



Zoning Text Amendment (ZTA) No. 18-11, Telecommunications Towers – Limited & Conditional Use

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Completed: 09/13/18

Description

ZTA No. 18-11 amends the Montgomery County Zoning Ordinance to add definitions; allow certain telecommunications towers as a conditional use in certain residential zones; revise the standards for telecommunications towers allowed as a limited or conditional use; exempt certain antennas from height limits; revise the conditional use findings required for the replacement of a pre-existing pole; and generally amend conditional use requirements to address certain telecommunications towers.

Summary

Staff recommends approval of ZTA No. 18-11 to add definitions; allow certain telecommunications towers as a conditional use in certain residential zones; revise the standards for telecommunications towers allowed as a limited or conditional use; exempt certain antennas from height limits; revise the conditional use findings required for the replacement of a pre-existing pole; and generally amend conditional use requirements to address certain telecommunications towers. Staff believes that ZTA 18-11 strikes a balance in addressing the community’s interest in having increased access to mobile broadband services and the evolving technical needs of the wireless industry while also working to protect the community’s interest in managing commercial use of public property (rights-of-way) and maintaining attractive and safe roads and neighborhoods. The inclusion of a requirement for conditional use approval for replacement of shorter poles makes sense, given that retrofitting them with small cell technology can be more difficult when also trying to establish compatibility with neighborhoods, especially in areas with underground utilities.

Background/Analysis

ZTA 18-02 (Adopted May 15, 2018), amended the Zoning Ordinance to allow replacement of pre-existing streetlights, utility poles and site plan-approved parking lot lights in the Commercial/Residential, Employment and Industrial zones. ZTA 18-11 would allow replacement of these same types of pre-existing poles in the Agricultural, Rural Residential and Residential zones as a Limited Use if the pre-existing pole is at least 22 feet tall and 30 feet from a house, or as Conditional Use if the pre-existing pole is shorter than 22 feet and at least 30 feet from a house. The Hearing Examiner must find that the tower is compatible with nearby residential property and is located to minimize its visual impact. To meet federal shot clocks, the Hearing Examiner’s decision would be made final action by the County, by

removing the right to appeal the Hearing Examiner's decision to the Board of Appeals. Appeal to the Circuit Court would still be permitted.

As proposed, ZTA 18-11 adds to or modifies the telecommunication provisions as discussed below:

- Defines **Enclosure or stealth design** to mean material, or the use of materials, intended to conceal antennas and associated equipment. *(lines 16-18)*
- Defines **the height of a Telecommunications Tower as measured** from the lowest point of the natural grade of the ground at the base of the pole to the highest point on the tower, including any attached antennas and equipment. *(lines 19-22)*
- **ZTA 18-11 does not change the requirements for tall telecommunications towers.** In residential areas, these macro towers continue to require a 300-foot setback, conditional use approval, and an Office of Zoning and Administrative Hearing (OZAH) Hearing Examiner's approval may be appealed to the Board of Appeals

REPLACEMENT POLES AS LIMITED USE IN RESIDENTIAL AREAS (Streetlight, Utility, and Parking Lot Light Poles)

- ZTA 18-11 allows these poles to be replaced as a **Limited Use if the poles are at least 22 feet tall and are at least 30 feet from homes** in Residential, Rural Residential, and Agricultural zones.
 - Sample research determined the 30-foot set back can be met in almost all cases.
 - ZTA 18-02 changed the Zoning Code to allow these poles to be replaced as a Limited Use if they are 10 feet from buildings in Commercial/Residential, Employment and Industrial Zones (no minimum height requirement).
 - Height of a replacement structure would be limited to 6 additional feet for streetlights, when abutting a right-of-way with a paved section width of 65 feet or less, or 15 additional feet for streetlights when abutting a right-of-way with a paved section width greater than 65 feet. Additional height for utility poles and parking lot light poles would be limited to 10 feet. However, additional minimum height would be permitted to comply with the National Electric Safety Code. *(lines 66-84)*
- **Setback for Attachments to Existing Poles.** ZTA 18-11 reduces setbacks from dwellings in residential areas (in Rural Residential, Residential, or Planned Unit Development zones) from 60 feet to 30 feet (to use existing utility poles). In 2018, the characteristics of emerging 5G and small cell technology require that antennas be located closer to mobile devices, and thus closer to residences and businesses. In ZTA 18-02, the County approved allowing the smallest class of antennas to be located on poles at least 10 feet from buildings in commercial areas. In proposed ZTA 18-11, the County Executive recommends that the smallest class of antennas be allowed if located at least 30 feet from a dwelling in residential neighborhoods. This makes the setback for replacement of preexisting poles the same as the setback to attach to an existing structure that does not require replacement. *(lines 269-273)*

- **Minimum Height for Buildings.** ZTA 18-11 lowers the minimum building height for buildings that can be used to attach antennas to, from 50 feet to 35 feet in any Residential Detached, Rural Residential, or Planned Unit Development zone. (*lines 230-273*)
 - **Facades.** ZTA 18-11 also changes minimum building heights for attaching to building facades to the same as using building roofs – 35 feet in residential; 20 in commercial areas.
 - **Setback.** ZTA 18-11 adds a requirement that the building used to attach antennas to, must be at least 10 feet from a house, duplex or townhouse. This minimum setback was added to address residents’ concerns about increase of commercial structures like group/assisted living homes in residential areas.

