

Article 12: Telecommunication Regulations

Part 1: Title, Purpose, Authority, and Effective Date

Section 12.01: Title

This Article shall be known and may be cited as the "Telecommunication Regulations" of the City of Rockingham (City) North Carolina", also known as "the Article", "this Article", and "Article" herein.

Section 12.02: Purpose

The purpose of this Article is to establish general guidelines for the location of Personal Wireless Service Facilities ("PWSF") and their component parts, including but not limited to towers, antenna, ground equipment and related accessory structures. More specifically, the purposes and intent of this Article are to:

- (A) Promote the health, safety, and general welfare of the public by regulating the location of telecommunication facilities.
- (B) Minimize the impacts of PWSFs on surrounding land uses by establishing standards for location, structural integrity, and compatibility.
- (C) Encourage the location and collocation of PWSF equipment on existing structures thereby minimizing new visual, aesthetic, and public safety impacts, effects upon the natural environment and wildlife, and to reduce the need for additional towers.
- (D) Accommodate the growing need and demand for PWSF services.
- (E) Encourage coordination between suppliers and providers of PWSF services.
- (F) Establish predictable and balanced codes governing the construction and location of PWSF within the confines of permissible local regulations.
- (G) Establish review procedures to ensure that applications for PWSF are reviewed and acted upon within a reasonable period of time as required by applicable state and federal regulations.
- (H) Respond to the policies embodied in the Telecommunications Act of 1996; The Middle Class Tax Relief and Job Creation Act of 2012, and other applicable federal and state regulations in such a manner as not to unreasonably discriminate between providers of functionally equivalent personal wireless services or to prohibit or have the effect of prohibiting personal wireless services.
- (I) Protect the character of the City while meeting the needs of its citizens to enjoy the benefits of PWSF.
- (J) Encourage the use of public lands, buildings, and structures as locations for PWSF demonstrating concealed technologies and revenue generating methodologies.

Section 12.03: Authority

The provisions of this Article are adopted under authority granted by the General Assembly of the State of North Carolina with particular reference to Part 3 of Chapter 160D of the North Carolina General Statutes.

Section 12.04: Effective Date

This Article shall be effective from and after the date of its adoption by the City Council.

Section 12.05: Repeal Of Pre-Existing Telecommunications Regulations

The provisions and requirements of this Article supersede all the provisions and requirements of the pre-existing City's Telecommunications Regulations adopted on January 14, 2003 and amended through March 10, 2015.

Section 12.06: Jurisdiction

These regulations shall govern the establishment and maintenance of PWSF. Provisions of this Article shall apply uniformly to all areas within the jurisdiction of the City.

Part 2: Definitions**Section 12.07: Definitions**

For the purposes of this Article, and where not inconsistent with the context of a particular section, the defined terms, phrases, words, abbreviations, and their derivations shall have the meaning given in this section. When not inconsistent with the context, words used in the present tense include the future tense; words used in the singular number include the plural, and words used in the plural number include the singular; the word "shall" is always mandatory and not merely directory; the word "may" is permissive; and the words "used" or "occupied" include the words intended, designed, or arranged to be used or occupied.

- (A) **"Alternative Structure"** means a structure that is not primarily constructed for the purpose of holding antennas but on which one (1) or more antennas may be mounted, including buildings, water tanks, pole signs, billboards, church steeples, and electric power transmission towers.
- (B) **"Amateur Radio Tower"** means any tower used for amateur radio transmissions consistent with the "Complete FCC U.S. Amateur Part 97 Rules and Regulations" for amateur radio towers.
- (C) **"Ancillary Structure"** means, for the purposes of this Article, any form of development associated with a communications facility, including foundations, concrete slabs on grade, guy anchors, generators, and transmission cable supports, but excluding equipment cabinets.
- (D) **"Antenna"** means any apparatus designed for the transmitting and/or receiving of electromagnetic waves, including telephonic, radio or television communications. Types of elements include omni-directional (whip) antennas, sectionalized (panel) antennas, multi or single bay (FM & TV), yagi, or parabolic (dish) antennas.
- (E) **"Antenna Array"** means a single or group of antenna elements and associated mounting hardware, transmission lines, or other appurtenances which share a common attachment device such as a mounting frame or mounting support structure for the sole purpose of transmitting or receiving electromagnetic waves.
- (F) **"Antenna Element"** means any antenna or antenna array.
- (G) **"ASR"** means the Antenna Structure Registration Number as required by the FAA and FCC.
- (H) **"Base Station"** means the electronic equipment utilized by the wireless providers for the transmission and reception of radio signals.

- (I) **"Breakpoint Technology"** means the engineering design of a monopole wherein a specified point on the monopole is designed to have stresses concentrated so that the point is at least five percent (5%) more susceptible to failure than any other point along the monopole so that in the event of a structural failure of the monopole, the failure will occur at the breakpoint rather than at the base plate, anchor bolts, or any other point on the monopole.
- (J) **"Collocation"** means the practice of installing and operating multiple wireless carriers, service providers, and/or radio common carrier licensees on the same tower or attached communication facility using different and separate antenna, feed lines, and radio frequency generating equipment.
- (K) **"Combined Antenna"** means an antenna or an antenna array designed and utilized to provide services for more than one (1) wireless provider, or a single wireless provider utilizing more than one (1) frequency band or spectrum, for the same or similar type of services.
- (L) **"Concealed"** means a tower, ancillary structure, or equipment compound that is not readily identifiable as such, and is designed to be aesthetically compatible with existing and proposed building(s) and uses on a site. There are two (2) types of concealed facilities: 1) Antenna Attachments, including painted antenna and feed lines to match the color of a building or structure, faux windows, dormers or other architectural features that blend with an existing or proposed building or structure and 2) Freestanding. Freestanding concealed tower's usually have a secondary, obvious function which may include church steeple, windmill, bell tower, clock tower, light standard, flagpole with or without a flag, or tree.
- (M) **"COW"** or **"Cellular on Wheels"** means a temporary PWSF, typically located on a trailer that can be erected/extended to provide short term, high volume communications services to a specific location.
- (N) **"DAS"** or **"Distributed Antenna System"** A DAS system consists of: (1) a number of remote communications nodes deployed throughout the desired coverage area, each including at least one antenna for transmission and reception; (2) a high capacity signal transport medium (typically fiber optic cable) connecting each node to a central communications hub site; and (3) radio transceivers located at the hub site (rather than at each individual node as is the case for small cells) to process or control the communications signals transmitted and received through the antennas.
- (O) **"DAS Hub"** means ancillary equipment usually contained in a shelter or other enclosure which does not have any wireless transmission or receive equipment contained therein but is utilized in the deployment and operation of wireless DAS receive/transmit infrastructure that is located elsewhere.
- (P) **"Development Area"** means the area occupied by a communications facility including areas inside or under an antenna-support structure's framework, equipment cabinets, ancillary structures, and/or access ways.
- (Q) **"Discontinued"** means any tower without any mounted transmitting and/or receiving antennas in continued use for a period of 180 consecutive days.
- (R) **"Equipment Compound"** means the fenced-in area surrounding the ground-based wireless communication facility including the areas inside or under a tower's framework and ancillary structures such as equipment necessary to operate the antenna on the structure that is above the base flood elevation including cabinets, shelters, pedestals, and other similar structures.

- (S) **"Equipment Cabinet"** means any structure above the base flood elevation including cabinets, pedestals, and other similar structures and used exclusively to contain radio or other equipment necessary for the transmission or reception of wireless communication signals.
- (T) **"Equipment Shelter"** means a self-contained prefabricated building, made of permanent materials such as steel or concrete, which contains all electronic ancillary equipment and normally including a generator.
- (U) **"FAA"** means the Federal Aviation Administration.
- (V) **"FCC"** means the Federal Communications Commission.
- (W) **"Feed Lines"** means Cables or fiber optic lines used as the interconnecting media between the transmission/receiving base station and the antenna.
- (X) **"Flush-Mounted"** means any antenna or antenna array attached directly to the face of the support structure or building such that no portion of the antenna extends above the height of the support structure or building. Where a maximum flush-mounting distance is given, that distance shall be measured from the outside edge of the support structure or building to the inside edge of the antenna.
- (Y) **"Guyed Structure"** (see Tower)
- (Z) **"Geographic Search Ring"** means an area designated by a wireless provider or operator for a new base station, produced in accordance with generally accepted principles of wireless engineering.
- (AA) **"Handoff Candidate"** means a wireless communication facility that receives call transference from another wireless facility, usually located in an adjacent first "tier" surrounding the initial wireless facility.
- (BB) **"Lattice Structure"** (see Tower)
- (CC) **"Least Visually Obtrusive Profile"** means the design of a wireless communication facility intended to present a visual profile that is the minimum profile necessary for the facility to properly function.
- (DD) **"Mitigation"** means a modification of an existing tower to increase the height, or to improve its integrity, by replacing or removing one (1) or several tower(s) located in proximity to a proposed new tower in order to encourage compliance with this Article, or improve aesthetics or functionality of the overall wireless network.
- (EE) **"Monopole Structure"** (see Tower).
- (FF) **"Non-concealed"** means a wireless communication facility that is readily identifiable as such and can be either freestanding or attached.
- (GG) **"OTARD"** means over the air reception devices which are limited to either a "dish" antenna one meter (39.37 inches) or less in diameter designed to receive direct broadcast satellite service, including direct-to-home satellite service, or to receive or transmit fixed wireless signals via satellite, or an antenna that is one meter or less in diameter and is designed to receive video programming services via broadband radio service (wireless cable), or to receive or transmit fixed

wireless signals other than via satellite or an antenna that is designed to receive local television broadcast signals.

