

SECTION 16.5 - GENERAL STANDARDS FOR COMMUNICATION TOWERS

Subdivision 1: Purpose and Intent

The purpose of the provisions on communication towers is to:

- a) accommodate the communication needs of residents and businesses while protecting the public health, safety, and general welfare of the community;
- b) minimize any adverse visual effects of towers through careful design and siting standards;
- c) to ensure a reasonable separation from this commercial use and existing residential homes;
- d) avoid potential damage to adjacent properties from tower failure through structural standards and setback requirements; and,
- e) maximize the use of existing and approved towers and buildings to accommodate new wireless telecommunication antennas in order to reduce the number of towers needed to serve the community

Subdivision 2: Definitions

Antenna That portion of any equipment used to radiate or receive radio frequency energy for transmitting or receiving radio or television waves. Antennas may consist of metal, carbon fibre, or other electronically conductive rods or elements. It includes, but is not limited to personal wireless service, microwave, radio and television broadcasting and transmitting and receiving and short wave radio equipment.

Antenna Support Structure Any pole, telescoping mast, tower, tripod, or any other structure which supports a device used in the transmitting or receiving of electromagnetic energy.

Camouflaged Tower a tower constructed to simulate a natural feature, such as a tree, thereby reducing the aesthetic impact to the surrounding area.

High power transmission line A 69kv or greater electric transmission line with towers a minimum of 75 feet in height.

Platted Land Lands with a legal description described as lot, block and plat name.

Public Land Land owned by Federal, State or local government, or other entities financed by public funds.

Residential area Shall include all platted land and land which has been legally subdivided into tracts less than ten acres for the purpose of residential use, where there are 24 homes or more within a quarter (1/4) mile radius of the proposed tower site.

Structure, Public An edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner which is owned or rented, and operated by a federal, state, or local government agency.

Tower Any pole, spire, structure, or combination thereof, including supporting lines, cables, wire, braces, and masts, intended primarily for the purpose of mounting an antenna, or to serve as an antenna. The height of a tower shall be measured from the base of the pole to the highest point. This definition excludes any towers that are less than 60 feet in height.

Tower Accessory Structure A structure located at the base of the tower housing base receiving/transmitting equipment.

Subdivision 3: General Requirements

- A. All communication facilities shall be in compliance with all Federal, State, and local building, electrical, and other relevant code requirements.
- B. No advertising message nor identification shall be affixed to any communication structure unless otherwise required by law.
- C. All obsolete and unused communication equipment shall be removed within twelve (12) months of cessation of use, unless a written exemption is granted by the Zoning Administrator. In the event that a tower is not removed within 12 months of the cessation of operations at the site, the tower and associated facilities may be removed by the County and the costs of removal assessed against the property. tower operators shall provide at the time of application, a copy of the lease or other instrument obligating them to remove the tower and associated facilities upon cessation of operations at the site.
- D. The addition of antennas and associated equipment of an additional provider to an existing legal structure shall be considered co-location and not require an amendment to the original conditional use permit. Any additions will require written notification to the County Zoning office.

- E. No land may be subdivided for the purpose of providing space for any antenna unless all lot size requirements for the relevant zoning district are met and subdivision approval is obtained.
- F. When the landowner applies for the permit, they must affirmatively state that the use is consistent with any land use restrictions that applies to the site.
- G. On a parcel of land zoned for agricultural or general rural, the minimum lot size shall be two and a half acres for construction of a tower over 35 feet in height. On a parcel of land zoned for commercial/industrial or heavy industrial purposes, the minimum lot size is that which is allowed for the zoning district.
- H. The tower location shall provide screening for off-site views of the facility. Associated base equipment must be located within a structure whenever possible, or housed at the base of the tower and screened from view for adjoining residents by fencing or landscaping . Tower accessory structures shall be constructed of materials designed to minimize visibility to surrounding areas. All accessory buildings must comply with the local building code requirements. The Planning Commission reserves the right to require design measures to camouflage facilities by integrating them with existing buildings and other existing uses. Existing on-site vegetation shall be preserved to the maximum extent practicable.
- I. Towers and accessory structures shall be situated in the rear yard when located with another principal residential use, unless the Planning Commission finds that another location on the parcel is more appropriate.
- J. Only one communication tower is permitted on a parcel of land. All other standards contained in this ordinance must be met.
- K. Construction of the tower, accessory buildings, landscaping, requirement must be completed within one year of the issuance of the permit.
- L. Towers located within 5 miles of an FAA approved airstrip shall provide evidence of FAA consent and/or MnDot.
- M. The telecommunication company shall provide the County with evidence of insurance for one million dollars worth of coverage for personal or property damage.

