

ZONING TEXT AMENDMENT:
SMALL CELL WIRELESS (TELECOMMUNICATIONS) FACILITIES
(26-47-ZTA)
CITY OF HENDERSONVILLE - COMMUNITY DEVELOPMENT
STAFF REPORT

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PROJECT SUMMARY



- Project Name & Case #:
 - Small Cell Wireless Telecommunications Facilities
 - 26-47-ZTA
- Applicant:
 - City of Hendersonville
- Articles Amended:
 - Zoning Ordinance
 - Article XVI or VI
 - City Code of Ordinances
- Zoning Districts Impacted:
 - All
- Relevant Future Land Use Designations:
 - Downtown

Summary

The City of Hendersonville has initiated a zoning text amendment to address the deployment of small cell wireless telecommunications facilities across the city. The proposed updates to this zoning ordinance are precipitated by state and federal laws on this same topic. These existing laws limit what can be done to address these facilities at the local level. The proposed ordinance is based upon model policies that reflect conformance with state and federal regulations.

Small cell wireless facilities are a type of infrastructure that helps improve cell phone and wireless internet service—especially in areas where signals are weak or overloaded. They are small, low-powered antennas that transmit data within the larger cellular network. They are much smaller than the traditional cell towers. These facilities are typically found on standalone poles in the right-of-way but can be mounted to) existing structures such as streetlights, utility poles, traffic signals, and buildings.

The proposed standards provide guidance for the installation of small cell facilities in much the same way that the City’s existing telecommunication zoning standards guide where and how traditional towers are installed. Because small cell facilities are and will continue to be located along public rights-of-way, aesthetic standards are a principal focus for certain areas of town (downtown + historic districts) to address concerns over appearance and visual clutter.

AMENDMENT OVERVIEW - AMMENDMENT ANALYSIS

Legal preemptions, intended to reduce local oversight and allow for the speedy deployment of small cell facilities, were first introduced in 2015-2016 at the Federal level; with the State of North Carolina ultimately adopting their own standards in mid-2017. The NC law that passed ([Session Law 2017-159](#)) allowed for some local oversight by allowing for the enforcement of objective aesthetic design standards. Design standards have to be adopted locally in order to be enforceable.

Over the first several years after the adoption of SL2017-159, the City of Hendersonville received minimal interest from the various wireless communication providers for local deployment of small cell facilities - with only a few inquiries and permit requests. However, in recent months, small cell wireless facilities (and/or their associated poles and underground wiring) have been deployed in the city and/or have sought permitting approval from the City. With this recent uptick in activity and installation of facilities within rights-of-way across various locations in Hendersonville, the City is past due for adopting standards to guide their deployment.

The proposed standards are organized and summarized as follows:

Purpose: The purpose of the proposed changes to address Small Cell Wireless Facilities can be categorized as follows:

1. To facilitate deployment of wireless infrastructure;
2. To protect the public health, safety, and welfare; and
3. To preserve the aesthetic character of the public realm

Placement: The preferred location hierarchy is as follows:

1. Collocation on existing structures including telecommunication facilities;
2. Collocation on existing utility poles;
3. Collocation on existing streetlight poles;
4. Replacement of existing poles;
5. New poles, where no feasible alternative exists.

Spacing: They are to be spaced a minimum of 300' apart.

Prohibitions: Facilities may not impede on ADA required spaces, obstruct sight distance triangles, interfere with traffic controls, be placed directly in front of residences or storefronts, be located on historic properties, and can only locate within a historic district or where utilities are all underground when no other feasible location exists.

Design Standards:

Facilities shall be designed to minimize visual impact and to be compatible with surroundings, equipment shall be concealed/shrouded, new pole, in some cases, should serve another function such as street lights or traffic lights and poles shall be designed according to the

Zoning District in which they are located:

- a) Downtown Design Overlay & Historic Districts – 14'-18' max height with decorative pole with green coating.
- b) Residential Zoning - 25' max height. Collocate on existing pole or collocate on a new pole which serves another function.
- c) Non-Residential Zoning – 50' max. with non-reflective finish
- d) Mixed-Use Zoning - 50' max height. Collocate on existing pole or collocate on a new pole which serves another function.

Foundations & Utilities: Foundations shall meet code requirements and have underground utility connections.