- (HH) **"Personal Wireless Service Facility" or "PWSF"** means any staffed or unstaffed location for the transmission and/or reception of radio frequency signals or other wireless communications, including commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services as defined in the Telecommunications Act of 1996, and usually consisting of an antenna or group of antennas, transmission cables, feed lines, equipment cabinets or shelters, and may include a tower. The following developments shall be deemed a PWSF: new, mitigated, or existing towers, public towers, replacement towers, collocation on existing towers, attached concealed and non-concealed antenna, concealed towers, and non-concealed towers (monopoles, lattice and guyed).
- (II) **"Public Safety Communications Equipment"** means all communications equipment utilized by a public entity for the purpose of ensuring the safety of the citizens of the City and operating within the frequency range of 145 MHz through 155 MHz, 445 MHz through 475 MHz and 700 MHz through 1,000 MHz and any future spectrum allocations at the direction of the FCC.
- (JJ) **"Radio Frequency Emissions"** means any electromagnetic radiation or other communications signal emitted from an antenna or antenna-related equipment.
- (KK) **"Radio Frequency Propagation Analysis"** means computer modeling to show the level of signal saturation in a given geographical area.
- (LL) **"Replacement"** (see Mitigation)
- (MM) **"Satellite Earth Station"** means a single or group of parabolic or dish antennas mounted to a support device that may be a pole or truss assembly attached to a foundation in the ground, or in some other configuration, including the associated separate equipment cabinets necessary for the transmission or reception of wireless communications signals with satellites.
- (NN) **"Stanchion"** means a vertical support structure generally utilized to support exterior lighting elements.
- (OO) **"Streamlined Processing"** means expedited review process for collocations.
- (PP) **"Structure"** means anything constructed or erected, the use of which required permanent location on the ground, or attachment to something having a permanent location on the ground, including advertising signs.
- (QQ) **"Temporary PWSF"** means a temporary tower or other structure, typically located on a trailer that provides interim short-term communications when permanent PWSF equipment is unavailable or offline. A Temporary PWSF meets an immediate demand for service in the event of emergencies and/or public events where the permanent wireless network is unavailable or insufficient to satisfy demand.
- (RR) **"Tower"** means a physical structure, typically metallic in composition, used as part of a PWSF to provide an elevated location to attach antenna and other equipment necessary for the operation of a PWSF. Towers do not include any device used to attach antennas to an existing building, unless the device extends above the highest point of the building by more than twenty (20) feet. Types of towers include the following:

- (1) **"Guyed Tower"** means a style of tower consisting of a single truss assembly composed of sections with bracing incorporated. The sections are attached to each other, and the assembly is attached to a foundation and supported by a series of wires that are connected to anchors placed in the ground or on a building.
 - (2) **"Lattice Structure"** means a self-supporting tapered style of tower that consists of vertical and horizontal supports with multiple legs and cross bracing, and metal crossed strips or bars to support antennas.
 - (3) **"Monopole Structure"** means a style of freestanding tower consisting of a single shaft usually composed of two (2) or more hollow sections that are in turn attached to a foundation. This type of tower is designed to support itself without the use of guy wires or other stabilization devices. These facilities are mounted to a foundation that rests on or in the ground or on a building's roof. All feed lines shall be installed within the shaft of the structure.
- (SS) **"Tower Base"** means the foundation, usually concrete, on which the tower and other support equipment are situated. For measurement calculations, the tower base is that point on the foundation reached by dropping a perpendicular from the geometric center of the tower.
- (TT) **"Tower Height"** means the vertical distance measured from the grade line to the highest point of the tower, including any antenna, lighting or other equipment affixed thereto.
- (UU) **"Tower Site"** means the land area that contains, or will contain, a proposed tower, support structures and other related buildings and improvements.

Part 3: Exemptions and General Provisions

Section 12.08: Existing Telecommunications Towers

Telecommunications towers existing prior to the adoption date of these regulations or permitted prior to the adoption of this Article shall be allowed to continue to operate provided they met the requirements set forth by the City at the time of final inspection; not including any towers that are currently in violation of other provisions of this Ordinance and/or the previous tower regulations of the City.

Section 12.09: Exempt Facilities

The following items are exempt from the provisions of this Article; notwithstanding any other provisions:

- (A) A government-owned communications facility, upon the declaration of a state of emergency by federal, state, or local government, and a written determination of public necessity by the City designee; except that such facility must comply with all federal and state requirements. No communications facility shall be exempt from the provisions of this division beyond the duration of the state of emergency.
- (B) A government-owned communications facility erected for the purposes of installing antenna(s) and ancillary equipment necessary to provide communications for public health and safety.
- (C) A temporary PWSF, upon the declaration of a state of emergency by federal, state, or local government, or determination of public necessity by the City and approved by the City; except that such facility must comply with all federal and state requirements. The PWSF may be exempt

from the provisions of this division up to sixty (60) days after the duration of the state of emergency.

- (D) Over the air reception devices ("OTARD") as that term is defined by the Federal Communications Commission, including satellite earth stations that are (1) meter (39.37 inches) or less in diameter in all residential zoning districts and two (2) meters or less in all other zoning districts. OTARD devices are exempt provided that same do not require the construction of a tower or other structure which height exceeds 12 feet above the residential structure of the consumer who desires to receive fixed wireless services, satellite transmissions, or over the air reception of television signals.

Section 12.10: Application of this Article

This Article shall apply to the development activities including installation, construction, or modification of all antenna and tower facilities including but not limited to: non-commercial, amateur radio station antennas; existing towers; proposed towers; public towers; mitigation of towers; collocation on existing towers; attached PWSF; concealed PWSF; non-concealed towers; temporary PWSF (a/k/a COW); DAS facilities; and broadcasting towers.

Section 12.11: Abandonment (Discontinued Use)

- (A) PWSF towers, antennas, and the equipment compound shall be removed, at the owner's expense, within 180 days of cessation of use, unless the abandonment is associated with a mitigation as provided in the 'Mitigation' section of this Article, in which case the removal shall occur within ninety (90) days of cessation of use.
- (B) An owner wishing to extend the time for removal or reactivation shall submit an application stating the reason for such extension. The City may extend the time for removal or reactivation up to sixty (60) additional days upon a showing of good and unique cause. If the tower or antenna is not removed within this time, the City may give notice that it will contract for removal within thirty (30) days following written notice to the owner. Thereafter, the City may cause removal of the tower with costs being borne by the owner.
- (C) Upon removal of the PWSF tower, antenna, and equipment compound, the development area shall be returned to its natural state and topography and vegetated consistent with the natural surroundings or consistent with the current uses of the surrounding or adjacent land at the time of removal, excluding the foundation, which does not have to be removed.

Section 12.12: Conflict with other Laws or Regulations

When the requirements of this Article conflict with the requirements of other lawfully adopted rules, regulations, ordinances, or deeds restrictions imposed by the developer or subdivider, the more stringent requirements shall govern.

Section 12.13: Interference with Public Safety Communications

In order to facilitate the regulation, placement, and construction of antenna, and to ensure that all parties are complying to the fullest extent possible with the rules, regulations, and/or guidelines of the FCC, each owner of an antenna, antenna array or applicant for a collocation shall agree in a written statement to the following:

- (A) Compliance with "Good Engineering Practices" as defined by the FCC in its rules and regulations.
- (B) Compliance with FCC regulations regarding susceptibility to radio frequency interference, frequency coordination requirements, general technical standards for power, antenna, bandwidth limitations, frequency stability, transmitter measurements, operating requirements, and any and

- all other federal statutory and regulatory requirements relating to radio frequency interference (RFI).
- (C) In the case of an application for collocated PWSF, the applicant, together with the owner of the subject site, shall use their best efforts to provide a composite analysis of all users of the site to determine that the applicant's proposed facilities will not cause radio frequency interference with the City's public safety communications equipment and will implement appropriate technical measures, as described in antenna element replacements, to attempt to prevent such interference.
- (D) Whenever the City has encountered radio frequency interference with its public safety communications equipment, and it believes that such interference has been or is being caused by one or more antenna arrays, the following steps shall be taken:
- (1) The City shall provide notification to all wireless service providers operating in the City of possible interference with the public safety communications equipment, and upon such notifications, the owners shall use their best efforts to cooperate and coordinate with the City and among themselves to investigate and mitigate the interference, if any, utilizing the procedures set forth in the joint wireless industry-public safety "Enhanced Best Practices Guide," released by the FCC in Appendix D of FCC 04-168 (released August 6, 2004), including the "Good Engineering Practices," as may be amended or revised by the FCC from time to time in any successor regulations.
 - (2) If any equipment owner fails to cooperate with the City in complying with the owner's obligations under this section or if there is a determination of radio frequency interference with the City's public safety communications equipment, the owner who failed to cooperate and/or the owner of the equipment which caused the interference shall be responsible for reimbursing the City for all costs associated with ascertaining and resolving the interference, including but not limited to any engineering studies obtained by the City to determine the source of the interference. For the purposes of this subsection, failure to cooperate shall include failure to initiate any response or action as described in the "Enhanced Best Practices Guide" within twenty-four (24) hours of City's notification.