Subdivision 4: Design Standards

- A. All towers shall be of a monopole design unless the Planning Commission or County Board deems that an alternative design is necessary or preferred due to the

topography or to better blend with existing structures, for safety reasons, or if necessary to allow co-location.

- B. The structural design, mounting, and installation of any antenna and support structure shall be in compliance with the manufacturer's specifications. The construction plans and design of any antenna requiring a permit shall be approved and certified by a registered professional engineer.
- C. All towers shall be reasonably protected against unauthorized climbing. The bottom of the tower from ground level to 12 feet above ground shall be designed in a manner to preclude unauthorized climbing or shall be enclosed by a 6 foot fence with three strands of barbed wire at the top with a locked gate.
- D. Antennas shall not be artificially illuminated unless required by FCC, FAA or any other governmental agency to protect the public health and safety. Antennas in the "Agricultural District" may be lighted to facilitate identification to low flying aircraft used for crop spraying.
- E. Antenna support structures under two hundred (200) feet in height shall be painted or coated silver or have a galvanized finish to reduce the visual impact, unless otherwise required by federal law or required by the County for easy identification in an Agricultural area for low-flying aircraft used for crop spraying. Silver or galvanized finishes shall be required unless the setting or natural surroundings can be used to justify another color. Metal towers shall be constructed of, or treated with a corrosive resistant material.
- F. All towers shall be constructed for co-location of at least one or two additional carriers, depending on the height of the tower, including but not limited to other personal wireless service companies, local police, fire, and ambulance companies. Towers shall be designed in all respects, to accommodate both the applicant's antenna and comparable antennas to allow for future re-arrangement of antennas. Support structures shall be designed to accommodate the following:

Structures from 100 to 125 feet- a minimum of one tenant beside the owner
Structures from 125 and higher - a minimum of two tenants besides the owner
- G. Towers located in the heavy industrial, industrial or commercial districts, where the tower is located closer to a property line than a distance equal to the height of the tower shall be designed and engineered to fail or collapse within the distance between the tower and the property line. The application for any tower shall require the submittal of written documentation explaining tower construction and possible failure. At a minimum, the tower shall comply with the minimum setback requirement for the zone in which it is located. If the tower is located in a Heavy Industrial, Industrial or Commercial zone adjacent to any other district, the tower must meet a setback equal to the height of the tower plus an additional 20 feet from the property line abutting that zone. The setback requirement may be

waived, if it is necessary to allow continued operation of an existing farm irrigation system.

- H. Applicants of all towers shall be required to obtain a building permit from the Zoning Office regardless of whether the tower is a permitted use or a conditional use.

Subdivision 5: Co-Location Requirements

- A. A proposal for a new communication tower shall not be approved unless it can be shown by the applicant that the telecommunication equipment planned for the proposed tower cannot be accommodated:

1. on an existing or approved tower that is within the following minimum distance requirements between towers:

within a one mile radius of another over 120 feet tall;
within 1/2 mile radius for towers under 120 feet;
within 1/4 mile for towers under 80 feet; due to the following reasons:

- a) The planned equipment would exceed the structural capacity of the existing or approved tower or building, as documented by a qualified and licensed professional engineer, and the existing or approved tower cannot be reinforced, modified or replaced to accommodate planned or equivalent equipment at a reasonable cost.
- b) The planned equipment would cause interference, materially impacting the usability of other existing or planned equipment at the tower or building as documented by a qualified radio frequency engineer and the interference cannot be prevented at a reasonable cost.
- c) Existing towers and buildings within the search radius cannot accommodate the planned equipment at a height necessary to function reasonably as documented by a qualified engineer, regardless of whether its location is regulated by the County or adjacent municipality.
- d) In spite of its best efforts, the applicant was unable to obtain approval within 60 days, to co-locate on an existing or approved tower or building. The applicants efforts must be documented in writing, and sent by certified mail.