REPLACEMENT POLES AS CONDITIONAL USE IN RESIDENTIAL AREAS (Streetlight Poles)

ZTA 18-11 will **allow replacement poles as a Conditional Use if the pre-existing pole is less than 22 feet in height** in Residential Detached, Rural Residential, and Agricultural zones (these shorter poles are typically in neighborhoods with underground utilities). The purpose of requiring conditional use for replacement of poles shorter than 22 feet is that these poles will always require a height increase, and are more difficult to make compatible with neighborhoods, especially in areas with underground utilities. However, under federal law, the County cannot prohibit all deployment of antennas in residential neighborhoods. By having a Hearing Examiner review the proposed location, the intent is to encourage the applicants to select locations that are farther from houses, such as across the street where there are no houses, adjacent to a park or greenway, surrounded by trees that make the antenna less visible, or near an intersection with other large street signs. Also, the purpose of allowing replacement of poles taller than 22 feet as a limited use is to incentivize applicants to select taller poles wherever possible. (*lines 150-191*)

- Maximum height for new replacement pole would be 22 feet (typically, existing pole is 14 feet tall – i.e., new 8-foot increase allowed; this is more than 6-foot increase allowed for taller poles as Limited Use, but taller poles do not need to get much taller to support small cells)
- 30-foot setback, but the Hearing Examiner can reduce the setback to 10 feet if there are no poles nearby that can meet the 30-foot setback requirement. This is a safety value to ensure the County does not prohibit provision of service, but there are very few instances where a pole that meets the 30-foot setback cannot be found.
- Setbacks can also be reduced by the Hearing Examiner to 10 feet if it will make the new telecommunications tower less visually obtrusive.

OZAH CONDITIONAL USE PROCESS CHANGES

- **Compatibility.** Narrows what OZAH Hearing Examiner must look at to determine compatibility. (*lines 311-322*)
 - The Hearing Examiner reviews height, topography, environmental features, and within 400 feet, character of residential properties, proximity to nearby residences, tree coverage, and design of other streetlight, utility and parking lot light poles. Small cell antennas for mobile phones have a limited service range of about a 350-foot radius, so there is a limited area in which an alternate location or pole could be selected. (*lines 192-201*)

- **Appeal to Board of Appeals Removed.** Board of Appeals does not oppose this change for a narrow class of decisions in the interest of complying with the federal shot clock rule. (lines
 - County action would be final after Hearing Examiner issues decision, but decisions can be appealed to the Circuit Court instead of oral argument by Board of Appeals.
 - Most decisions will involve adding 8 feet to an existing streetlight.
 - The Federal Communications Commission is proposing to reduce the period of time to review new replacement pole installations subject to conditional review from 150 days to 90 days. Making the Hearing Examiner’s decision final action by the County, will enable retention of the conditional use process for replacement poles in residential areas.

OTHER CHANGES AND CLARIFICATIONS

- Equipment size was changed to 12 cubic feet in ZTA 18-02. ZTA 18-11 keeps 12 cubic feet for equipment size on a pole and increases to 20 cubic feet for equipment size in the base. DOT retains authority to approve having equipment on a pole instead of in the base. The additional size increase for the base is necessary to allow hardening of the base (e.g., to prevent damage from vandalism). (*lines 90-97*)
- Building height and setback calculations are amended so that antennas are treated similar to porches and do not count in setback limits. (*lines 281-290*)
- Antennas would not count toward building height, similar to solar panels.

Conclusion

Staff believes that ZTA 18-11 strikes a balance in addressing the community’s interest in having increased access to mobile broadband services and the evolving technical needs of the wireless industry while also working to protect the community’s interest in managing commercial use of public property and maintaining attractive and safe roads and neighborhoods. Adding a requirement for conditional use approval for replacement of shorter poles makes sense, given that retrofitting them with small cell technology can be more difficult when also trying to establish compatibility with neighborhoods, especially in areas with underground utilities. Staff recommends approval of ZTA 18-11 as introduced.

Attachments

1. ZTA No. 18-11 as introduced
2. ZTA 18-11 Telecommunications Towers – Approval Standards- Frequently Asked Questions

ATTACHMENT 1

Zoning Text Amendment No.: 18-11
Concerning: Telecommunications
Towers – Limited Use
Draft No. & Date: 1 – 7/18/18
Introduced: July 24, 2018
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**

Lead Sponsor: Council President Riemer at the request of the Executive

AN AMENDMENT to the Montgomery County Zoning Ordinance to:

- add definitions;
- allow certain telecommunications towers as a conditional use in certain residential zones;
- revise the standards for telecommunications towers allowed as a limited or conditional use;
- exempt certain antennas from height limits;
- revise the conditional use findings required for the replacement of a pre-existing pole; and
- generally amend conditional use requirements to address certain telecommunications towers

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

DIVISION 3.1. “Use Table”
Section 3.1.6. “Use Table”
DIVISION 3.5. “Commercial Uses”
Section 3.5.2. “Communication Facility”
Section 3.5.14. “Accessory Commercial Uses”
DIVISION 4.1. “Rules for All Zones”
Section 4.1.7. “Measurements and Exceptions”
DIVISION 7.3. “Regulatory Approvals”
Section 7.3.1. “Conditional Use”

EXPLANATION: **Boldface** indicates a Heading or a defined term.
Underlining indicates text that is added to existing law by the original text amendment or by ZTA 14-09.
[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 or text added by this amendment in addition to ZTA 14-09.
[[Double boldface brackets]] indicate text that is deleted from the text amendment by amendment or indicates a change from ZTA 14-09.
* * * 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:

1 **Sec. 1. DIVISION 59-3.1 is amended as follows:**

2 **DIVISION 3.1. Use Table**

3 * * *

4 **Section 3.1.6. Use Table**

5 The following Use Table identifies uses allowed in each zone. Uses may be modified in Overlay zones under

6 Division 4.9.

USE OR USE GROUP	Definitions and Standards	Ag	Rural Residential		Residential															Commercial/ Residential			Employment				Industrial		
					Residential Detached								Residential Townhouse			Residential Multi-Unit													
					AR	R	RC	RNC	RE-2	RE-2C	RE-1	R-200	R-90	R-60	R-40	TLD	TMD	THD	R-30	R-20	R-10	CRN	CRT	CR	GR	NR	LSC	EOF	IL
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COMMERCIAL																													
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Communication Facility	3.5.2																												
Cable Communications System	3.5.2.A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	P	C	C	C	C	
Media Broadcast Tower	3.5.2.B	C	C	C		C	C	C	C	C	C				C	C	C				C		L	C	C	C	P		
Telecommunications Tower	3.5.2.C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L/C	L	L	L	L/C	L/C	L	L/C	L	L	L		

7 **Key:** P = Permitted Use L = Limited Use C = Conditional Use Blank Cell = Use Not Allowed

8 **Sec. 2. DIVISION 59-3.5 is amended as follows:**

9 **DIVISION 3.5. Commercial Uses**

10 * * *

11 **Section 3.5.2. Communication Facility**

12 * * *

13 **C. Telecommunications Tower**

14 1. Defined

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16 c. Enclosure or stealth design means material, or the use of
17 materials, intended to conceal antennas and associated
18 equipment.

19 d. The height of a Telecommunications Tower is measured from
20 the lowest point of the natural grade of the ground at the base of
21 the pole to the highest point on the tower, including any
22 attached antennas and equipment.

23 2. Use Standards

24 * * *

25 b. [In the Commercial/Residential, Industrial, and Employment
26 zones, where] Where a Telecommunications Tower is allowed
27 as a limited use and the tower would replace a pre-existing
28 utility pole, streetlight pole, or site plan approved parking lot
29 light pole, the tower is allowed if it satisfies the following
30 standards:

31 i. In the Commercial/Residential, Industrial, and
32 Employment zones, the pre-existing pole and the
33 replacement tower must be at least 10 feet from an

34 existing building, excluding any building encroachments
35 allowed under Section 4.1.7.B.5.

36 ii. In the Agricultural, Rural Residential, and Residential
37 zones, the pre-existing pole must be at least 22 feet tall,
38 and the pre-existing pole and replacement tower must be
39 at least 30 feet from a dwelling, excluding any building
40 encroachments allowed under Section 4.1.7.B.5.

41 [i]iii. Antennas must comply with the Antenna Classification
42 Standard A under Section 59.3.5.2.C.1.b, be concealed
43 within an enclosure the same color as the pole, be
44 installed at a minimum height of 15 feet, and be installed
45 parallel with the tower.

46 [ii]iv. The tower must be located:

47 (a) within 2 feet of the base of a pre-existing pole and
48 at the same distance from the curb line, or edge of
49 travel lane in an open section, as the pre-existing
50 pole in a public right-of-way;

51 [(b) at least 10 feet from an existing building;]

52 [(c)](b) outside of the roadway clear zone, as
53 determined by the Department of Permitting
54 Services;

55 [(d)](c) in a manner that allows for adequate sight
56 distances, as determined by the Department of
57 Permitting Services; and

58 [(e)](d) in a manner that complies with streetlight
59 maintenance requirements, as determined by the
60 Department of Transportation.

61 [iii]v. A pre-existing streetlight or parking lot light pole must be
62 removed within 10 business days after power is activated
63 to the replacement tower, and a pre-existing utility pole
64 must be removed within 180 days after a replacement
65 utility pole is installed.

66 [iv]vi. The height of the tower, including any attached antennas
67 and equipment, must not exceed:

68 (a) 22 feet when replacing a pre-existing streetlight
69 less than 22 feet tall;

70 [(a)](b) for pre-existing streetlights 22 feet or taller,
71 the height of the pole that is being replaced:

72 (1) plus 6 feet when abutting a right-of-way
73 with a paved section width of 65 feet or less;
74 or

75 (2) plus 15 feet when abutting a right-of-way
76 with a paved section width greater than 65
77 feet[.];

78 [(b)](c) for utility poles [and parking lot lights], the
79 height of the pre-existing utility [or parking lot
80 light] pole plus 10 feet[.] and, if necessary, the
81 minimum additional height required to comply
82 with the National Electric Safety Code;

83 (d) for parking lot lights, the height of the pre-existing
84 parking lot light pole plus 10 feet.

85 [v]vii. The tower must be the same color as the pre-existing
86 pole.

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- [vi]viii. The tower must have no exterior wiring, except that exterior wiring may be enclosed in shielded conduit on wooden or utility poles.
- [vii]ix. Any equipment cabinet:
 - (a) must not exceed a maximum volume of 12 cubic feet and be installed a minimum of 12 feet above ground if not installed in the Telecommunications Tower base or at ground level;
 - (b) must not exceed a maximum volume of 20 cubic feet when installed in the Telecommunications Tower base or at ground level;
 - [(b)](c) used to support antennas on a replacement streetlight pole must be installed in the Telecommunications Tower base or at ground level, unless this requirement is waived by the Department of Transportation;
 - [(c)](d) must be the same color or pattern as the pre-existing tower, except as provided in [Section 59.3.5.2.C.2.b.vii(d)] Section 59.3.5.2.C.2.b.ix(e);
 - [(d)](e) may be a stealth design approved by the Department of Transportation.
- [viii]x. The tower must include a replacement streetlight, if a streetlight existed on the pre-existing pole.
- [ix]xi. The design of a replacement tower located in a public right-of-way, including the footer and the replacement streetlight, must be approved by the Department of Transportation.

114 [x]xii. The noise level of any fans must comply with Chapter
115 31B.

116 [xi]xiii. Signs or illumination on the antennas or support
117 structure, except a streetlight, are prohibited unless
118 required by the Federal Communications Commission or
119 the County.

