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## COMMUNICATION TOWERS, ANTENNAS AND BASE UNIT REQUIREMENTS

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**550.1600. Purpose.** Regulations governing communication towers, antennas and base units are established to provide for appropriate locations for communication towers, antennas and base units, to ensure compatibility with surrounding uses, to promote the co-location of communication antennas, and to preserve the city's ability to provide a public safety communication system.

**550.1610. Definitions.** As used in this article, the following words shall mean:

*Base unit.* An unstaffed single-story structure or weatherproofed cabinet used to house radio frequency transmitters, receivers, power amplifiers, signal processing hardware and related equipment.

*Communication antenna.* A device intended for receiving or transmitting television, radio, digital, microwave, cellular, personal communication service (PCS), paging or similar forms of wireless electronic communication, including but not limited to directional antennas such as panels, microwave dishes and satellite dishes, and omni-directional antennas, such as whip antennas.

*Communication antenna, façade mounted.* A communication antenna mounted on the façade of a structure such as a building, water tower, clock tower, steeple, stack, light pole, traffic signal davit or communication tower.

*Communication tower or antenna, rooftop mounted.* A communication tower or antenna located on the roof of a structure such as a building, water tower, clock tower, penthouse or similar structure.

*Communication tower.* Any pole, spire, structure or combination thereof, including supporting lines, cables, wires, braces and mast, used for the purpose of supporting one (1) or more antennas, including self-supporting lattice towers, guyed towers or monopole towers. A communication tower may include, but not be limited to, radio and television transmission towers, microwave towers, common carrier towers, cellular telephone towers and personal communication service towers.

*Communication tower, monopole.* A communication tower consisting of a single pole, constructed without guyed wires and anchors.

*Communication tower and antenna height.* The height of a freestanding communication tower and antenna shall be measured as the distance from ground level to the highest point on the tower, including the antenna. The height of a rooftop communication antenna shall be measured as the distance from the point where the base of the tower and antenna is attached to the roof, to the highest point on the supporting structure, including the antenna.

*Institutional use.* Educational facilities, parks, cemeteries, golf courses, sport arenas, religious institutions, athletic fields and publicly owned property.

*Public safety communication system.* A communication system owned or operated by a governmental entity such as a law enforcement agency, public works department, municipal transit authority or medical facility.

*Publicly owned property.* Land, buildings or structures owned by any governmental body or public agency including city, county, state or federally owned properties, other than public rights-of-way.

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*Transmission equipment.* Any equipment that facilitates transmission for wireless communication, including, but not limited to, radio transceivers, antennas and other relevant equipment associated with and necessary to their operation, including coaxial or fiber-optic cable, and regular and backup power supply.

**550.1620. Permitted uses exempt from administrative review and approval.** Notwithstanding any other provisions to the contrary, communication towers and antennas designed for private reception of television and radio signals, used for amateur or recreational purposes, shall be permitted in all districts, provided such antennas and towers comply with the standards of section 550.1670 of the Minneapolis Code of Ordinances, and the following:

- (1) Notwithstanding the height limitations of the built form overlay district, freestanding towers and antennas shall not exceed thirty-five (35) feet in height and rooftop mounted antennas shall not exceed fifteen (15) feet in height.
- (2) Antennas shall not exceed one (1) meter in diameter in the urban neighborhood and residential mixed-use districts and two (2) meters in diameter in all other districts.
- (3) Towers and antennas shall not be located in any required front, side or rear yard, nor shall they be located between a principal building and a required front or side yard.
- (4) Only one (1) freestanding tower and antenna shall be allowed per residential zoning lot.
- (5) Antennas mounted to infrastructure in the public right-of-way shall be regulated by the relevant division of the Minneapolis Department of Public Works.