Part 4: Antennas, Towers, and Associated Equipment – Permits and Siting

Section 12.14: Building Code Requirements

PWSF infrastructure shall be constructed and maintained in conformance with all applicable building code requirements.

Section 12.15: Permits Required

- (A) Permit (Level I): The permit issued by the Zoning Administrator as designated by this Ordinance, to an individual, corporation, partnership, or other entity to engage in the creation of amateur radio tower, or a temporary PWSF (a/k/a COW).
- (B) Permit (Level II): The permit issued by the Zoning Administrator as designated by this Ordinance to an individual, corporation, partnership, or other entity to engage in collocated or combined PWSF, concealed or non-concealed attached PWSF, antenna and associated equipment replacements, PWSF tower replacement or mitigation, or new DAS.

- (C) Permit (Level III): The Special Use Permit issued by the Zoning Administrator (after public hearing and approval by the Board of Adjustment) as designated by this Ordinance, to an individual, corporation, partnership, or other entity to engage in the creation of new concealed or non-concealed PWSF towers.
- (D) Permit (Level IV): The Special Use permit issued by the Zoning Administrator (after public hearing and approval by the Board of Adjustment) as designated by this Ordinance, to an individual, corporation, partnership, or other entity holding a broadcast license issued by the FCC to engage in the creation of a new AM, FM or TV Broadcast tower.

Section 12.16: Permit Level Requirements

PERMIT LEVEL	ISSUED BY	PERMIT TYPE	USE
I	Zoning Administrator	Permitted	Amateur radio no greater than seventy (70) feet in height or temporary PWSF (a/k/a COW)
II	Zoning Administrator	Permitted	Collocated, combined and concealed or non-concealed attached antennas and associated equipment for PWSF, antenna element and equipment replacement, PWSF mitigation, and DAS.
III	Board of Adjustment	Special	New concealed and non-concealed PWSF towers
IV	Board of Adjustment	Special	Broadcasting Towers

Section 12.17: Siting Alternatives Order

The siting of a new PWSF shall be in accordance with the following preferred siting alternative order:

- (A) Concealed attached PWSF in any zoning district
 - (1) On City-owned property
 - (2) On non-City-owned property
- (B) Collocated or combined PWSF in any zoning district
 - (1) On City-owned property
 - (2) On non-City-owned property
- (C) Non-concealed attached PWSF in any zoning district
 - (1) On City-owned property
 - (2) On non-City owned property
- (D) Mitigation of existing PWSF in any zoning district
 - (1) On City-owned property
 - (2) On non-City owned property
- (E) Distributed Antenna System
 - (1) Attached
 - (a) Concealed on City-owned property
 - (b) Concealed in right-of-way or easement
 - (c) Concealed on non-City-owned property
 - (d) Non-concealed on City-owned property
 - (e) Non-concealed in right-of-way or easement

- (f) Non-concealed on non-City-owned property
- (2) New Freestanding DAS facility
 - (a) Concealed on City-owned property
 - (b) Concealed in right-of-way or easement
 - (c) Concealed on non-City-owned property
 - (d) Non-concealed on City-owned property
 - (e) Non-concealed in right-of-way or easement
 - (f) Non-concealed on non-City-owned property
- (F) Concealed freestanding PWSF
 - (1) On City-owned property in any zoning district
 - (2) On non-City-owned property in the following districts ranked highest to lowest:
 - (a) I-1 and I-2
 - (b) B-3
 - (c) R-20
 - (d) B-1, B-2, and O-I
 - (e) R-12, R-9, R-8, R-7 and R-7A
- (G) Non-concealed freestanding PWSF
 - (1) On City-owned property in any zoning district
 - (2) On non-City-owned property in the following districts, ranked highest to lowest:
 - (a) I-1 and I-2
 - (b) B-3
 - (c) R-20

Section 12.18: Preference Ranking for Attached, Collocated, and Combined PWSF

For attached, collocated, or combined PWSF, the order of ranking preference, highest to lowest shall follow the same ranking as provided in subsections A1 through C2 in Section 12.16 above. Where a lower ranked alternative is proposed, the applicant must file relevant information as required including, but not limited to, an affidavit by a radio frequency engineer demonstrating that despite diligent efforts to adhere to the established hierarchy within the geographic search area, higher ranked options are not technically feasible, practical or justified given the location of the proposed PWSF.

Section 12.19: Preference Ranking for Mitigation and Freestanding Towers

Where a mitigated or freestanding PWSF is permitted the order of ranking preference from highest to lowest shall follow the same ranking as provided in subsections D1 through F2 in Section 12.16 above. Where a lower ranked alternative is proposed, the applicant must file relevant information as required and demonstrate higher ranked options are not technically feasible, practical, or justified given the location of the proposed communications facility, and the existing land uses of the subject and surrounding properties within 300 feet of the subject property.

Section 12.20: PWSF Use Regulations and Required Permits

New PWSF antennas# and PWSF towers shall be permitted in City of Rockingham according to the following table:

Zoning District	Amateur Facility or Temporary PWSF	Concealed Attached PWSF Antenna	Collocated or Combined PWSF antenna or Antenna Element Replacement	Non-concealed Attached PWSF Antenna*	Mitigation of Existing PWSF Tower or DAS	Concealed Freestanding Non DAS PWSF Tower	Non-Concealed Freestanding PWSF Tower	Broadcasting Tower	PWSF Antenna Element Replacement
R-20	Level I	Level II	Level II	Level II	Level II	Level III	Level III	Level IV	Level II
R-12 R-9 R-8	Level I	Level II	Level II	Level II	Level II	Level III			Level II
R-7 R-7A	Level I	Level II	Level II	Level II	Level II	Level III			Level II
B-1 B-2	Level I	Level II	Level II	Level II	Level II	Level III			Level II
B-3	Level I	Level II	Level II	Level II	Level II	Level III	Level III	Level IV	Level II
I-1 I-2	Level I	Level II	Level II	Level II	Level II	Level III	Level III	Level IV	Level II
O-I	Level I	Level II	Level II	Level II	Level II	Level III			Level II
O-S	Level I	Level II	Level II	Level II	Level II	Level III			Level II

Antenna for this purpose means all radio frequency equipment mounted to a support structure.
* Non-concealed attached antennas are only allowed on transmission towers, water tanks, and light stanchions.

Part 5: Permit (Level I) Amateur Radio, Temporary Towers, and Exempt OTARD Facilities

Section 12.21: Amateur Radio Tower Specifications and Requirements

- (A) Height: Amateur tower height, location, and other technical specifications shall comply with federal and state law. Amateur towers shall not exceed seventy (70) feet. Amateur tower permits shall be issued conditioned upon the tower being used solely for non-commercial purposes and no commercial wireless communications facilities may be collocated thereon (notwithstanding the provisions of 47 USC §1455(a)).
- (B) Setbacks: A distance equal to the height of the tower shall separate new amateur radio towers from all structures not located on the same parcel as the tower, property lines, right-of-way lines and/or easements. Any relocation of amateur radio towers shall remain on same parcel and must comply with stated Ordinance setback requirements, or, if compliance is not possible, the relocation must not increase the amount by which setbacks are nonconforming, other than increases necessitated solely by changes in size of the base to support the new tower.
- (C) Application Requirements: All Permit (Level I) applications for Amateur radio towers shall contain the following:
 - (1) Completion of the "Amateur Radio Tower Application" and application fee.

- (2) One (1) original and two (2) copies of a survey of the property completed by a registered professional engineer, licensed in the State of North Carolina showing all existing uses, structures, and improvements as well as proposed structure and setbacks.
- (3) One (1) original and two (2) copies of construction drawings showing the proposed structure and setbacks.
- (4) A copy of an active FCC Amateur license.
- (5) An Applicant Certification statement that the proposed facility will only be utilized for amateur radio purposes, shall comply with all applicable federal regulations, and that the proposed facility will not be used for commercial purposes in any form.