120 [xii]xiv. The owner of the tower or the antenna attached to
121 the tower must maintain their tower, antennas, and
122 equipment in a safe condition, remove graffiti, and repair
123 damage.

124 [xiii]xv. If a tower does not have a streetlight, the tower
125 must be removed at the cost of the owner of the tower
126 when the tower is no longer in use for more than 12
127 months. Any antenna and equipment must be removed at
128 the cost of the owner of the antenna and equipment when
129 the antennas and equipment are no longer in use for more
130 than 12 months. The Telecommunications Transmission
131 Facilities Coordinating Group must be notified within 30
132 days of the removal.

133 c. Where a Telecommunications Tower is allowed as a conditional
134 use and does not replace a pre-existing pole, it may be
135 permitted by the Hearing Examiner under Section 3.5.2.C.2.a[,
136 limited use standards] – Limited Use, Section 7.3.1[,] –
137 Conditional Use, and the following standards:

138 i. Before the Hearing Examiner approves any conditional
139 use for a Telecommunications Tower, the proposed
140 facility must be reviewed by the [County]

141 Telecommunications Transmission [Facility] Facilities
142 Coordinating Group. The applicant for a conditional use
143 must file a complete copy of a recommendation from the
144 Telecommunications Transmission [Facility] Facilities
145 Coordinating Group with the Hearing Examiner at least
146 [5]30 days before the date set for the public hearing. The
147 recommendation must be no more than 90 days old at the
148 time the conditional use application is filed.

149 * * *

150 d. Where a Telecommunications Tower is allowed as a conditional
151 use and the tower would replace a pre-existing utility pole,
152 streetlight pole, or site plan approved parking lot light pole, it
153 may be permitted by the Hearing Examiner under Section
154 3.5.2.C.2.b – Limited Use, Section 7.3.1 – Conditional Use, and
155 the following standards:

156 i. Before the Hearing Examiner approves any conditional
157 use for a Telecommunications Tower, the proposed
158 facility must be reviewed by the Telecommunications
159 Transmission Facilities Coordinating Group. The
160 applicant for a conditional use must file a complete copy
161 of a recommendation from the Telecommunications
162 Transmission Facilities Coordinating Group with the
163 Hearing Examiner at least 30 days before the date set for
164 the public hearing. The recommendation must be no
165 more than 90 days old at the time the conditional use
166 application is filed.

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- ii. Notwithstanding Section 3.5.2.C.2.b.ii, a Telecommunications Tower must be set back, as measured from the base of the support structure, as follows:
 - (a) not less than 30 feet from a dwelling, excluding encroachments that are allowed under Section 4.1.7.B.5; or
 - (b) the Hearing Examiner may reduce the setback requirement to not less than 10 feet, if:
 - (1) the Telecommunications Transmission Facilities Coordinating Group determines that improvements to service area or capacity cannot be achieved by using a pre-existing streetlight, utility, or parking lot pole within 800 feet of the proposed tower under Section 3.5.2.C.2.b or Section 3.5.2.C.14.c; or
 - (2) the Hearing Examiner determines that a reduced setback will allow the support structure to be located on the property in a less visually obtrusive location after considering the height of the structure, topography, existing tree coverage and vegetation, proximity to nearby residential properties, and visibility from the street.
- iii. Notwithstanding Section 3.5.2.C.2.b.iv.(a), the tower must be located to minimize its visual impact. Screening

194 under Division 6.5 is not required; however, the Hearing
195 Examiner may require the tower to be less visually
196 obtrusive by use of screen, coloring, or other visual
197 mitigation options, after considering within 400 feet the
198 character of residential properties, proximity to nearby
199 residential properties, existing tree coverage and
200 vegetation, and design and presence of streetlight, utility,
201 or parking lot poles.

202 * * *

203 **Section 3.5.14. Accessory Commercial Uses**

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205 C. Antenna on Existing Structure

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207 2. Use Standards

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

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211 c. Associated equipment must be located in an unmanned
212 building, equipment cabinet, or equipment room in an existing
213 building.

214 * * *

215 iii. If an equipment cabinet services an Antenna on Existing
216 Structure and the Existing Structure is a utility pole,
217 streetlight pole, or site plan approved parking lot light
218 pole, the equipment cabinet:

219 (a) must not exceed a maximum volume of 12 cubic
220 feet and be installed a minimum of 12 feet above

221 ground if not installed in the Telecommunications
222 Tower base or at ground level; [and]
223 (b) must not exceed a maximum volume of 20 cubic
224 feet when installed in the Telecommunications
225 Tower base or at ground level; and
226 (c) must be the same color or pattern as the existing
227 structure, unless it is a stealth design approved by
228 the Department of Transportation.

229 * * *

230 d. Except under Section 3.5.14.C.2.e, when mounted on a rooftop
231 or structure located outside of a right-of-way, the antenna must
232 meet the following standards:

233 i. An antenna is prohibited:
234 (a) on or within 10 feet of any detached house, duplex,
235 or townhouse building type or an accessory
236 structure associated with either building type; and
237 (b) in any scenic setback indicated in a master plan.

238 ii. An antenna and a related unmanned equipment building
239 or cabinet may be installed on a rooftop, if a building is a
240 minimum height of:

241 (a) [~~50~~] 35 feet in any Residential Detached, Rural
242 Residential, or Planned Unit Development zone,
243 and must be mounted in an antenna enclosure the
244 same color or design as the building; or
245 (b) 20 feet in any Residential Multi-Unit,
246 Commercial/Residential, Employment, or
247 Industrial zone, and must be mounted in an

248 antenna enclosure the same color or design as the
249 building.