**550.1630. Permitted uses subject to administrative review and approval.**

(a) *Uses.* Notwithstanding the height limitations of the built form overlay districts, the following uses shall be permitted in all zoning districts, subject to administrative review and approval by the zoning administrator, as specified in section 550.1640, and the standards of this section:

- (1) Rooftop communication towers and antennas not exceeding fifteen (15) feet in height.
- (2) Façade mounted communication antennas, except the construction of a new communication tower or the conversion of an existing structure to a communication tower.
- (3) Extension of the height of existing communication towers of not more than fifteen (15) feet, provided the total height of the communication tower and all antennas shall not exceed the total allowable height, as provided in section 550.1660.

(b) *Standards.* Permitted uses subject to administrative review and approval shall comply with the standards of section 550.1670 and the following:

- (1) The antenna and its supporting structure shall be aesthetically compatible with the structure upon which the proposed antenna is to be mounted and with surrounding uses. Façade mounted communication antennas shall be camouflaged, and rooftop mounted communication antennas and towers shall be camouflaged where it is determined to be necessary.
- (2) The structure upon which the proposed antenna is to be mounted shall have the structural integrity to carry the weight of the antenna and its supporting structure.
- (3) The base unit shall be aesthetically compatible with the structure upon which the proposed antenna is to be mounted and with surrounding uses.
- (4) An existing communication tower shall be allowed only one (1) height extension of not more than fifteen (15) feet by administrative review. Additional extensions may be applied for as a conditional use.

**550.1640. Administrative review process.**

(a) *In general.* The zoning administrator, in consultation with the planning director, shall approve or deny such application. The zoning administrator may impose such conditions and require such guarantees deemed

reasonable and necessary to protect the public interest and to ensure compliance with the standards and purposes of this zoning ordinance and policies of the comprehensive plan.

(b) *Submittal requirements.* In addition to the general application requirements of Chapter 525, Administration and Procedures, the applicant shall submit the following:

- (1) Scaled schematic drawings and photographic perspectives showing the structure and the placement of the tower and antenna on the structure.
- (2) A written certification from a registered engineer that the structure has the structural integrity to carry the weight of the tower and antenna.
- (3) A scaled drawing showing the size, location, construction materials and screening of the base unit.
- (4) A scaled drawing showing how the tower and antenna will be camouflaged.
- (5) A letter from the director of the property services division of the finance department stating that the proposed site, if located on publicly owned property, is not needed for the public safety communication system or stating that co-location is acceptable. The director of the property services division of the finance department shall have ten (10) working days after receipt of a written request to make such determination.

(c) *Appeals.* Notwithstanding the provisions of Chapter 525, Administration and Procedures, decisions of the zoning administrator regarding the administrative review of permitted telecommunication towers, antennas, and base units shall be subject to appeal to the city planning commission.

**550.1650. Conditional uses.**

(a) *In general.* The following communication towers, antennas, and base units may be allowed as a conditional use, subject to the provisions of Chapter 525, Administration and Procedures, and sections 550.1660 and 550.1670.

- (1) Freestanding communication towers and antennas, including antennas mounted on light poles and similar structures, provided that towers and antennas located in the urban neighborhood and residential mixed-use districts shall be located on institutional use sites of not less than twenty thousand (20,000) square feet. Freestanding communication towers and antennas shall be prohibited in the downtown area bounded by the Mississippi River, I-35W, I-94, and I-394/Third Avenue North (extended to the river) except that antennas may be mounted to light poles existing on the effective date of this ordinance.
- (2) Rooftop mounted communication towers and antennas exceeding fifteen (15) feet in height.
- (3) Communication towers and antennas designed for private reception of television and radio signals and used for amateur or recreational purposes which exceed thirty-five (35) feet in height if freestanding or fifteen (15) feet in height if rooftop mounted, or antennas which exceed one (1) meter in diameter in the urban neighborhood and residential mixed-use districts or two (2) meters in diameter in all other districts.
- (4) Communication towers and antennas that use any portion of a structure, other than the roof or penthouse, for structural support and do not meet the definition of a façade mounted communication antenna.

(b) *Exceptions.* The uses listed below shall be exempt from the provisions of this section as follows:

- (1) Communication antennas in the public right-of-way, as permitted by the Minneapolis Department of Public Works.