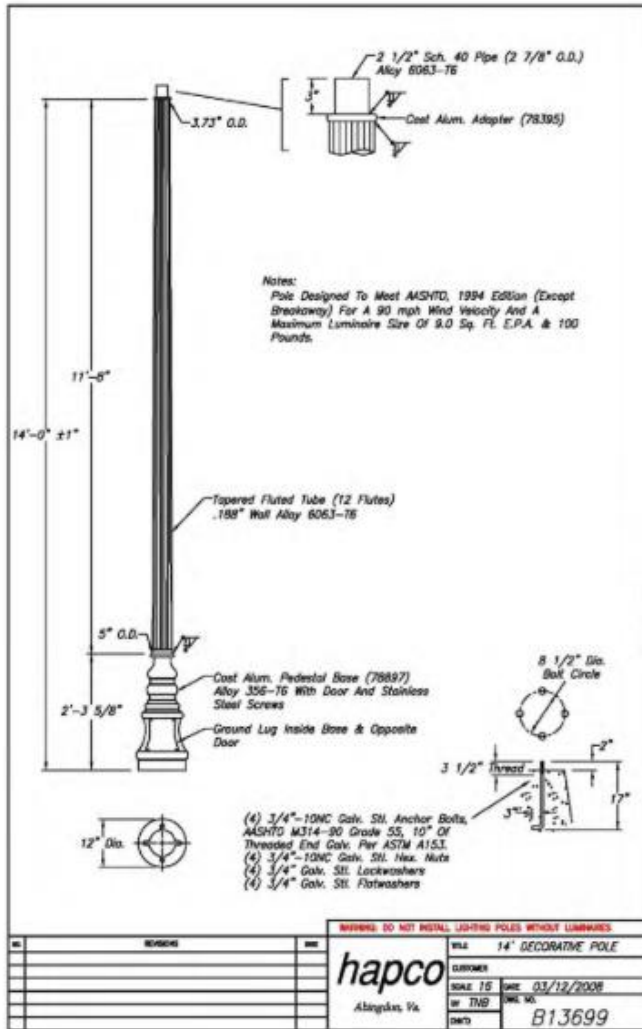
Noise & Ventilation: Facilities will use passive ventilatin and shall be below 30 dBA.

Identification & Safety: Facilities shall include safety signate with 4"x6" max identification plates.

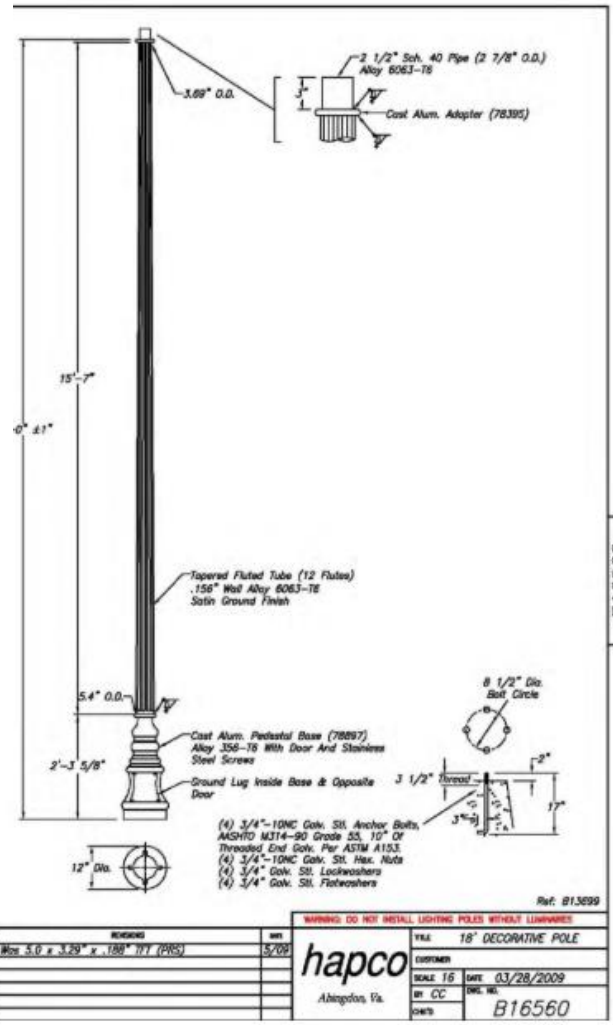
Removal & Abandonment: Facilities abandoned for 12 months shall be removed and the City may remove any facilities which are a safety hazard or no longer maintained.