Section 12.22: Temporary PWSF Specifications and Requirements

- (A) Temporary PWSF shall be in place for no more than sixty (60) days; shall require notification of construction to the FAA; shall not require marking or lighting by the FAA; shall be less than 200 feet in height; and shall not involve any excavation (or excavation where prior disturbance exceeds proposed excavation by at least 2 feet).
- (B) Application Requirements: All Permit (Level 1) applications for Temporary PWSF shall contain the following:
 - (1) Completion of the "Temporary Tower Application" and application fee.
 - (2) Description of proposed location, type of temporary structure, duration of proposed location not to exceed 60 days (subject to a one time extension of an additional 60 days for good cause), type of electrical service to be utilized, description of temporary necessity requiring Temporary PWSF.

Part 6: Permit (Level II) PWSF Collocation, Combined, Attachment, Antenna Element, Equipment Replacement, Replacement Towers, and DAS**Section 12.23: PWSF Collocation and Combination**

The City requires collocation and combining of PWSF antennas on existing towers as a higher priority where collocation is possible. Upon enactment of this Article, any person, corporation, partnership, or other entity which intends to collocate on an existing tower within the jurisdiction of this Ordinance must obtain a Permit (Level II). Collocation PWSFs are subject to the following:

- (A) A PWSF collocated or combined antenna or antenna array shall not exceed the maximum height prescribed in the Special Use Permit (if applicable) or increase the height of an existing tower by more than twenty (20) feet and shall not affect any tower lighting, except as provided for herein below.
- (B) New PWSF antenna mounts shall be flush-mounted onto existing structures, unless it is demonstrated through radio frequency (RF) propagation analysis that flush-mounted antennas will not meet the network objectives of the desired coverage area.

- (C) The equipment cabinet shall be subject to the setback requirements of the underlying zoning district.
- (D) When a PWSF collocated or combined antenna is to be located on a nonconforming building or structure, then the existing permitted nonconforming setback shall prevail.
- (E) Applications entitled to the streamlined processes described in Section 160A-400.53 North Carolina General Statutes shall meet all the following requirements:
 - (1) The additional PWSF antenna array, transmission lines, and related ancillary equipment including the base station do not exceed the number of same items previously approved for such tower when originally approved, and the collocated facility is in complete conformance with the original conditions imposed on the tower upon which it is being attached.
 - (2) The proposed PWSF collocation shall not increase the existing vertical height of the structure by the greater of (i) more than ten percent (10%) or (ii) the height of one additional antenna array with separation from the nearest existing antenna not to exceed 20 feet.
 - (3) Except where necessary to shelter the antenna from inclement weather or to connect the antenna to the tower via cable, adding an appurtenance to the body of a PWSF that protrudes horizontally from the edge of the PWSF the greater of (i) more than 20 feet or (ii) more than the width of the PWSF at the level of the appurtenance.
 - (4) The PWSF collocation shall not increase the ground space area approved in the communications tower site plan for equipment enclosures and ancillary facilities by more than 2,500 square feet.
 - (5) The existing tower on which the PWSF collocation will attach shall comply with applicable regulations, restrictions, and/or conditions, if any, applied to the initial wireless facilities placed on the tower, as updated by any applicable modifications to ANSI EIA/TIA standards or North Carolina Building Code.
 - (6) The proposed additional PWSF collocation and tower shall comply with all federal, state, and local safety requirements.
 - (7) The proposed PWSF collocation and ancillary equipment shall not exceed the applicable weight limits for the tower.
- (F) Applications for collocation entitled to streamlined processing pursuant to Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012 shall be approved provided they meet the following requirements:
 - (1) A PWSF collocation on an existing antenna-supporting structure not in a public right of way shall not increase the overall height of the antenna-supporting structure, antenna and/or antenna array more than 10% or 20 feet, whichever is greater. A PWSF collocation on an existing antenna-supporting structure within a public right of way shall not increase the overall height of the antenna-supporting structure, antenna and/or antenna array more than 10% or 10 feet, whichever is greater.

- (2) A PWSF collocation eligible under this subsection (F) shall not, for towers not in a public right of way, protrude from the antenna-supporting structure more than 20 feet or the width of the structure at the elevation of the collocation, and for towers within a public right of way, protrude from the antenna-supporting structure more than 6 feet.
 - (3) Any PWSF collocation on an existing antenna-supporting structure shall meet current building code requirements (including windload).
 - (4) A PWSF collocation shall not add more than four (4) additional equipment cabinets or one (1) additional equipment shelter to be eligible as a collocation under this subsection (F).
 - (5) A PWSF collocation eligible under this subsection (F) shall not require excavation outside of existing leased or owned parcel or existing easements.
 - (6) A PWSF collocation eligible under this subsection (F) shall not defeat any existing concealment elements of the antenna-supporting structure.
 - (7) A PWSF collocation eligible under this subsection (F) shall comply with all conditions associated with the prior approval of the antenna-supporting structure except for modification of parameters as permitted in this subsection (F).
 - (8) Proposed PWSF collocations that do not meet the standards of this subsection (F) shall be processed either pursuant to subsection (E) above or pursuant to Section 12.24, as applicable.
- (G) Application Requirements:
- (1) Completion of "PWSF Application" and application fee.
 - (2) Applicant shall provide a written statement of compliance with all applicable FCC rules and regulations.
 - (3) Applicant shall provide a complete set of construction drawings of the proposed facility demonstrating compliance with applicable Federal, State and City building codes.
 - (4) Applicant shall provide a structural analysis by a Registered Professional Engineer that the support structure complies with applicable ANSI/EIA/TIA-222G (as amended) standards with all existing and proposed equipment.
 - (5) Applicants seeking processing under 47 USC §1455(a) shall also provide:
 - (a) Documentation evidencing the structure upon which the collocation is proposed has previously been subject to zoning approval by the City.
 - (b) Documentation evidencing the collocation installation complies with the requirements set forth in Section 12.23 (F) above.

Section 12.24: PWSF Antenna Attachment: Concealed and Non-concealed

PWSF antennas and equipment may be mounted onto a structure which is not primarily constructed for PWSF purposes but upon which one (1) or more PWSF antennas and equipment may be mounted. Upon enactment of this Article, any person, corporation, partnership, or other entity which intends to place an antenna and equipment on an alternative structure within the jurisdiction of this Ordinance must obtain a Permit (Level II). Attached antenna and equipment shall be subject to the following:

- (A) The top of the attached PWSF antenna shall not be more than twenty (20) feet above the existing or proposed building or structure.
- (B) Non-concealed PWSF attachments shall only be allowed on electrical transmission towers, water tanks and existing light stanchions subject to approval by the Planning Department and utility company.
- (C) When an attached PWSF antenna and equipment is to be located on a nonconforming building or structure, the existing permitted nonconforming setback shall prevail.
- (D) Concealed PWSF attached antennas, feed lines and antennas shall be designed to architecturally match the façade, roof, wall, and/or structure on which they are affixed so that they blend with the existing structural design, color, and texture.
- (E) Application Requirements:
 - (1) Completion of the "PWSF Application" and application fee.
 - (2) Applicant shall provide a written statement of compliance with all applicable FCC rules and regulations.
 - (3) Applicant shall provide a complete set of construction drawings of the proposed facility demonstrating compliance with applicable Federal, State and City building codes.
 - (4) Applicant shall provide a structural analysis by a Registered Professional Engineer that the support structure complies with applicable ANSI/EIA/TIA-222G (as amended) standards with all existing and proposed equipment.

Section 12.25: PWSF Antenna Element Replacement or Modification

For any replacement or modification of existing PWSF antenna and associated equipment, the applicant must, prior to making such modifications, submit the following:

- (A) Evidence of Need: A written statement setting forth the purpose of the replacement or modification.
- (B) A description of the proposed modifications to the PWSF antenna, including modifications to PWSF antenna element design, type and number, as well as changes in the number and/or size of any feed lines, from the base of the equipment cabinet to such PWSF antenna elements.
- (C) Height: The height of a PWSF that is modified shall comply with the provisions of Section 12.23 (F) hereinabove.
- (D) Equipment cabinets and Equipment Shelters: Electronic equipment shall be contained in either equipment cabinets or equipment shelters. Equipment cabinets shall not be visible from pedestrian and right-of-way views. Equipment cabinets may be provided within the principal