**550.1660. Specific standards for conditional uses.** All communication towers and antennas requiring a conditional use permit shall be subject to the provisions of Chapter 525, Administration and Procedures, and the submittal requirements of section 550.1640(b). In addition, the applicant shall comply with the following standards and submit written documentation indicating such compliance:

- (1) *Tower type.* Communication towers shall be of a monopole design. The city planning commission may consider the substitution of alternative tower types in cases where structural, radio frequency, and design considerations, location or the number of co-locators suggests a tower other than a monopole.
- (2) *Co-location of communication antennas.* Shared use of existing communication towers shall be preferred to the construction of a new tower.
- (3) Height of freestanding towers and antennas.
  - a. *Urban neighborhood, residential mixed-use and commercial mixed-use districts.* The height of freestanding communication towers and antennas located in the urban neighborhood, residential mixed-use and commercial mixed-use districts shall not exceed seventy-five (75) feet.
  - b. *Production districts.* The height of freestanding communication towers and antennas located in the production districts shall not exceed one hundred (100) feet.
  - c. *Excess height.* The city planning commission may increase the height of freestanding towers and antennas, provided that in the urban neighborhood, residential mixed-use and commercial mixed-use districts such increase shall not exceed the maximum height by more than fifty (50) percent. The applicant shall submit an inventory of existing and approved communication towers within a one (1) mile radius of the proposed site outlining opportunities for shared use as an alternative to the construction of a new tower, and shall demonstrate to the satisfaction of the city planning commission the following:
    1. The proposed antenna cannot be accommodated on an existing or approved tower due to one (1) or more of the following reasons: the unwillingness of the owner of the existing or approved tower to co-locate an additional antenna; the planned antenna would exceed the structural capacity of existing or approved tower; the planned antenna would cause radio frequency interference with other existing or planned equipment, which cannot reasonably be prevented; other reasons affecting technical performance, system coverage and system capacity make it impractical to place the proposed equipment on existing or approved towers; or the proposed co-location on an existing or approved tower would not conform to the requirements of the zoning ordinance.
    2. The surrounding topography, structures, vegetation and other factors make a tower that complies with the district height regulations impractical.
    3. The proposed tower is designed to structurally accommodate both the applicant's antenna and at least one (1) additional user. The applicant shall submit a letter indicating the proposed tower is available for co-location with a phone number for interested parties to call.
- (4) *Height of all other towers and antennas allowed by conditional use.* The maximum height of all other towers and antennas shall be as approved by conditional use permit.

**550.1670. Development standards for all permitted and conditional communication towers, antennas and base units.** In addition to the standards of sections 550.1620, 550.1630 and 550.1660 above, all communication towers, antennas, and base units shall be subject to the following standards:

- (1) *Encroachments and setbacks.*
  - a. The tower site and setback shall be of adequate size to contain guyed wires, debris and the tower in the event of a collapse.
  - b. Communication towers shall maintain a minimum distance from the nearest residential structure equal to twice the height of the tower. For the purposes of this article, residential structures shall also include any parking structure attached to a principal residential structure.

