install small cell facilities on M-NCPPC property are required to follow the same application and review process in accordance with the 2014 Telecommunications Facility Siting on Park Property policy and administrative procedures. Small cell facilities are telecommunications facilities and may be treated as 'new' facilities, or in certain cases 'collocations.'

General observations based on experience in working with the telecommunications industry:

1. Industry not always consistent in the definition of small cell. Small cell can include, and is not limited to:
   - Femtocell
   - Picocell
   - Metrocell – see last page for example
   - Microcell

   The definition of small cells often includes reference to wireless antenna(s) base station.

2. Recent proposals from carriers to place a small cell requires a location at the desired height, a power supply, and a space on the ground to place and equipment cabinet likely placed on a concrete pad. Not all small cells are alike.

3. Small cells are installed to increase wireless capacity of individual private carriers and off-load burden from the nearby cell tower (macro), often placed strategically between to larger towers.

4. Requests to install small cells in Montgomery Parks are treated as new telecommunications facilities, or collocations. A recent request to Montgomery Parks includes the carrier's proposal to install a small flagpole in the middle of the park, which would contain the small cell. The request also includes the installation of power supply and an equipment cabinet on a pad nearby the small cell.

5. Small cells are sometimes, incorrectly, also used to describe distributed-antenna systems (DAS) which are not low-powered access nodes.

6. The FCC commenced new rulemaking (see attached FCC notice dated 9/26/13, and BB&K's Powerpoint dated 10/7/13). The highlights:

- "Streamlining the environmental and historic preservation review processes for newer technologies, including small cells and distributed antenna systems;
- Removing barriers to the deployment of temporary towers, that are used in cases of emergencies or to add capacity during short term events;
- The meaning of terms included in a provision of the Middle Class Tax Relief and Job Creation Act of 2012 which states "a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station;" and
- Clarification of issues addressed in the Commission's "shot clock" order which set time periods for state and local governments to complete review of wireless siting applications."

Additionally, concerns stem from the changes in FCC regulations that will greatly affect our local authority to manage requests for telecommunications facilities, and already have impacted the time to consider requests by the initiation of the shot clock, which includes a 90-day review limitation to collocation requests, and 150-day limitation to new facility requests.

MCO

- **MetroCell Outdoor Power Requirement**
  - AC Version (110 / 220 V)
  - DC Version (-48V DC)
- **Output Transmit Power**
  - 2x5W output
- **Antenna Requirement**
  - Integrated omni or directional antennas
  - External omni or directional antennas – Vz Provided
- **Small Cell Router (7705 SAR-W)** AC and DC options supported
- **Power Distribution Unit (PDU)** -- Only required for AC MCO
- **Mounting Bracket Requirement** – Wall / Pole / Floor / Cabinet
- **Cabinet & Battery Back-up Requirement** - Available