250 ii. An antenna may be installed on the facade of a building
251 at a minimum height of:

252 (a) [50] 35 feet in [a] any Residential Detached, Rural
253 Residential, or Planned Unit Development zone
254 and must be mounted in an antenna enclosure the
255 same color or design as the building; or

256 (b) [30] 20 feet in any Residential Multi-Unit,
257 Commercial/Residential, Employment, [and] or
258 Industrial zone and must be mounted in an antenna
259 enclosure the same color or design as the building.

260 * * *

261 e. An antenna classified as Standard A under Section 3.5.2.C.1.b
262 may be installed on any existing structure located in the right-
263 of-way in any zone where an antenna on an existing structure is
264 allowed, if:

265 i. the antenna is in an enclosure and the enclosure is the
266 same color or pattern as the existing structure;

267 ii. the antenna and the antenna enclosure [is] are installed at
268 a minimum height of 15 feet above the ground; and

269 iii. the structure is at least [60] 30 feet from a dwelling in a
270 Rural Residential, Residential, or Planned Unit
271 Development zone, and at least 10 feet from any
272 [structure] building in any Commercial/Residential,
273 Employment, or Industrial zone.

274 **Sec. 3. DIVISION 59-4.1. is amended as follows:**

275 **DIVISION 4.1. Rules for All Zones**

276 * * *

277 **Section 4.1.7. Measurement and Exceptions**

278 * * *

279 C. Height

280 * * *

281 3. Height Encroachments

282 Any height encroachment not specifically listed is prohibited.

283 * * *

284 b. The maximum height does not apply to solar panels and any
285 roof structure listed in Section 4.1.7.C.3.a or Antenna on
286 Existing Structures as defined in Section 3.5.14.C.2.d, except
287 that in the TLD, TMD, THD, and R-30 zones, an air
288 conditioning unit or similar structure or mechanical
289 appurtenance may exceed the established height limit by a
290 maximum of 8 feet.

291 * * *

292 **Sec. 4. DIVISION 59-7.3 is amended as follows:**

293 **DIVISION 7.3. Regulatory Approvals**

294 **Section 7.3.1. Conditional Use**

295 * * *

296 B. Application Requirements

297 * * *

298 2. The applicant must submit the following for review:

299 * * *

- 300 m. for a [telecommunication tower] Telecommunications Tower
301 application[,];
302 i. photographic simulations of the tower and site seen from
303 areas with a direct view of the tower, including a
304 minimum of at least 3 directions; and
305 ii. photographs of streetlight, utility, or parking lot light
306 poles within 400 feet of the proposed
307 Telecommunications Tower.

308 * * *

309 E. Necessary Findings

310 * * *

311 7. Notwithstanding any other requirements of Section 59-7.3.1.E, to
312 approve a conditional use application for a Telecommunications
313 Tower that replaces a pre-existing streetlight, utility, or parking lot
314 light pole, the Hearing Examiner must find that the tower:

- 315 a. meets the requirements of Section 3.5.2.C.2.d;
316 b. is compatible with or can be made compatible with nearby
317 residential property by the use of screening, coloring, stealth
318 design, or other visual mitigation options after considering the
319 height of the structure, topography, existing vegetation and
320 environmental features; and
321 c. does not abut or confront an individual resource in the Master
322 Plan for Historic Preservation.

323 * * *

324 F. Decision

325 1. Hearing Examiner

326 * * *

327 c. [Any] Except for decisions relating to a Telecommunications
328 Tower, any party of record may appeal the Hearing Examiner’s
329 decision by filing a written request to present oral argument
330 before the Board of Appeals within 10 days after the Office of
331 Zoning and Administrative Hearings issues the Hearing
332 Examiner’s report and decision. The filing of such a request
333 transfers jurisdiction over the matter while on appeal from the
334 Hearing Examiner to the Board of Appeals.

335 * * *

336 d. Any party aggrieved by a decision of the Hearing Examiner
337 relating to a Telecommunications Tower may, within 30 days
338 after the Hearing Examiner’s action, file a petition for judicial
339 review of the decision under Section 22-403 of the Land Use
340 Article.

341 * * *

342 **Sec. 5. Effective date.** This ordinance becomes effective 20 days after the
343 date of Council adoption.

344

345 This is a correct copy of Council action.

346

347

348 _____
349 Megan Davey Limarzi, Esq.
Clerk of the Council

ZTA 18-11 Telecommunications Towers – Approval Standards Frequently Asked Questions

What Is a “small cell”?

“Small cell” is a marketing term, not a technical term. “Small cell” is used by the wireless industry to describe a class of antennas that are designed to be installed at lower heights and designed to operate closer to mobile devices, than so-called “macro cells or macro towers.”

A macro tower is typically 75 to 150 feet tall, antennas may be 6 to 9 feet long, and these macro antennas can provide coverage for about a 1-mile radius. In comparison, a small cell tower is designed to be installed 20 to 35 feet above ground, with an antenna 2 to 4 feet long. (Sometimes, multiple antennas about 1 to 1.5 feet long are installed inside a cannister 2 to 4 feet long.) The small cell mobile device coverage area varies from a radius of 250 ft to 500 ft.

As described above, approximately 57 small cells would fit inside the coverage area of a macro cell – but a single small cell provides as much capacity as a single macro cell. More capacity helps bandwidth-intensive applications – such as mobile video and video streaming – work better. Installing small cells at strategic locations will create more capacity in small-radius areas. Mobile service traffic can be moved seamlessly from congested taller macro antennas to shorter small cells. This is why there is more demand to install small cells in densely populated urban areas, near transit stops with large concentrations of mobile phone users, and along large capacity roads with traffic congestion. For converse reasons, small cells are not likely to be deployed to rural or sparsely populated areas – these areas will be served with taller macro towers and there is no financial incentive to install an antenna in a sparsely populated area that will serve an even smaller-radius area.