Nonconforming Facilities: Legally established facilities may continue.

DESIGN SPECIFICATIONS OF DOWNTOWN DESIGN OVERLAY & HISTORIC DISTRICT POLES



14' DECORATIVE LIGHT POLE
SCALE: 3/8" = 1'-0"



18' DECORATIVE LIGHT POLE
SCALE: 3/8" = 1'-0"

NOTES:
1. SEE LAYOUT PLAN, FOUR (4) DECORATIVE LIGHT POLES AT CORNERS OF SEVENTH AVENUE AND LOCUST STREET ONLY.
2. 14' AND 18' DECORATIVE LIGHT POLES, TRAFFIC SIGNALS, AND PEDESTRIAN SIGNALS ARE BEING PURCHASED BY THE CITY. CONTRACTOR IS RESPONSIBLE FOR TRANSPORT FROM CITY OPERATIONS CENTER TO THE SEVENTH AVENUE PROJECT AREA AND FOR INSTALLATION OF LIGHTS.

EXAMPLES OF EXISTING DOWNTOWN POLES



EXAMPLES OF SMALL CELL POLES



Source: [Jeffrey Beall](#), [CC BY 4.0](#), via Wikimedia Commons

Stealth Small Cell Pole

Equipment hidden inside the pole structure



Source: Comments of Crown Castle, WT Docket No. 15-180, at 14 (filed September 28, 2015)

Small Cell on a Lamp Post

Small facility deployed in historic Pittsburgh, PA

Small Cell on Utility Poles



Source: Comments of PCIA - Attachment, WT Docket No. 15-180, at 23 (filed September 28, 2015).

COMMITTEE RECOMMENDATION

The proposed amendment was only briefly reviewed by the Downtown Design Overlay Committee.

PROPOSED TEXT REVISIONS

The following revisions to the zoning code are presented for your consideration. The following language in **red** will be removed and language in **green** will be added to the current zoning district language, shown in black, as illustrated below.

ZONING ORDINANCE

ARTICLE VI. GENERAL PROVISIONS

ARTICLE VI – GENERAL PROVISIONS

Section 6-20. Small Wireless Facility Design and Placement Standards

Sec.6-20- 1. Purpose and Intent

a) The purpose of this subsection is to:

- i. Facilitate deployment of wireless infrastructure;
- ii. Protect the public health, safety, and welfare; and
- iii. Preserve the aesthetic character of the public realm.

b) These standards are intended to be:

- i. Technologically neutral;
- ii. Non-discriminatory; and
- iii. Consistent with applicable federal and state law.

2. Applicability

a) This subsection applies to all small wireless facilities and associated support structures located within the public right-of-way or on publicly owned property with the exception of small wireless facility located in an interior structure or upon the site of any stadium or athletic facility.

b) These standards shall apply to:

- i. New poles;
- ii. Replacement poles; and
- iii. Collocation on existing structures.

c) Where these standards conflict with state or federal law, such law shall control.

3. Administrative Review and Approval

a) Small wireless facilities shall be subject to administrative review.

b) Applications shall be approved if they meet all applicable standards of this Ordinance.

c) The City shall act on applications within the timeframes established by applicable law.

d) Applications shall not be denied for aesthetic reasons unless:

1. The standards are reasonable;
2. The standards are no more burdensome than those applied to other infrastructure deployments; and
3. The standards are published in advance.

4. Placement and Location Standards

a) Preferred Location Hierarchy

Small wireless facilities shall be located in the following order of preference:

- 1) Collocation on existing structures including telecommunication facilities;
- 2) Collocation on existing utility poles;
- 3) Collocation on existing streetlight poles;
- 4) Replacement of existing poles;
- 5) New poles, where no feasible alternative exists.

b) Spacing

New small wireless facility poles shall be separated by a minimum distance of three hundred (300) feet unless the applicant demonstrates that a lesser distance is necessary for service.

c) Prohibited Locations

Small wireless facilities shall not be located:

- 1) Where they would contribute to the obstruction of required sidewalks or ADA access;
- 2) Within a 10' x 70' sight triangle at intersections;
- 3) In a manner that interferes with traffic control devices or public safety operations;
- 4) To the maximum extent feasible, new standalone small cell poles must be aligned with the extension of intersecting side-property lines, rather than directly in front of a primary residential facade or storefront window.
- 5) On property listed on or eligible for listing on the National Register of Historic Places.
- 6) On property which a locally-designated historic landmark.