- building on the lot, behind a screen on a rooftop, or on the ground within the fenced-in and screened equipment compound.
- (E) Sounds: No unusual sound emissions such as alarms, bells, buzzers, or the like are permitted. Emergency generators are allowed. Sound levels shall not to exceed sixty-five 65db as measured at the closest property boundaries for the facility.
- (F) Signage: Commercial messages shall not be displayed on any concealed PWSF tower. Required noncommercial signage shall be subject to the following:
- (1) The only signage that is permitted upon a concealed PWSF tower, equipment cabinets, shelters or fence shall be informational, and for the purpose of identifying the tower (such as ASR registration number), as well as the party responsible for the operation and maintenance of the facility, and any additional security and/or safety signs as applicable.
 - (2) If more than 220 voltage is necessary for the operation of the facility and is present in a ground grid or in the tower, signs located every twenty (20) feet and attached to the fence or wall shall display in large, bold, high contrast letters, minimum height of each letter four (4) inches, the following: "HIGH VOLTAGE - DANGER."
 - (3) Name plate signage shall be provided, in an easily visible location, including the address and telephone number of the contact to reach in the event of an emergency or equipment malfunction, including property manager signs as applicable.
- (G) Lighting: Lighting on concealed PWSF towers shall not exceed the Federal Aviation Administration (FAA) minimum standards. All other lighting shall be subject to the following:
- (1) Any lighting required by the FAA must be of the minimum intensity and number of flashes per minute (i.e., the longest duration between flashes) allowable by the FAA. Dual lighting standards are required with strobe during daytime and red flashing lights at night unless prohibited by the FAA.
 - (2) Lights shall be filtered or oriented so as not to project directly onto surrounding property or rights-of-way, consistent with FAA requirements.
- (H) Application Requirements:
- (1) Completion of "PWSF Application" and application fee.
 - (2) Applicant shall provide a written statement of compliance with all applicable FCC rules and regulations.
 - (3) Applicant shall provide a complete set of construction drawings of the proposed facility demonstrating compliance with applicable Federal, State and City building codes.
 - (4) Applicant shall provide a structural analysis by a Registered Professional Engineer that the support structure complies with applicable ANSI/EIA/TIA-222G (as amended) standards with all existing and proposed equipment.
 - (5) A signed statement from the applicant or the PWSF owner of compliance of all applicable FCC rules and regulations. A stamped or sealed structural analysis of the PWSF by a registered professional engineer licensed by the State of North Carolina stating that the proposed modifications or replacements together with all existing antenna and equipment meets North Carolina Uniform Statewide Building Code (USBC) requirements,

and current ANSI/EIA/TIA-222 code as amended for support structures in the City of Rockingham, NC.

- (6) One (1) original and two (2) copies of a site plan addressing development standards set forth in subsection (A) above.
- (7) Applicants seeking processing under 47 USC §1455(a) shall also provide:
 - (a) Documentation evidencing the structure proposed to be replaced or modified has previously been subject to zoning approval by the City.
 - (b) Documentation evidencing the replacement/modification complies with the requirements set forth in Section 12.23 (F) above.

Section 12.26: Mitigation

- (A) Mitigation shall accomplish a minimum of one (1) of the following:
 - (1) Reduce the number of PWSF support structures or towers; or
 - (2) Replace a non-concealed PWSF tower with a PWSF concealed tower or reduce the visual impact of a PWSF; or
 - (3) Replace an existing PWSF tower with a new PWSF tower to improve network functionality resulting in compliance with this Article.
- (B) Development Standards:
 - (1) Setbacks: A new PWSF tower approved for mitigation shall not be required to meet new setback standards so long as the new tower and its equipment compound are no closer to any property lines or dwelling units as the tower and equipment compound being mitigated. The intent is to encourage the mitigation process, not penalize the tower owner for the change out of the old facility. (For example, if a new tower is replacing an old tower, the new tower is permitted to have the same setbacks as the tower being removed, even if the old tower had nonconforming setbacks.)
 - (2) Height: The height of a PWSF that is mitigated shall comply with the provisions of Section 12.23 (F) hereinabove.
 - (3) Breakpoint technology: A newly mitigated PWSF monopole tower shall use breakpoint technology in the design of the replacement facility.
 - (4) Visibility: Mitigated PWSF towers or support structures shall be configured and located in a manner that minimizes adverse effects on the landscape and adjacent properties, with specific design considerations as to height, scale, color, texture, and architectural design of the buildings on the same and adjacent zoned lots.
- (C) Application Requirements:
 - (1) Completion of the "PWSF Application" and application fee.
 - (2) Applicant shall provide a written statement of compliance with all applicable FCC rules and regulations.
 - (3) Applicant shall provide a complete set of construction drawings of the proposed facility demonstrating compliance with applicable Federal, State and City building codes.

- (4) A map of the same search ring submitted and used by the applicant's site locator with a statement confirming the same.
- (5) A map-indicating applicant's existing RF signal propagation, a map indicating applicant's proposed new RF signal propagation, and a map indicating the proposed improvements' coverage area, which provides sufficient justification for the requested support structure height.
- (6) A statement from the applicant providing information regarding justification for the proposed new mitigated PWSF facility.
- (7) Proof that a property and/or tower owner's agent has appropriate authorization to act upon the owner's behalf (if applicable).
- (8) An affidavit by a radio frequency engineer demonstrating compliance with 'Locating Alternatives Order' section of this Article. If a lower ranking alternative is proposed the affidavit must address why higher ranked options are not technically feasible, practical, and/or justified given the location of the proposed communications facility.
- (9) Statement as to the potential visual and aesthetic impacts of the proposed tower and equipment on all adjacent residential zoning districts.
- (10) Written statement by a registered professional engineer licensed by the State of North Carolina specifying the design structural failure modes of the proposed facility, if applicable.
- (11) Statement certifying that no unusual sound emissions such as alarms, bells, buzzers, or the like are permitted. Emergency Generators are permitted. Sound levels shall not exceed sixty-five (65dB) as measured at the closest property boundaries for the facility.
- (12) A radio frequency propagation plot indicating the coverage of existing antenna sites, coverage prediction, and design radius, together with a certification from the applicant's radio frequency (RF) engineer that the proposed facility's coverage or capacity potential cannot be achieved by any higher ranked alternative such as a concealed facility, attached facility, replacement facility, collocation, or new tower and the reasons why such alternative structures are unacceptable.
- (13) One (1) original and two (2) copies of a survey of the property completed by a registered professional engineer, licensed in the State of North Carolina showing all existing uses, structures, and improvements.
- (14) Six (6) sets (24"×36") of signed and sealed site plans shall include the following:
 - (a) Name of project and date.
 - (b) Deed Book, and Page and Map Book and Page Reference.
 - (c) Scale, north arrow, and vicinity map.
 - (d) Subject property information including zoning, watershed classification, percent coverage of lot to be impervious surface (if located in a designated watershed area).

- (e) Adjacent property information, including landowners, land uses, height of principal building, size of lots, zoning, and land use designation.
 - (f) Tower elevations.
 - (g) Landscape buffering plans.
 - (h) Maximum height of the proposed tower and proposed and future mounting elevations of future antenna, including individual measurement of the base, the tower, and lightning rod.
 - (i) Location, classification, and size of all major public or private streets and rights-of-way.
 - (j) Identify adjacent features within 500 feet of property boundary including driveways, public parking areas, pedestrian ways, trails, and any other pertinent features.
 - (k) Two (2) reduced copies (8½"×11"), of the foregoing preliminary grading plans may be included on site plans or separately submitted in equal quantities.
- (16) Title report or American Land Title Association (A.L.T.A.) survey showing all easements on the subject property, together with a full legal description of the property.
- (17) List of adjacent property owners and keyed to the map. The list must be from the most current ownership information supplied by the Richmond County Tax Department, together with two (2) sets of mailing labels for such property owners. Applicant will also provide a notarized Certification Letter stating the ownership list referenced herein is accurate to the best of the applicant's ability.
- (18) Simulated photographic evidence of the proposed tower and antenna appearance from any and all residential areas within 1,500 feet and vantage points approved by the [Planning Department] including the facility types the applicant has considered and the impact on adjacent properties including:
- (a) Overall height
 - (b) Configuration
 - (c) Physical location
 - (d) Mass and scale
 - (e) Materials and color
 - (f) Illumination
 - (g) Architectural design
- (19) All other documentation, evidence, or materials necessary to demonstrate compliance with the applicable approval criteria set forth in this Article.
- (20) Prior to issuance of a building permit, proof of FAA compliance with Subpart C of the Federal Aviation Regulations, Part 77, and "Objects Affecting Navigable Airspace," if applicable.
- (21) Proof of compliance with National Environmental Policy Act and National Historic Preservation Act.

- (22) Written statement by a registered professional engineer licensed by the State of North Carolina specifying the design structural failure modes of the proposed facility, if applicable.

Section 12.27: DAS**(A) Attached DAS Development Standards:**

- (1) Where feasible, antennas can be placed directly above, below or incorporated with vertical design elements of a building or structure to help in concealment. The top of the antenna(s) shall not exceed more than seven (7) feet above the tallest level of the structure on which it is attaching.
- (2) Attached equipment box and power meter, if applicable shall be located on the pole at a height that does not interfere with pedestrian or vehicular traffic or visibility and where applicable shall not interfere with street name signs or traffic lighting standards.
- (3) Freestanding equipment box and/or power meter, if applicable not attached to an existing structure shall be located no farther than two feet from the base of the structure and shall not interfere with pedestrian or vehicular traffic. Screening materials may be required during site plan review if the equipment box and/or meter are adjacent a public right-of-way or along a pedestrian sidewalk or pathway.
- (4) All cables and surface mounted wires shall be enclosed within conduit or a similar cable cover which should be painted to match the structure or building on which that DAS is mounting.