Small cells require power, and they typically have a pair of fibers for every wireless carrier served by an antenna, installed from a network connection point to the antenna. The small cell uses less power and emits less radio frequency (RF) emissions than more powerful macro cells. Small cells require equipment nearby, that converts the analog RF wireless signal into a digital IP (Internet protocol) signal that travels as light through fiber. Different wireless providers can share a single antenna, but typically they need separate equipment within a single equipment cabinet. This equipment can be installed on a pole, in the pole base, or at ground level near the pole (sometimes disguised as a trashcan, under a bench, or as public art). This equipment generates heat and must be air-cooled or fan-cooled. Equipment on poles can be smaller because it is air cooled, and equipment at ground level needs a fan and to be reinforced to prevent damage.

However, confusingly, “small cells” are used to describe antennas that provide mobile (i.e., cell phone) coverage, and also as “fixed wireless.” Fixed wireless is using a wireless signal to replace a fiber or coaxial connection from the street to a house. Small cells used for mobile coverage serve about a 250 to 500 feet radius, but small cells used for fixed wireless might serve a distance of one-half mile.

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What Is “5G”

“5G” or “5th generation” is a marketing term used by the wireless industry to describe the ability to deliver one gigabit per second service capacity to a mobile device.

5G can mean a process in which the antenna is installed closer to the mobile device (i.e., using a “small cell”) to create more capacity. The spectrum (bandwidth wave frequencies) carry and deliver mobile data to the device. After the data is delivered, the spectrum can be reused. By allowing this repeated delivery of data and reuse of spectrum, more capacity is created.

Confusingly, 5G also refers to specific radio frequency bands, that operate at higher frequencies than current 3G or 4G bands. These higher frequency 5G bands have a shorter physical range, i.e., they do not travel as far. These 5G bands need small cell technology to support deployment in densely populated areas.

Finally, even more confusingly, 5G is also used to describe several new technologies that are still being tested and developed. When industry speaks about 5G technologies, you might hear the terms, “millimeter waves,” “small cells,” “massive MIMO,” “full duplex” or “beamforming.” These are all new technologies being tested to reduce delay and increase download speeds. It’s not clear yet which technologies will work best, and it is why there can be a lot of variation between what different wireless companies state they need to deploy “5G”. It is not clear yet how well these 5G technologies and spectrum will work in buildings, in rain, and where there are a lot of trees.

Why Should the County Allow Any Telecommunications Towers in Residential Neighborhoods?

Under federal law, County law may not prohibit provision of a telecommunications service. While there are many ways to receive such services, there are some carriers that only provide telecommunications service wirelessly. The County cannot prohibit one means to get service because there is another alternative means or carrier available. Prohibiting deployment of any antennas in a residential neighborhood may have the unintentional effect of prohibiting the provision of service.

In addition, the County has an interest in ensuring that all residents have access to robust, affordable broadband service. In the past two years, mobile telephone line subscriptions have increased by over 65,000 lines and there are now more than 1 million mobile telephone lines in the County. The future of communications is mobile, and the County wants to remain one of the most digitally connected places in America.

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What Is the Difference Between “Limited Use” and “Conditional Use” in the Montgomery County Zoning Code?

Limited Use. The zoning code is designed to ensure that uses are compatible with the community. To qualify as a limited use, certain requirements must be met. These requirements establish what is required to be compatible with the community. Typically, no discretion is required to interpret whether these requirements are met – something either complies with the conditions or it does not. Common types of limited use standards are size, color, height and setback distance. The presumption for limited use is that if the requirements are met, the use will be compatible with the community; therefore, no public zoning hearing is required if the pre-established requirements are met.

Conditional Use. Conditional use requires discretion to determine if the use is compatible with the community. An application is filed with the Office of Zoning and Administrative Hearings (OZAH) and is jointly reviewed by OZAH and the Planning Commission. After OZAH determines that an application is complete, OZAH will issue a notice of a public hearing to affected properties. These properties are typically within a one-quarter mile radius, or within sight or sound, of the proposed use. A premise sign will also be attached to the property to notify the public that a conditional use has been requested. A Hearing Examiner will conduct the public hearing, allow testimony, and write up findings to approve or disapprove the conditional use. In some cases, the zoning code identifies a range of conditions that must be met to allow the use. That is, the use would be allowable if it fits within these requirements. Alternatively, the code identifies factors that the Hearing Examiner should consider to determine whether the use is compatible with the community. Finally, Conditional Use can be used if the applicant wants an exception to the Limited Use requirements, such as to request a shorter setback. Each of these instances requires exercise of discretion. Moreover, some uses will always be subject to Conditional Use because the County has determined there are no objective standards that should be used to allow a use without a public hearing. In contrast, a limited use does not require a public hearing, because the County has already determined that if certain requirements are met, the use is compatible, and it is a matter of administrative review to determine that the requirements will be met.

What is the Process for Allowing Telecommunications Towers in Residential Neighborhoods?

TFCG or Tower Committee Application. Any entity that wants to install an antenna or telecommunications tower must submit an application to the Transmission Facility Coordinating Group (TFCG or “Tower Committee”). The Tower Committee will perform an engineering review of the application, to determine compliance with safety and engineering requirements, such as wind safety, electrical code, Federal Communications Commission radio frequency (RF)

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standards, etc. The Tower Committee staff determines whether the application is complete. (Federal law limits the time for the County to determine whether an application is complete, and the ability of the County to request additional information after an application is determined to be complete.) The Tower Committee staff conducts a site visit to the proposed location, reviews propagation maps to determine coverage or capacity improvements, and reviews proposed design, location and equipment specification to provide engineering analysis. The Tower Committee staff also requests information and provides analysis about the ability to collocate antennas, as alternatives to installing more telecommunications towers. The Tower Committee members conduct their review of staff reports and discussion to determine whether to issue a favorable recommendation in an open meeting, which the public may attend. The Tower Committee is not a public hearing and does not take public testimony.