7) Within designated National Register or local historic districts unless no feasible alternative exists;

Note: For purposes of this section, the term "historic" shall refer to districts or landmarks which have been nominated to the National Register of Historic Places or designated pursuant to chapter 28 of the City Code

d) Underground Districts

In areas where utilities are underground, new poles shall be prohibited unless:

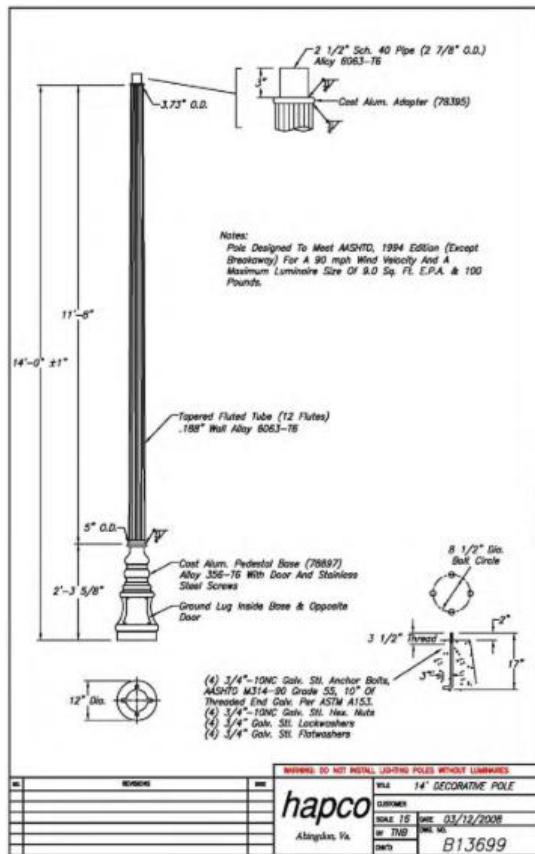
- 1) No feasible alternative exists; and
- 2) The facility is designed to minimize visual impact.

5. Design Standards

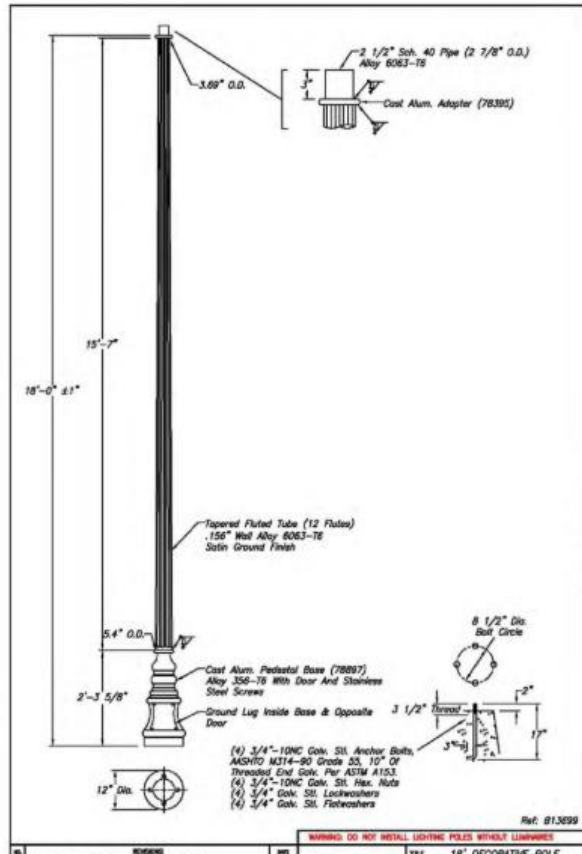
- a) Antennas shall not exceed a height of three feet (3').
- b) All facilities shall be designed and placed to minimize visual impact and be compatible with surrounding streetscape elements. Where no required lighting is included with the facility, locations adjacent to street trees shall be considered to assist with concealment.
- c) Equipment and wiring shall be fully concealed, shrouded, or integrated into the pole.
- d) All mounting hardware, bolts, and brackets must be hidden from public view using a tapered concealment shroud connecting the base of the radio shroud to the pole.
- e) All wiring, cabling, and hardware shall be concealed.
- f) No new ground disturbance shall be permitted that would exceed the depth and width of any previous ground disturbance (including footings and anchoring mechanisms). Except up to four lightning grounding rods up to 3/4-inch in diameter may be installed.