- c. No part of any communication tower, antenna, base unit, equipment, guyed wires or braces shall extend across or over any part of a public right-of-way, except as regulated by the Minneapolis Department of Public Works.
  - d. Communication towers, antennas and base units shall comply with applicable regulations as established by the Federal Aviation Administration.
  - e. Communication towers, antennas and base units shall comply with the minimum yard requirements of the district in which they are located.
- (2) *Compatibility with nearby properties.* Communication towers, antennas, and base units shall utilize building materials, colors and textures that are compatible with the existing principal structure and that effectively blend the tower facilities into the surrounding setting and environment to the greatest extent possible. Metal towers shall be constructed of, or treated with, corrosive resistant material. Outside of the production districts, unpainted, galvanized metal, or similar towers shall be prohibited, unless a self-weathering tower is determined to be more compatible with the surrounding area.
- (3) *Screening and landscaping.* A screening and landscaping plan designed to screen the base of the tower and the base unit shall be submitted. The plan shall show location, size, quantity and type of landscape materials. Landscape materials shall be capable of screening the site all year. One (1) row of evergreen shrubs or trees capable of forming a continuous hedge at least six (6) feet in height within two (2) years of planting shall be provided to effectively screen the base of the tower and the base unit, except for towers and antennas designed for private reception of television and radio signals and used for amateur or recreational purposes, and light poles and traffic signal davits in public rights-of-way that support communication antennas and transmission equipment. A maintenance plan for the landscape materials shall also be submitted. The city planning commission may consider the substitution of other architectural screening plans such as a decorative fence or masonry wall in lieu of planted materials.
- (4) *Screening of equipment.*
- a. Equipment which does not require line-of-sight to function shall be screened in accordance with section 550.80.
  - b. Equipment which requires line-of-sight to function may require screening where it is determined to be necessary.
- (5) *Rooftop mounted towers and antennas.* Rooftop mounted communication towers and antennas shall not be located on a portion of a residential structure less than fifty (50) feet in height, except for towers and antennas designed for private reception of television and radio signals and used for amateur or recreational purposes.
- (6) *Façade mounted antennas.*
- a. Mounted on freestanding towers and poles. A façade mounted antenna may extend above the façade of the tower or pole on which it is mounted, but otherwise may project outward beyond such façade. Height of a freestanding tower or pole shall be measured to the tallest point of the structure, including antennas.
  - b. Mounted on all other structures. A façade-mounted antenna shall be mounted flush against the structure on which it is mounted and shall not extend above the façade of such structure, except that antennas designed for private reception of television and radio signals, used for amateur or recreational purposes, may extend above the façade of the structure.
- (7) *Base units.* Base units shall not exceed five hundred (500) square feet of gross floor area. The city may require as a condition of approval that base units be located underground.
- (8) *Security.* All sites shall be reasonably protected against unauthorized climbing. The bottom of the tower, measured from ground level to twelve (12) feet above ground level, shall be designed in a manner to discourage unauthorized climbing.

- (9) *Signage.* Advertising or identification of any kind on towers, antennas, and base units shall be prohibited, except for applicable warning and equipment information signage required by the manufacturer or by federal, state or local regulations.
- (10) *Lighting.* Communication towers and antennas shall not be illuminated by artificial means, except when mounted on an existing light pole or where the illumination is specifically required by the Federal Aviation Administration or other federal, state or local regulations.
- (11) *Heritage Preservation Ordinance compliance.* Communication towers and antennas proposed for any locally designated historic structures or locally designated historic districts shall be subject to all requirements of the city's Heritage Preservation Ordinance. This provision shall also apply to antenna installations in public rights of way.
- (12) *Radio frequency emissions and noninterference.* The applicant shall comply with all applicable Federal Communication Commission standards.
- (13) *Public safety communication system.* The location of the proposed antenna, if located on publicly owned property, shall not be needed for use by the public safety communication system, or if needed, it shall be determined by the director of the property services division of the finance department that co-location of the proposed antenna with a public safety antenna is agreeable.

**550.1680. Obsolete or unused towers.** All obsolete or unused communication towers, antennas, and base units or accessory facilities shall be removed within twelve (12) months of the cessation of operations unless an extension is approved by the city planning commission. If an extension is not approved, such towers, antennas, and base units shall be deemed a nuisance, and the city may act to abate such nuisance and require their removal at the property owner's expense. The operator shall provide the city with a copy of the Federal Communications Commission notice of intent to cease operations at the same time it submits such notice to the Federal Communications Commission. In the case of multiple operators sharing the use of a single tower, this provision shall not become effective until all operators cease operations for a period of twelve (12) consecutive months, provided each operator shall provide the city with notice of intent to cease operations. After the facilities are removed, the owner or operator of the site shall restore the site to its original, or to an improved, condition.