- e) Other reasons that make it impractical to locate the planned telecommunications equipment upon an existing or approved tower or building.

- B. If a variance is requested, the applicant shall demonstrate to staff, by providing a coverage/interference analysis and capacity analysis prepared by a qualified radio frequency engineer that the location of the antennas as proposed is necessary to meet the frequency reuse, capacity and spacing needs of the wireless communication system and to provide adequate coverage.

- C. The antennas shall be located on an existing structure, if possible.

Subdivision 6: Prohibited Uses

- 1. No tower or accessory structure shall be erected in any public or private drainage easements.

- 2. No tower over 60 feet in height shall be located closer than the height of the tower plus 20 feet from of any residential dwelling other than the dwelling on the parcel on which the tower is to be located unless a waiver for siting is obtained for the necessity of preserving an operating irrigation system.

- 3. No tower shall be located closer than the height of the tower from any property line.

- 4. No temporary mobile cell sites are permitted except in the case of equipment failure, equipment testing, or in the case of emergency situation as authorized by the County Zoning Administrator. Use of temporary mobile cell sites for testing purposes shall be limited to twenty-four (24) hours; use of temporary mobile cell sites for equipment failure or in the case of emergency situations shall be limited to a term of thirty (30) days. These limits can be extended by the Zoning Administrator.

- 5. Permanent platforms or structures, exclusive of antennas, other than those necessary for safety purposes or for tower maintenance are prohibited.

Subdivision 7: Application for a Communication Tower

In addition to the submittal requirements required elsewhere in this ordinance, applications for conditional use permits for new towers and antennas shall be accompanied by the following information before being considered a complete application:

- 1. A report from a qualified and licensed professional engineer which:
 - a. describes the tower height and design including a cross section and elevation;

- b. certifies the tower's compliance with structural and electrical standards;
 - c. describes the tower's capacity, including the potential number and type of antennas that it can accommodate;
 - d. describes the lighting to be placed on the tower if such lighting is required by the FCC or FAA;
 - e. describes that the applicant will avoid causing destructive interference to co-located, previously established public safety communications;
 - f. specifies the distance to a DNR protected lake or river, the Mississippi River or Rum River areas, and the boundaries of state or county parks within a 1/2 mile or 1 mile, depending on the zone.
 - g. evidence of insurance
 - h. permit from the city, township, county or state for right-of-way use.
2. The County will maintain an inventory of all existing and proposed cell site installations and all carriers shall provide the following with each application:
- a. a presentation size map of the County which shows the projected plan for cell sites to staff only, or if individual properties are not known, the geographic service areas of proposed cell sites.
 - b. provide a list of all existing sites, existing sites to be upgraded or replaced.
3. All applications will be signed by a representative from the telecommunications company and the landowner. Written acknowledgment by the same, that they will abide by all applicable permits
4. The Planning Commission may at its discretion, require visual impact demonstrations including mock-ups and/or photo montages; screening and painting plans; network maps; alternative site analysis; lists of other nearby telecommunication facilities; or facility design alternatives for the proposed tower.
5. The Zoning Department is authorized to employ on behalf of the County, an independent technical expert to review technical materials submitted by the applicant or to prepare any technical materials required by not submitted by the applicant. The applicant shall pay the costs of said review and/or independent analysis.

Subdivision 8: Permitted and Conditional Use Permits by Zoning District for Communication Towers.

Antennas and towers shall be allowed in the following zoning districts with a permit, if it meets the standards set forth in this ordinance and the following criteria are met:

A) HEAVY INDUSTRIAL DISTRICT

Permitted: The following uses are permitted if all general and performance standards are met:

1. Antenna located on a existing high power overhead transmission tower or attached to a pole integrated into the tower.
2. A free standing tower up to 250 feet, which has been constructed to accommodate additional users; the number depending on the tower height.
3. Antenna mounted on an existing structure and does not extend a maximum of fifteen (15) feet above the structure.

Conditional Use:

1. Towers over 250 feet built to accommodate at least two additional users.
2. Antenna and supporting structures mounted on an existing structure, and extends more than fifteen (15) feet beyond the height of the structure.