f). Pole Design

- 1) Downtown Design Overlay. Per Sec. 5-28, when located within the Downtown Design Overlay Zoning District, poles shall be constructed according to City of Hendersonville specifications for Downtown District post shown below and coated in a color matching other City facilities as approved by the Public Works Director.



14' DECORATIVE LIGHT POLE
SCALE: 3/4" = 1'-0"



18' DECORATIVE LIGHT POLE
SCALE: 3/4" = 1'-0"

NOTES:
1. SEE LAYOUT PLAN. FOUR 18' DECORATIVE LIGHT POLES AT CORNERS OF SEVENTH AVENUE AND LOCUST STREET ONLY.
2. 14' AND 18' DECORATIVE LIGHT POLES, TRAFFIC SIGNALS, AND PEDESTRIAN SIGNALS ARE BEING PURCHASED BY THE CITY. CONTRACTOR IS RESPONSIBLE FOR TRAFFIC FROM CITY OPERATIONS CENTER TO THE SEVENTH AVENUE PROJECT AREA AND FOR INSTALLATION OF LIGHTS.

Figure 1: Design Specifications for 14' & 18' Decorative Poles



Figure 2: Photo example of 14' Decorative Pole



Figure 3: Photo example of 18' Decorative Pole

- 2) Other Historic Districts. In designated historic districts (Local and National Register) outside of the Downtown Design Overlay, newly proposed facilities shall be reviewed by SHPO. New poles shall meet same specifications as above.
- 3) Residential Zoning Districts. Facilities shall meet the following requirements when located within areas zoned PRD, PMH, R-40, R-20, R-20, R-15, R-10, R-6 or any of these districts' Conditional Zoning District counterpart:
 - a. Facilities shall be:
 - i. Collocated on existing poles or
 - ii. Collocated on replacement poles that combine to serve as a streetlight or traffic light, where small wireless facilities are concealed and poles are consistent in height and design with adjacent streetscape elements.
 - b. Pole height shall not exceed twenty-five feet (25')
- 2) Non-Residential Zoning Districts. Facilities shall meet the following requirements when located within areas zoned PCD, RCT, C-2, C-3, I-1, PMD, PID or any of these districts' Conditional Zoning District counterpart:

- 1. Pole height shall not exceed:

- i. Fifty (50) feet for freestanding poles; or
- ii. Ten (10) feet above the height of an existing structure for collocated facilities, unless otherwise allowed by law.

2. Finish shall be non-reflective and made of material consistent with utility poles within the district.

e) Mixed Use Zoning Districts. Facilities shall meet the following requirements when located within areas zoned C-1, C-4, MIC, GHMU, HMU, UVCZD, URCZD, CHMU or any of these districts' Conditional Zoning District counterpart:

1. Facilities shall be:
 - i. Collocated on existing poles or
 - ii. Collocated in replacement poles that combine to serve as streetlight or traffic light, where small wireless facilities are concealed and poles are consistent in height and design with adjacent streetscape elements.
2. Pole height shall not exceed:
 - i. Fifty (50) feet for freestanding poles; or
 - ii. Ten (10) feet above the height of an existing structure for collocated facilities, unless otherwise allowed by law.
3. Finish shall be non-reflective and made of material consistent with utility poles within the district.

7. Equipment and Antennas

a) Antennas shall be enclosed within a shroud integrated into the pole.

b) Equipment cabinets shall be internal or flush-mounted to the pole.

c) The following dimensional limits shall apply unless otherwise preempted by law:

- 1) Antenna enclosure diameter/height/width: fourteen (18) inches maximum;
- 2) Equipment cabinet diameter/height/width: twenty (20) inches maximum;

d) Color and finish shall match the supporting structure.