(B) New Freestanding DAS Facility Development Standards:

- (1) Height: The total height of DAS facility including antenna shall not exceed one (1) foot above the height of existing public utility poles for power or light in the same geographic area.
- (2) Setbacks for DAS outside of the right-of-way shall meet the same setbacks of the underlying zoning district for similar structures.
- (3) Visibility of new DAS poles:
 - (a) New DAS structures shall be configured and located in a manner that minimizes adverse effects on the landscape and adjacent properties, with specific design considerations as to height, scale, color, texture, and architectural design of the buildings on the same and adjacent zoned lots. Concealment design is required to minimize the visual impact of wireless communications facilities.
 - (b) All cables, conduits, and surface mounted wires shall be enclosed within the structure.
- (4) Equipment cabinets: Equipment shelters or cabinets shall be consistent with the general character of the neighborhood and historic character if applicable. Equipment shelters or cabinets shall be screened from the public view by using landscaping, or materials and colors consistent with the surrounding backdrop.
 - (a) Screening enclosures shall be allowed when the design is architecturally compatible with the building.
 - (b) Screening materials shall consist of materials and colors consistent with the surrounding backdrop and/or textured to match the existing structure.

- (c) The use of foliage and vegetation around ground equipment may be required based on conditions of the specific area where the ground equipment is to be located.
- (C) DAS Hub Development Standards:
- (1) Setbacks for DAS hubs outside of the right-of-way shall meet the setback standards of the underlying zoning district.
 - (2) DAS hub equipment shelters or cabinets shall be consistent with the general character of the neighborhood and historic character if applicable. Equipment shelters or cabinets shall be screened from the public view by using landscaping, or materials and colors consistent with the surrounding backdrop.
 - (3) Screening enclosures shall be allowed when the design is architecturally compatible with the building.
 - (4) Screening materials shall consist of materials and colors consistent with the surrounding backdrop and/or textured to match the existing structure.
 - (5) The use of foliage and vegetation around ground equipment may be required based on conditions of the specific area where the ground equipment is to be located.
- (D) DAS Application Requirements (inside or outside of the Right-of-Way):
- (1) Completion of the "DAS Facility Application" and application fee.
 - (2) An engineering plan signed and sealed by a NC Registered Professional Engineer identifying the location of the proposed facility, including a description of the facilities to be installed, where it is to be located, and the approximate size of facilities and equipment.
 - (3) A description of the manner in which the facility will be installed (i.e. anticipated construction methods and/or techniques) including simulated photographic evidence of the proposed tower and antenna illustrating the appearance from any and all residential areas within 1500 feet and vantage points approved by the Planning Department; facility types the applicant has considered; and the impact on adjacent properties including
 - (a) Overall height
 - (b) Configuration
 - (c) Physical location
 - (d) Mass and scale,
 - (e) Materials and color
 - (f) Illumination
 - (g) Architectural design
 - (4) The timetable for construction of the project or each phase thereof, and the areas of the city which will be affected.
 - (5) An inventory of all existing wireless communications facilities that the registrant or the registrant's predecessors in interest has previously placed in the areas to which the permit application applies, and extending one thousand (1,000) feet beyond said areas within the city as well as any other areas within the city which the city finds reasonably necessary to review the permit application.

- (6) In the case of an application for collocated wireless communications facilities, the applicant/registrant, together with the owner of the subject site, shall use their best efforts to provide a composite analysis of all users of the site to determine that the applicant's proposed facilities will not cause radio frequency interference with the city's public safety communications equipment and will implement appropriate technical measures, as described in antenna element replacements, to attempt to prevent such interference.
- (7) An affidavit by a radio frequency engineer demonstrating compliance with Section 12.17. If a lower ranking alternative is proposed the affidavit must address why higher ranked options are not technically feasible, practical, and/or justified given the location of the proposed communications facility.
- (8) Such additional information requested the City finds reasonably necessary to review the permit application.

Part 7: Permit (Level III) New Concealed and Non-concealed PWSF Towers

Section 12.28: Concealed and Non-concealed PWSF Towers (not including DAS)

- (A) Determination of Need: No new concealed or non-concealed PWSF tower shall be permitted unless the applicant demonstrates that no existing tower or existing support structure can accommodate the applicant's proposed use; or that use of such existing facilities would prohibit personal wireless services in the geographic search area to be served by the proposed tower.
- (B) Height:
 - (1) New concealed PWSF towers shall be limited to 150 feet or less in height. Height calculations shall be made in accordance with FAA standards, and shall include all appurtenances.
 - (2) New non-concealed (non-broadcast) PWSF towers shall be 150 feet or less in height. However, should a non-concealed PWSF tower be required in excess of 150 feet, under no circumstances shall any non-concealed PWSF tower exceed 199 feet.
- (C) Setbacks: New concealed and non-concealed PWSF towers shall be subject to the setbacks described below for breakpoint technology:
 - (1) If the PWSF has been constructed using breakpoint design technology (see 'Definitions'), the minimum setback distance shall be equal to 110 percent (110%) of the distance from the top of the structure to the breakpoint level of the structure, or the minimum side and rear yard requirements, whichever is greater. Certification by a registered professional engineer licensed by the State of North Carolina of the breakpoint design and the design's fall radius must be provided together with the other information required herein from an applicant. (For example, on a 100-foot tall monopole with a breakpoint at eighty (80) feet, the minimum setback distance would be twenty-two (22) feet (110 percent of twenty (20) feet, the distance from the top of the monopole to the breakpoint) plus the minimum side or rear yard setback requirements for that zoning district.)

- (2) If the PWSF tower is not constructed using breakpoint design technology, the minimum setback distance shall be equal to the height of the proposed PWSF.
- (D) Equipment cabinets and Equipment Shelters: Electronic equipment shall be contained in either (a) equipment cabinets or (b) equipment shelters. Equipment cabinets shall not be visible from pedestrian and right-of-way views. Equipment cabinets may be provided within the principal building on the lot, behind a screen on a rooftop, or on the ground within the fenced-in and screened equipment compound.
 - (E) Fencing: All equipment compounds shall be enclosed with an opaque fence or masonry wall in residential zoning districts and in any zoning district when the equipment compound adjoins a public right-of-way. Alternative equivalent screening may be approved through the site plan approval process described in subsection (F) below.
 - (F) Buffers: The equipment compound shall be landscaped with a minimum ten (10) foot wide perimeter buffer containing the following planting standards:
 - (1) All plants and trees shall be indigenous to this part of North Carolina.
 - (2) Existing trees and shrubs on the site should be preserved and may be used in lieu of required landscaping as approved by the Planning Department.
 - (3) One (1) row of evergreen trees with a minimum two (2) inch caliper, twenty-five (25) foot on center.
 - (4) Evergreen shrubs capable of creating a continuous hedge and obtaining a height of at least five (5) feet shall be planted, minimum three (3) gallon or twenty-four (24) inches tall at the time of planting, five (5) foot on center.
 - (5) Alternative landscaping plans which provide for the same average canopy and understory trees but propose alternative locating on the entire subject property may be considered and approved by the Planning Department, provided the proposed alternative maximizes screening as provided above, and is otherwise consistent with the requirements of this section.
 - (G) Signage: Commercial messages shall not be displayed on any concealed PWSF tower. Required noncommercial signage shall be subject to the following:
 - (1) The only signage that is permitted upon a concealed PWSF tower, equipment cabinets, shelters or fence shall be informational, and for the purpose of identifying the tower (such as ASR registration number), as well as the party responsible for the operation and maintenance of the facility, and any additional security and/or safety signs as applicable.
 - (2) If more than 220 voltage is necessary for the operation of the facility and is present in a ground grid or in the tower, signs located every twenty (20) feet and attached to the fence or wall shall display in large, bold, high contrast letters, minimum height of each letter four (4) inches, the following: "HIGH VOLTAGE - DANGER."
 - (3) Name plate signage shall be provided, in an easily visible location, including the address and telephone number of the contact to reach in the event of an emergency or equipment malfunction, including property manager signs as applicable.