DPS and OZAH. Telecommunications towers and antennas applications are either applying for deployment as a limited use, or conditional use. When the Tower Committee issues a recommendation for a limited use, the recommendation is submitted to the Department of Permitting Services (DPS) to receive a building or right of way permit. A change was made in DPS procedures in June 2018 because of changes to the zoning code under ZTA 18-02. DPS now conducts a zoning review for telecommunications building and right of way permits (previously, there was no zoning review when telecommunications facilities were placed in rights of way) and reviews the engineering analysis in the Tower Committee recommendation to determine that the construction requested in the DPS permit application is consistent with what was recommended by the Tower Committee (previously, DPS reviewed a one-page notice that a recommendation had been received, but not the complete recommendation; in addition, for use of poles, the Tower Committee issues recommendations applicable to a specific pole rather a recommendation to use a pole at an address – in this way, the pole reviewed by the Tower Committee will be the same pole DPS will issue a right of way permit to use.). If the Tower Committee issues a recommendation for a conditional use, the applicant must file the Tower Committee (TFCG) recommendation with the Office of Zoning and Administrative Hearings (OZAH) and request approval for a conditional use. If a conditional use is granted, the applicant takes the OZAH conditional use approval and the TFCG recommendation to DPS to request a telecommunication building or right of way permit.

How Will Allowing Telecommunications Towers as Replacements of Pre-Existing Streetlights, Utility Poles, and Parking Lot Lights Impact My Neighborhood?

ZTA 18-11 is allowing a replacement of a pre-existing streetlight, utility, or parking lot light pole as a Limited Use in a residential neighborhood if the pre-existing pole is at least 22 feet tall and the pole is at least 30 feet from a dwelling. (Commercial/Retail areas with mixed use tall residential buildings and street level retail, such as downtown Silver Spring or Bethesda, are not

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classified as residential.) Pre-existing poles shorter than 22 feet require a conditional use permit. Typically, poles taller than 22 feet will be: utility poles with aerial (overhead) utility lines; spun aluminum poles with cantilevered or cobra-head lights that extend out from the pole; bronze poles with square lights on wide streets; and taller green poles in urban downtown areas. Black poles with trapezoid-shaped lights (or colonial lights), silver poles with space ship/concentric circle designs, and some decorative green streetlights with art deco lights – especially in neighborhoods with underground utilities – are typically less than 22 feet tall.

Limited Use Under ZTA 18-11. Under proposed ZTA 18-11, if the pre-existing streetlight, utility, or parking lot light pole in your neighborhood is 22 feet or taller, and the pole being replaced is at least 30 feet from a dwelling, a request to replace this pole to install a telecommunications antenna will be a limited use. The maximum height of the replacement structure will be an additional 6 feet taller than a streetlight in the right of way, and an additional 10 feet for replacement of a utility or parking lot light pole. If necessary, a few additional feet can be added to replacement of a utility pole to ensure compliance with safety codes requiring minimum distances for communications facilities from power lines. Under separate regulations to be proposed by the County Executive, the County will require that a sign be placed on the pre-existing pole to notify surrounding properties of the proposed pole replacement. The sign will contain an email or website address where interested parties can sign up to be notified once the Tower Committee staff determines that an application has sufficient information to proceed. The County Executive intends to provide the public the ability to provide input in writing that will be considered by the Tower Committee in drafting recommendations. Such input may assist the Tower Committee staff in reviewing selection of a specific pole within a limited area. (Because small cell antennas have limited range, there is a limit to how far they can be moved from an optimal location and still be effective.) However, because of federal time limits to review applications, the time window to submit comments will likely be 5 to 10 days after it is determined that an application contains enough information to proceed. The purpose of allowing use of taller poles as a limited use is to encourage applicants to place antennas on taller poles that may not require height increases, often located on wider streets, where the antennas will be more compatible with neighborhoods.

Conditional Use Under ZTA 18-11. Under proposed ZTA 18-11, if the pre-existing streetlight, utility, or parking lot light pole in your neighborhood is less than 22 feet tall, a request to replace this pole to install a telecommunications antenna will be a conditional use. The pole being replaced will have to be at least 30 feet from a dwelling. The maximum height of the replacement structure will be 22 feet tall and it must be set back 30 feet from a dwelling. A public zoning hearing will be scheduled and the neighborhood associations and properties approximately one-quarter mile from the proposed new telecommunications tower will be notified of the hearing and be provided an opportunity to testify. Through separate regulations, the County Executive will also propose that a sign be attached to the pole proposed to be replaced to provide additional notice. A Hearing Examiner will review the TFCG

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recommendation and Planning Commission recommendation. The Hearing Examiner will review the application, recommendations and testimony to determine whether this is the least visually obtrusive location within 400 feet. The Hearing Examiner also has discretion to require visual screening elements such as screening and color.

The purpose of requiring conditional use for replacement of poles shorter than 22 feet is that these poles will always require a height increase, and are more difficult to make compatible with neighborhoods, especially in areas with underground utilities. However, under federal law, the County cannot prohibit all deployment of antennas in residential neighborhoods. By having a Hearing Examiner review the proposed location, the intent is to encourage the applicants to select locations that are farther from houses, such as across the street where there are no houses, adjacent to a park or greenway, surrounded by trees that make the antenna less visible, or near an intersection with other large street signs. Moreover, the purpose of allowing replacement of poles taller than 22 feet as a limited use is to incentivize applicants to select taller poles wherever possible.