8 Foundations and Utilities

a) Foundations shall comply with applicable engineering and building code requirements.

b) All conduit and utility connections shall be underground where feasible.

c) Equipment shall be internally separated by ownership where applicable.

9. Noise and Ventilation

a) Facilities shall utilize passive ventilation where feasible.

b) Noise from mechanical equipment shall not exceed:

- 1) Thirty (30) dBA measured at one (1) meter; or
- 2) Applicable local noise ordinance standards, whichever is more restrictive.

10 Identification and Safety

a) Facilities shall include required safety signage.

b) Identification plates shall not exceed four (4) inches by six (6) inches and shall include:

1. Provider name;
2. Facility ID; and
3. Emergency contact information.

11 Removal and Abandonment

a) Facilities that are abandoned or not in use for a period of twelve (12) months shall be removed.

b) The City may require removal if the facility:

1. Creates a safety hazard; or
2. Is no longer maintained in accordance with this Section.

12 Nonconforming Facilities

a) Legally existing facilities that do not conform to these standards may continue.

b) Modifications shall comply with applicable federal and state law regarding eligible facilities requests.

ARTICLE XII. DEFINITION OF TERMS

Small Cell Wireless Facility - A wireless facility that meets the following qualifications:

- a. Each antenna is located inside an enclosure of no more than 6 cubic feet in volume or, in the case of an antenna that has exposed elements, the antenna and all of its exposed elements, if enclosed, could fit within an enclosure of no more than 6 cubic feet.
- b. All other wireless equipment associated with the facility has a cumulative volume of no more than 28 cubic feet. For the purposes of this sub-subdivision, the

following types of ancillary equipment are not included in the calculation of equipment volume: electric meters, concealment elements, telecommunications demarcation boxes, ground-based enclosures, grounding equipment, power transfer switches, cut-off switches, vertical cable runs for the connection of power and other services, or other support structures.

Micro Wireless Facility - a telecommunication device no larger than 24 inches in length, 15 inches in width, and 12 inches in height, with an exterior antenna no longer than 11 inches A micro wireless facility is not considered a small cell wireless facility.

AMENDMENT STANDARDS (ARTICLE 11-4)

GENERAL REZONING STANDARDS: COMPREHENSIVE PLAN CONSISTENCY	
1) COMPREHENSIVE PLAN CONSISTENCY	<p><u>LAND SUPPLY, SUITABILITY & INTENSITY</u> Supply: N/A Suitability: N/A Intensity: N/A</p>
	<p><u>FUTURE LAND USE & CONSERVATION MAP</u> Character Area Designations: Downtown (primarily) Character Area Descriptions: Somewhat Consistent Zoning Crosswalk: N/A Focus Area: N/A</p>
2) COMPATIBILITY	<p><i>Whether and the extent to which the proposed amendment is compatible with existing and proposed uses surrounding the subject property</i></p>
	<p><u>Existing Conditions:</u> The conditions of rights-of-way throughout the City of Hendersonville vary. However, within much of the city, it is characteristic to have numerous utility poles which contribute to an appearance of visual clutter, especially along thoroughfares. The preemptions allowing for the addition of new poles for small cell facilities has the potential to add to the visual clutter and create safety concerns as a result. Standards which require safe placement and construction and first require collocation on existing poles can assist in stabilizing the visual appearance and safety of rights-of-way in the City.</p> <p><u>GEN H COMPREHENSIVE PLAN GOALS</u> (Chapter IV) Vibrant Neighborhoods: Consistent Abundant Housing Choices: N/A Healthy & Accessible Natural Environment: Consistent Authentic Community Character: Consistent Safe Streets and Trails: Consistent Reliable & Accessible Utility Services: Consistent Satisfying Work Opportunities: N/A</p>