- (H) Lighting: Lighting on concealed PWSF towers shall not exceed the Federal Aviation Administration (FAA) minimum standards. All other lighting shall be subject to the following:
- (1) Any lighting required by the FAA must be of the minimum intensity and number of flashes per minute (i.e., the longest duration between flashes) allowable by the FAA. Dual lighting standards are required with strobe during daytime and red flashing lights at night unless prohibited by the FAA.
 - (2) Lights shall be filtered or oriented so as not to project directly onto surrounding property or rights-of-way, consistent with FAA requirements.
- (I) Equipment Compound: The fenced-in compounds shall not be used for the storage of any excess equipment or hazardous materials. No outdoor storage yards shall be allowed in a tower equipment compound. The compound shall not be used as habitable space.
- (J) Visibility:
- (1) Concealed:
 - (a) New concealed PWSF towers shall be designed to match adjacent structures and landscapes with specific design considerations such as architectural designs, height, scale, color, and texture.
 - (b) New antenna mounts shall be concealed and match the concealed PWSF tower.
 - (c) In residential zoning districts, new concealed PWSF towers shall only be permitted on lots whose principal use is not single-family residential, such as schools, religious institutions, fire stations, parks, and other public property.
 - (2) Non-concealed: New antenna mounts shall be flush-mounted, unless it is demonstrated through RF propagation analysis that flush-mounted antennas will not meet the network objectives of the desired coverage area.
 - (3) Concealed and Non-concealed:
 - (a) New concealed PWSF towers shall be configured and located in a manner that shall minimize adverse effects including visual impacts on the landscape and adjacent properties.
 - (b) A balloon test shall be required subsequent to the receipt of the photo simulations in order to demonstrate the proposed height and concealment solution of the PWSF. The applicant shall arrange to raise a colored balloon no less than three (3) feet in diameter at the maximum height of the proposed tower, and within twenty-five (25) horizontal feet of the center of the proposed tower. The applicant shall meet the following for the required balloon test:
 - (i) Applicant must inform the Planning Department and abutting property owners in writing of the date and times, including alternative date and times, of the test at least fourteen (14) days in advance.
 - (ii) A 3' by 5' sign with lettering no less than 3 inches high stating the purpose of the balloon test shall be placed at closest major intersection of proposed site.

- (iii) The date, time, and location, including alternative date, time and location, of the balloon test shall be advertised in a locally distributed paper by the applicant at least seven (7) but no more than fourteen (14) days in advance of the test date.
- (iv) The balloon shall be flown for at least four (4) consecutive hours during daylight hours on the date chosen. The applicant shall record the weather, including wind speed during the balloon test.
- (v) Re-advertisement will not be required if inclement weather occurs.
- (c) PWSF towers shall be constructed to accommodate antenna arrays as follows:
 - (i) Up to 120 feet in height shall be engineered and constructed to accommodate no less than four (4) antenna arrays.
 - (ii) All towers between 121 feet and 150 feet shall be engineered and constructed to accommodate no less than five (5) antenna arrays.
- (d) Grading shall be minimized and limited only to the area necessary for the new PWSF and equipment compound.

Section 12.29: Application Requirements for Concealed and Non-Concealed PWSF Towers (not including DAS)

- (A) Completion of "PWSF Application" and application fee.
- (B) Applicant shall provide a written statement of compliance with all applicable FCC rules and regulations.
- (C) Applicant shall provide a complete set of construction drawings of the proposed facility demonstrating compliance with applicable Federal, State and City building codes.
- (D) A map of the same search ring submitted and used by the applicant's site locator with a statement confirming the same.
- (E) A map indicating applicant's existing RF signal propagation, a map indicating applicant's proposed new RF signal propagation, and a map indicating the proposed improvements' coverage area, which provides sufficient justification for the proposed support structure height.
- (F) A map indicating applicant's existing RF signal propagation and a map indicating applications proposed new RF signal propagation.
- (G) A statement from the applicant providing information regarding justification for the proposed new PWSF facility.
- (H) Proof that a property and/or tower owner's agent has appropriate authorization to act upon the owner's behalf (if applicable).
- (I) An affidavit by a radio frequency engineer demonstrating compliance with 'Locating Alternatives Order' section of this Article. If a lower ranking alternative is proposed the affidavit must address

- why higher ranked options are not technically feasible, practical, and/or justified given the location of the proposed communications facility.
- (J) Statement as to the potential visual and aesthetic impacts of the proposed tower and equipment on all adjacent residential zoning districts.
- (K) Written statement by a registered professional engineer licensed by the State of North Carolina specifying the design structural failure modes of the proposed facility, if applicable.
- (L) Statement certifying that no unusual sound emissions such as alarms, bells, buzzers, or the like are permitted. Emergency Generators are permitted. Sound levels shall not exceed sixty-five (65dB) at the property boundaries.
- (M) A radio frequency propagation plot indicating the coverage of existing antenna sites, coverage prediction, and design radius, together with a certification from the applicant's radio frequency (RF) engineer that the proposed facility's coverage or capacity potential cannot be achieved by any higher ranked alternative such as a concealed facility, attached facility, replacement facility, collocation, or new tower and reasons why such alternative structures are unacceptable.
- (N) One (1) original and two (2) copies of a survey of the property completed by a registered professional engineer, licensed in the State of North Carolina showing all existing uses, structures, and improvements.
- (O) Six (6) sets (24"×36") of signed and sealed site plans shall include the following:
- (1) Name of project and date;
 - (2) Deed Book, and Page and Map Book and Page Reference;
 - (3) Scale, north arrow, and vicinity map;
 - (4) Subject property information including zoning, watershed classification, percent coverage of lot to be impervious surface (if located in a designated watershed area);
 - (5) Adjacent property information, including land owners, land uses, height of principal building, size of lots, zoning, and land use designation;
 - (6) PWSF Tower elevations;
 - (7) Landscape buffering plans;
 - (8) Maximum height of the proposed tower and proposed and future mounting elevations of future antenna, including individual measurement of the base, the tower, and lightning rod;
 - (9) Location, classification, and size of all major public or private streets and rights-of-way;
 - (10) Identify adjacent features within 500 feet of property boundary including driveways, public parking areas, pedestrian ways, trails, and any other pertinent features;
 - (11) Two (2) reduced copies (8½"×11"), of the foregoing preliminary grading plans may be included on site plans or separately submitted in equal quantities.

- (P) A title report or American Land Title Association (A.L.T.A.) survey showing all easements on the subject property, together with a full legal description of the property.
- (Q) List of adjacent property owners and keyed to the map. The list must be from the most current ownership information supplied by the Richmond County Tax Department, together with two (2) sets of mailing labels for such property owners. Applicant will also provide a notarized Certification Letter stating the ownership list referenced herein is accurate to the best of the applicant's ability.
- (R) Simulated photographic evidence of the proposed tower and antenna appearance from any and all residential areas within 1,500 feet and vantage points approved by the [Planning Department] including the facility types the applicant has considered and the impact on adjacent properties including:
 - (1) Overall height
 - (2) Configuration
 - (3) Physical location
 - (4) Mass and scale
 - (5) Materials and color
 - (6) Illumination
 - (7) Architectural design
- (S) All other documentation, evidence, or materials necessary to demonstrate compliance with the applicable approval criteria set forth in this Article.
- (T) Prior to issuance of a building permit, proof of FAA compliance with Subpart C of the Federal Aviation Regulations, Part 77, and "Objects Affecting Navigable Airspace," if applicable.
- (U) Proof of compliance with National Environmental Policy Act and National Historic Preservation Act.
- (V) Sounds: No unusual sound emissions such as alarms, bells, buzzers, or the like are permitted. Emergency generators are allowed. Sound levels shall not exceed sixty-five decibels (65 db) as measured at the closest property boundaries for the facility.

Part 8: Permit (Level IV) Broadcast Towers

Section 12.30: Broadcast Towers

- (A) Broadcast Facility Determination of Need: No new broadcast facilities shall be permitted unless the applicant demonstrates that no existing broadcast tower can accommodate the applicant's proposed use.
- (B) Height: Height for broadcast facilities shall be evaluated on a case-by-case basis; the determination of height contained in the applicant's FCC Form 351/352 construction permit or application for construction permit and an FAA determination of no hazard (FAA Form 7460/2) shall be considered prima facie evidence of the tower height required for such broadcast facilities.

- (C) Setbacks: New broadcast facilities and anchors shall be setback a minimum of five hundred (500) feet from any single-family dwelling unit on same zone lot; and a minimum of one (1) foot for every one (1) foot of tower height from all adjacent lots of record.
- (D) Equipment Cabinets: Except for AM broadcast facilities, cabinets shall not be visible from pedestrian views.
- (E) Fencing: All broadcast facility towers, AM antenna(s) towers, and guy anchors shall each be surrounded with an anti-climbing fence compliant with applicable FCC regulations.
- (F) Buffers:
- (1) Except for AM broadcast facilities, it is the intent that all pedestrian views from public rights-of-ways and adjacent residential land uses be screened from proposed broadcast facilities pursuant to Article VIII Section 1.0(E) & (F). AM broadcast facilities shall, where practicable, use artificial screening devices in lieu of natural vegetation for screening its ground equipment located at the base of AM tower(s).
 - (2) Alternative landscaping plans which provide for the same average canopy and understory trees but propose alternative siting on the entire subject property on which the proposed facility is projected may be considered and approved by the planning division, provided the proposed alternative maximizes screening as provided above, and is otherwise consistent with the requirements of this section.
- (G) Signage:
- (1) Commercial messages shall not be displayed on any tower.
 - (2) The only signage that is permitted upon an antenna support structure, equipment cabinets, or fence shall be informational, and for the purpose of identifying the antenna support structure (such as ASR registration number), as well as the party responsible for the operation and maintenance of the facility; i.e. the address and telephone number, security or safety signs, and property manager signs (if applicable).
- (H) If more than two hundred twenty (220) volts are necessary for the operation of the facility, signs located every twenty (20) feet and attached to the fence or wall shall display in large, bold, high contrast letters (minimum height of each letter four (4) inches) the following: "HIGH VOLTAGE - DANGER".
- (I) Lighting.
- (1) Lighting on towers shall meet and not exceed the FAA minimum standards.
 - (2) Any lighting required by the FAA must be of the minimum intensity and number of flashes per minute (i.e., the longest duration between flashes) allowable by the FAA. Dual lighting standards are required and strobe light standards are prohibited unless required by the FAA. The lights shall be oriented so as not to project directly onto surrounding property, consistent with FAA requirements.
- (J) Equipment Compound: The fenced in compounds shall not be used for the storage of any excess equipment or hazardous materials. No outdoor storage yards shall be allowed in a tower equipment compound. The compound shall not be used as habitable space.