Conditional Use Setback Reductions Under ZTA 18-11. Under very limited circumstances, the Hearing Examiner could allow use of a pre-existing pole closer than 30 feet to a dwelling. These provisions are proposed in ZTA 18-11 to comply with federal law that local government regulations not have the effect of prohibiting service. If there is no other pole within 800 feet that is at least 30 feet from a dwelling, then a pre-existing pole closer than 30 feet could be used. This is only likely to occur in new neighborhoods where houses are built much closer to roads than in the majority of the County. But even in these neighborhoods, there is often a taller pole that is farther from a house. In this instance, if a pre-existing pole that could meet the 30 foot setback exists, approval to reduce the setback is not likely to be granted. The Hearing Examiner can reduce the setback if it allows placement in a less visually obtrusive location. ZTA 18-11 is allowing replacement of a pre-existing streetlight, utility, or parking lot light pole; ZTA 18-11 does not change the current 300 foot setback from a dwelling to install a new pole or new telecommunications tower that is not replacing an pre-existing pole.

Can equipment be required to placed underground?

The equipment requires electrical power and generates heat. It must be cooled and large air vents at ground level would be needed. To avoid potential hazards from snow piling up and melting into the equipment vaults, the County is not requiring equipment to be undergrounded.

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How Close to Homes Can Antennas Be Placed on Existing Structures?

Since the mid-1990s the County has allowed antennas to be placed on existing structures as a limited use. The purpose of this was to encourage use of existing structures instead of installing new structures. In 2014, the zoning code was amended to allow small antennas to be attached to any existing structure. At the time, there were only 3 such small antennas and all were deployed in commercial areas. Thus, in the 2014 zoning code amendment, small antennas were allowed on any structure at least 60 feet from a dwelling.

In 2018, the characteristics of emerging 5G and small cell technology require that antennas be located closer to mobile devices, and thus closer to residences and businesses. In ZTA 18-02, the County approved allowing the smallest class of antennas to be located on poles at least 10 feet from buildings in commercial areas. In proposed ZTA 18-11, the County Executive recommends that the smallest class of antennas be allowed if at least 30 feet from a dwelling in residential neighborhoods. This makes the setback for replacement of preexisting poles the same as the setback to attach to an existing structure that does not require replacement.

ZTA 18-11 also proposes that the minimum height of building on which an antenna can be installed in a residential area be reduced from 50 feet to 35 feet. This would allow antennas to be attached to more three-story buildings in residential areas. But ZTA 18-11 also recommends that any such building used to attach antennas to, should be at least 10 feet from a detached house, duplex, or townhouse.

Why Should Antennas Be Allowed to Be Placed Closer to Homes If We Are Uncertain About the Health Effects of Having Antennas Closer to People?

Under federal law, local and state governments are prohibited from zoning on the basis of RF emissions. The Federal Communications Commission (FCC) sets limits for RF (radio frequency) emissions and the County reviews every antenna application to enforce the federal RF limits. RF emissions decrease as the distance from an antenna increases and increases the closer a person is to a mobile device. RF varies based on specific antennas, but the RF exposure from standing 9 feet from a 20-foot tall pole with 3 antennas attached, is roughly similar to the RF exposure for a person holding a cell phone. The RF exposure limits vary based on specific equipment and power, but generally under federal standards, an antenna must be at least 2.3 feet away to comply with FCC RF exposure limits. If three antennas are placed on a pole, the FCC RF exposure limit is 10.5 feet. (Note, the zoning code permits antennas to be installed on poles as close as ten feet to a building in a commercial area. But 3 antennas on a single pole would not be permitted to be installed this close to a building because it would not comply with the FCC RF standards enforced by the County.) The County is continuing to lobby Congress and federal agencies to update RF standards.

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Why Are There So Many Applications to Install New Antennas in Some Areas and No Antennas Planned for Similar Nearby Neighborhoods?

It is unknown how many new 5G small cell antennas will be installed. Estimates range from 700 to as high as 5,000. And it is unclear which new 5G technologies will best meet the growing demand for more mobile services. Many providers are requesting to install antennas in urban areas where demand is high and where they are projected to require more capacity in the very near future. These antennas are using 5G technology to enable current 4G spectrum to provide more capacity. But some providers are working to deliver more capacity to single family home neighborhoods. We anticipate that 5G small cell antennas will be deployed in limited areas and expand over time to nearby areas.

Why Make Any Changes Now to the Zoning Code If There is Uncertainty About 5G Small Cell Technology?

Given the unprecedented state and federal legislative and regulatory efforts to preempt the authority of local government to manage the placement and size of telecommunications towers in the public rights of way, it is important that we work expeditiously to enact reasonable local solutions to manage small cell deployments.

As many in the community are aware, State preemption legislation was introduced in the last Maryland General Assembly session and we anticipate that it will be reintroduced next session. US Senate legislation has been introduced to restrict and preempt local authority over small cell deployment and to give the FCC more authority to preempt local government authority to manage public rights of way and to require both recovery of permitting costs and compensation for use of public property by commercial service providers. The FCC has issued an Order for consideration at its August 2018 meeting to preempt express and de facto moratoria on deployment of small cells and announced an attempt to further preempt local government authority to regulate communications facilities in the public rights of way. And the FCC's Chairman's hand-picked, industry-tilted, Broadband Deployment Advisory Committee recommended that shot clocks be shortened to prevent public zoning hearings and preempt all local zoning if shot clocks are not met.

The best defense we have against these intrusions into local governance is to demonstrate that no further state or federal preemption is necessary because we have already provided a balanced local solution. Preemption will certainly lead to less local input and an inability to protect residents.