	<p>Welcoming & Inclusive Community: Consistent Accessible & Available Community Uses and Services: Consistent Resilient Community: N/A</p> <p><u>GEN H COMPREHENSIVE PLAN GUIDING PRINCIPLES</u> (Chapter IV) Mix of Uses: Consistent Compact Development: Consistent Sense of Place: Consistent Conserved & Integrated Open Spaces: Inconsistent Desirable & Affordable Housing: Consistent Connectivity: Consistent Efficient & Accessible Infrastructure: Consistent</p> <p><u>DOWNTOWN MASTER PLAN:</u> RELIABLE & ACCESSIBLE UTILITY SERVICES - Infrastructure and utilities within downtown should be positioned to support existing development and future redevelopment opportunities. ACCESSIBLE & AVAILABLE COMMUNITY USES AND SERVICES - Downtown should be the center for exceptional public facilities and services. DESIGN STANDARDS - Pedestrian-friendly environments should be expanded and clear of obstacles. Lighting should be pedestrian-scaled. Use trees, shrubs, and other landscaping elements to conceal service areas, utilities, and parking spaces.</p>
3) Changed Conditions	<p>Whether and the extent to which there are changed conditions, trends or facts that require an amendment -</p> <p>Recent installation of small cell facilities, application of permits to install underground wiring for small cell facilities, and permit applications for above ground small cell facilities have prompted City staff to prioritize the initiation of these proposed code standards.</p>
4) Public Interest	<p>Whether and the extent to which the proposed amendment would result in a logical and orderly development pattern that benefits the surrounding neighborhood, is in the public interest and promotes public health, safety and general welfare -</p> <p>The proposed amendment would allow for the installation of facilities that are designed to improve communication infrastructure and do so in an orderly fashion which is safe and minimizes visual impacts.</p> <p>Some claims have been made to suggest that radiofrequency (RF) used by these facilities are a public health concern. However, major health organizations state that the RF emissions fall well within strict guidelines and pose no known health risk.</p>

<p>5) Public Facilities</p>	<p>Whether and the extent to which adequate public facilities and services such as water supply, wastewater treatment, fire and police protection and transportation are available to support the proposed amendment</p>
	<p>The proposed text amendment would not directly impact the provision of publicly-provided services but may enhance communication technology needed to effectively and efficiently provide public services.</p>
<p>6) Effect on Natural Environment</p>	<p>Whether and the extent to which the proposed amendment would result in significantly adverse impacts on the natural environment including but not limited to water, air, noise, storm water management, streams, vegetation, wetlands and wildlife -</p>
	<p>Some research suggest that the wireless spectrum or radiofrequency (RF) used by these facilities have an impact on local flora and fauna including tree damage, absorption of radiation in honeybees and impacts to circadian rhythms and migration patterns. Small cell wireless facilities transmit data using mid- and high-band spectrum vs the traditional low-band spectrum. However, major health organizations state that the RF emissions fall well within strict guidelines and pose no known health risk.</p>

Staff Analysis

1. Comprehensive Plan Consistency - Staff finds the proposed text amendment to be consistent with the *Gen H Comprehensive Plan*.
2. Compatibility - The proposed text amendment is designed to prioritize compatibility within the constraints of federal and state law.
3. Changed Conditions - The text amendment is a timely response to emerging demand for new small cell facilities.
4. Public Interest – The text amendment proposes to allow for the orderly deployment of small cell facilities which will help to enhance communications infrastructure.
5. Public Facilities – The deployment of small cell facilities proposes to enhance the communication network.
6. Effect on Natural Environment – No known impacts at this time.

DRAFT COMPREHENSIVE PLAN CONSISTENCY AND REZONING REASONABLENESS STATEMENT

The petition is found to be **consistent** with the City of Hendersonville Gen H Comprehensive Plan based on the information from the staff analysis and the public hearing, and because:

The proposed text amendment aligns with the Gen H Comprehensive Plan Goals and Guiding Principles

We **[find/do not find]** this petition to be reasonable and in the public interest based on the information from the staff analysis and the public hearing, and because:

DRAFT [Rationale for Approval]

- *The proposed amendment aligns with state law and federal guidelines*
- *The proposed amendment allows for the installation, expansion, and improvement of telecommunications infrastructure*
- *The proposed amendment establishes standards for order, compatibility and safety in the deployment of small cell facilities.*

DRAFT [Rational for Denial]

- *The proposed amendment is overly restrictive and hinders improvements to the local telecommunications network*
- *The proposed amendment is overly relaxed and does not go far enough in protecting the public from the impacts of widespread deployment of small cell facilities.*