- (K) Abandonment:
- (1) Towers, antennas and the equipment compound shall be removed, at the owner's expense, within one hundred eighty (180) days of cessation of use, unless the abandonment is associated with a replacement antenna structure as provided in the Mitigations requirements, in which case the removal shall occur within ninety (90) days of cessation of use.
 - (2) An owner wishing to extend the time for removal or reactivation shall submit an application stating the reason for such extension. The city may extend the time for removal or reactivation up to sixty (60) additional days upon a showing of good cause. If the antenna support structure or antenna is not removed within this time, the city may give notice that it will contract for removal within thirty (30) days following written notice to the owner. Thereafter, the city may cause removal of the antenna support structure with costs being borne by the owner.
 - (3) Upon removal of the tower, antenna, and equipment compound, the development area shall be returned to its natural state and topography and vegetated consistent with the natural surroundings or consistent with the current uses of the surrounding or adjacent land at the time of removal.
- (L) Grading shall be minimized and limited only to the area necessary for the new tower and equipment.
- (M) Sounds: No unusual sound emissions such as alarms, bells, buzzers, or the like are permitted. Emergency generators are allowed. Sound levels shall not to exceed sixty-five 65db as measured at the closest property boundaries for the facility.
- (N) Parking: One parking space is required for each tower development area. The space shall be provided within the leased area, or equipment compound or the development area as defined on the site plan.

Section 12.31: Application Requirements for Broadcast Towers

- (A) Completion of the "Telecommunications Facility Application Permit" and application fee.
- (B) One (1) original and two (2) site plans (drawn to scale) addressing all the development standards herein.
- (C) Technical data included in the report shall include the purpose of the proposed facility as described in the FCC Construction Permit Application.
- (D) One original and two (2) copies of a survey of the property completed by a registered professional engineer, licensed in the State of North Carolina showing all existing uses, structures, and improvements.
- (E) Six (6) sets (24"×36") of signed and sealed site plans shall include the following:
- (a) Name of project and date.
 - (b) Deed Book, and Page and Map Book and Page Reference.
 - (c) Scale, north arrow, and vicinity map.

- (d) Subject property information including zoning, watershed classification, percent coverage of lot to be impervious surface (if located in a designated watershed area).
 - (e) Adjacent property information, including land owners, land uses, height of principal building, size of lots, zoning, and land use designation.
 - (f) PWSF Tower elevations.
 - (g) Landscape buffering plans.
 - (h) Maximum height of the proposed tower and proposed and future mounting elevations of future antenna, including individual measurement of the base, the tower, and lightning rod.
 - (i) Location, classification, and size of all major public or private streets and rights-of-way.
 - (j) Identify adjacent features within 500 feet of property boundary including driveways, public parking areas, pedestrian ways, trails, and any other pertinent features.
 - (k) Two (2) reduced copies (8½"×11"), of the foregoing preliminary grading plans may be included on site plans or separately submitted in equal quantities.
- (F) List of adjacent property owners and keyed to the map. The list must be from the most current ownership information supplied by the Richmond County Tax Department, together with two (2) sets of mailing labels for such property owners. Applicant will also provide a notarized Certification Letter stating the ownership list referenced herein is accurate to the best of the applicant's ability.
- (G) Proof that a property and/or antenna support structure owner's agent has appropriate authorization to act upon the owner's behalf (if applicable). A signed statement from a qualified person, together with their qualifications, shall be included that warrants radio frequency emissions from the antenna array(s) comply with FCC standards regarding interference to other radio services. The statement shall also certify that both individually and cumulatively, and with any other facilities located on or immediately adjacent to the proposed facility, the replacement antenna complies with FCC standards regarding human exposure to RF energy.
- (H) A stamped or sealed structural analysis of the proposed antenna support structure prepared by a registered professional engineer licensed by the State of {North Carolina} indicating the proposed and future loading capacity of the antenna support structure is compliant with EIA/TIA-222-G (as amended).
- (I) A pre-application conference will be required for any new broadcast facility.
- (J) Title report or American Land Title Association (A.L.T.A.) survey showing all easements on the subject property, together with a full legal description of the property.
- (K) Prior to issuance of a building permit, proof of FAA compliance with Subpart C of the Federal Aviation Regulations, Part 77, and "Objects Affecting Navigable Airspace," if applicable.

Part 9: Review and Decision Timelines for Collocations and New Tower Applications**Section 12.32: Streamlined Processing For Collocation**

Approvals are subject to the following:

- (A) A collocation application entitled to streamlined processing under Section 12.23(F) shall be deemed complete unless the City notifies the applicant within thirty (30) days of submission (or within some other mutually agreed upon timeframe) that the submission is incomplete. Notices of application incompleteness shall identify specifically the deficiencies in the application which, if cured, would make the application complete. Upon notice of deficiency, the timeline for a decision shall be tolled until the applicant re-submits to correct such deficiency. The City shall, within ten (10) days of re-submission, notify the applicant of continuing deficiencies or the application will be deemed complete. The timeline for a decision shall be likewise tolled during the additional re-submission deficiency period until the 2nd resubmission. Approval or denial of a complete application shall be in writing and shall be postmarked to the applicant by the sixtieth (60) day after the initial submission, excluding any tolling period.
- (B) A collocation application entitled to streamlined processing other than under Section 12.23(F) shall be deemed complete unless the City notifies the applicant within thirty (30) days of submission (or within some other mutually agreed upon timeframe) that the submission is incomplete. Notices of application incompleteness shall identify specifically the deficiencies in the application which, if cured, would make the application complete. Upon notice of deficiency, the timeline for a decision shall be tolled until the applicant re-submits to correct such deficiency. The City shall, within ten (10) days of re-submission, notify the applicant of continuing deficiencies or the application will be deemed complete. The timeline for a decision shall be likewise tolled during the additional re-submission deficiency period until the 2nd resubmission. Approval or denial of a complete application shall be in writing and shall be postmarked to the applicant by the ninetieth (90) day after the initial submission, excluding any tolling period.
- (C) Upon resubmitting of the revised application the City shall follow the process identified in this section, above, until all deficiencies identified are deemed cured.
- (D) If the City does not respond in writing to the applicant for a collocation under subsection (A) above within the specified timeframe in subsection (A) above, then the application shall be deemed approved. If the City does not respond in writing to the applicant for a collocation under subsection (B) above within the specified timeframe in subsection (B) above, the applicant has available the remedies established by federal or state regulations.
- (E) Application entitled to the streamlined review process shall not be subject to design or placement requirement, or public hearing review. All applications shall be initially submitted to the Planning Department for review and processing.

Section 12.33: Timing for Review of Application

New concealed and non-concealed PWSF towers shall be reviewed and have a decision rendered within one hundred and fifty (150) days of receipt of the application, subject to any applicable tolling for application deficiencies and resubmissions as described in Section 12.33.

Part 10: Fees and Supplemental Review

Section 12.34: Fees

The City Council shall set a fee, payable to the City Planning Department, to cover the necessary processing cost of all PWSF Permits. The set fee shall be posted in the Planning Department.

Section 12.35: Supplemental Review

The City reserves the right to require a supplemental review for any Permit (Level I, II, III or IV) subject to the following:

- (A) Where due to the complexity of the methodology or analysis required to review an application for a Permit (Level I, II, III, or IV) facility, the City may require the applicant to pay for a technical review by a third party expert, the costs of which shall be borne by the applicant and be in addition to other applicable fees. Schedules of current fees are listed in the City Fee Schedule.
- (B) Based on the results of the expert review, the approving authority may require changes to the applicant's application or submittals.
- (C) The supplemental review may address any or all of the following:
 - (1) The accuracy and completeness of the application and any accompanying documentation.
 - (2) The applicability of analysis techniques and methodologies.
 - (3) The validity of conclusions reached.
 - (4) Whether the proposed communications facility complies with the applicable approval criteria set forth in these codes.
 - (5) Other items deemed by the City to be relevant to determining whether a proposed communications facility complies with the provisions of these codes.