B) INDUSTRIAL/COMMERCIAL DISTRICTS

Permitted: The following uses are permitted if all general and performance standards are met.

1. Antenna located on a existing high power overhead transmission tower or attached to a pole integrated into the tower.
2. A free standing tower up to 200 feet, which has been constructed to accommodate additional tenants; the number depending on the tower height.
3. Antenna mounted on an existing structure and does not extend a maximum of fifteen (15) feet beyond the height of the structure.

Conditional Use:

1. Antennas over 200 feet built to accommodate at least three additional users, depending on the height of the tower.
2. Antenna and supporting structures mounted on an existing structure, and extends more than fifteen (15) feet beyond the height of the structure.

3. Towers up to 200 feet, located more than ¼ mile from the nearest residence other than the applicants, and built to accommodate additional users, the number depending on the height of the tower. The tower must meet the required setback from the property line, which is 50 feet.

C) AGRICULTURAL

Permitted:

1. Antenna located on an existing high power overhead transmission tower or attached to a pole integrated into the tower.
2. Antenna mounted on an existing structure and does not extend a maximum of fifteen (15) feet beyond the height of the structure.
3. Towers up to 200', located more than ¼ mile from the nearest residence other than the applicants, and built to accommodate additional users, the number depending on the height of the tower. The tower must meet the required setback from the property line which is 50 feet.

Conditional Use Permit:

1. Towers under 200 feet which will be located within ¼ mile from the nearest residence other than the applicants.
2. Towers over 200 feet, if the applicant can demonstrate a guaranteed occupancy of 3 or more tenants. The tower must meet the required setback for the zone, unless waived by the Planning Commission if in its opinion, the waiver is necessary to preserve an existing irrigation system.

Prohibited:

1. All free standing antenna towers and accessory structures located within a residential area.

D.) GENERAL RURAL

Permitted:

1. Antenna located on an existing high power overhead transmission tower or attached to a pole integrated into the tower.
2. Antenna mounted on an existing structure and does not extend a maximum of fifteen (15) feet beyond the height of the structure.

3. Towers up to 175 feet and accessory equipment located on “public land” more than ¼ mile from the nearest residence other than the applicants, and built to accommodate additional users, the number depending on the height of the tower.

Conditional Use Permit:

1. Antenna mounted on an existing structure and does not extend more than fifteen (15) feet beyond the height of the structure.
2. Free standing antenna towers and accessory structures that are not within a residential area up to a height of 175 feet, and that will accommodate additional users; the number depending on the height of the tower.

Prohibited:

1. All free standing antenna towers and accessory structures located within a “residential plat” or “residential area” as defined in this Ordinance.

E) URBAN EXPANSION

Co-approval by the adjoining city and/or township must be obtained as part of the application approval. The proposal must be consistent with the city's long term plan.

Permitted:

1. Antennas located on an existing high power overhead transmission tower or attached to a pole integrated into the tower.
2. Antennas mounted on an existing structure and does not extend a maximum of fifteen (15) feet beyond the height of the structure.

Conditional Use Permit:

1. Antennas mounted on an existing structure and does not extend a maximum of fifteen (15) feet beyond the height of the structure.
2. Towers up to 175 feet designed to accommodate additional users depending on the height of the tower. The proposal shall meet the requirements of all other sections of this ordinance. The height requirement must be consistent with the City/Township long range plans.

F) SHORELAND DISTRICTS

Conditional Use Permits:

1. Antenna located on a existing high power overhead transmission tower or attached to a pole integrated into the tower, and does not exceed fifteen (15) feet above the height of the structure.
2. Antennas mounted on an existing structure and does not extend a maximum of fifteen (15) feet above the height of the structure.

Prohibited:

1. All free standing antenna towers and accessory structures within a Shoreland area.

G) SCENIC AND RECREATIONAL RIVER DISTRICT

Conditional Use Permit:

1. Antenna located on an existing high power overhead transmission tower or attached to a pole integrated into the tower, and does not exceed a maximum of fifteen feet above the height of the transmission line.
2. Antenna mounted on an existing structure and does not extend a maximum of fifteen (15) feet above the height of the structure.

Prohibited:

1. All free standing antenna towers and accessory structures.