

**Chapter 27**  
**ANTENNAS**

**SECTION:**

XX-27-1: Purpose

XX-27-2: General Provisions

XX-27-3: Design Standards

XX-27-4: Co-Location Requirements

XX-27-5: Prohibited Uses

XX-27-6: Applications for a Communication Tower

XX-27-7: Zoning Districts

XX-27-8: Amateur Radio Service

**XX-27-1: PURPOSE:** The purpose of the provisions on antennas is to:

- A. Accommodate the communication needs of residents and businesses while protecting the public health, safety, and general welfare of the town.
- 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.
- 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. (Ord. 900, 18 Apr 22)

**XX-27-2: GENERAL PROVISIONS:**

- 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 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 town 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 zoning administrator.
- 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 shall affirmatively state that the use is consistent with any land use restrictions that applies to the site.
- G. Minimum Lot Area:
  - 1. On a parcel of land within a rural district established by chapter 45 of this ordinance, the minimum lot size shall be two and a half acres for construction of a tower over 35 feet in height.
  - 2. On a parcel of land within a commercial or industrial district established by chapter 45 of this ordinance, 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 shall 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 shall 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 shall be met.
- K. Construction of the tower, accessory buildings, landscaping, requirement shall be completed within one year of the issuance of the permit.
- L. Towers located within 5 miles of a federal aviation administration approved airstrip shall provide evidence approval by the federal aviation administration and/or Minnesota department of transportation.
- M. The telecommunication company shall provide the town with evidence of insurance for \$1,000,000.00 of coverage for personal or property damage. (Ord. 900, 18 Apr 22)

**XX-27-3: DESIGN STANDARDS:**

- A. All towers shall be of a monopole design unless town 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 six 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 federal communications commission, federal aviation administration, or any other governmental agency to protect the public health and safety.
- E. Antenna support structures under 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. 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 sheriff, fire, and ambulance providers. 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:
1. Structures from 100 to 125 feet in height: A minimum of one tenant in addition to the owner.
  2. Structures from 125 feet and greater height: A minimum of two tenants in addition to the owner.
- G. Towers located in commercial and industrial districts established by chapter 45 of this ordinance, 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 commercial or industrial district established by chapter 45 of this ordinance adjacent to any other district, the tower shall 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 by the town board, 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 regardless of whether the tower is a permitted use or a conditional use. (Ord. 900, 18 Apr 22)

**XX-27-4: CO-LOCATION REQUIREMENTS:**

- A. Antennas shall be located on an existing structure, if possible.
- B. 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 on an existing or approved tower that is within the following minimum distance requirements between towers:
1. Within a one mile radius of another over 120 feet tall.
  2. Within one-half mile radius for towers under 120 feet.
  3. Within one-quarter mile for towers under 80 feet.

- C. Reasons acceptable as to why co-location cannot be accommodated on an existing tower:
1. 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.
  2. 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.
  3. 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 town or adjacent jurisdiction.
  4. In spite of its best efforts documented in writing, and sent by certified mail, the applicant was unable to obtain approval within 60 days to co-locate on an existing or approved tower or building.
  5. Other reasons that make it impractical to locate the planned telecommunications equipment upon an existing or approved tower or building.
- D. If a variance is requested, the applicant shall demonstrate to town 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. (Ord. 900, 18 Apr 22)

**XX-27-5: PROHIBITED USES:**

- A. No tower or accessory structure shall be erected in any public drainage easements.
- B. 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.
- C. No tower shall be located closer than the height of the tower from any property line.

- D. 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 zoning administrator. Use of temporary mobile cell sites for testing purposes shall be limited to 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 30 days. These limits can be extended by the zoning administrator.
- E. Permanent platforms or structures, exclusive of antennas, other than those necessary for safety purposes or for tower maintenance are prohibited. (Ord. 900, 18 Apr 22)

**XX-27-6: APPLICATIONS FOR A COMMUNICATION TOWER:** In addition to the submittal requirements required by chapter 4 of 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:

- A. A report from a qualified and licensed professional engineer that:
  - 1. Describes the tower height and design including a cross section and elevation.
  - 2. Certifies the tower's compliance with structural and electrical standards
  - 3. Describes the tower's capacity, including the potential number and type of antennas that it can accommodate.
  - 4. Describes the lighting to be placed on the tower if such lighting is required by the federal communications commission or federal aviation administration.
  - 5. Describes that the applicant will avoid causing destructive interference to co-located, previously established public safety communications.
  - 6. Specifies the distance to a department of natural resources protected lake, river, or stream, the Rum River, and the boundaries of state or county parks within one-half mile or one mile, depending on the district.
  - 7. Evidence of insurance.
  - 8. Permit from the town, county, or state for right-of-way use.
- B. The zoning administrator will maintain an inventory of all existing and proposed cell site installations and all carriers shall provide the following with each application:
  - 1. A presentation size map of the town that shows the projected plan for cell sites to town staff only, or if individual properties are not known, the geographic service areas of proposed cell sites.

2. 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 administrator is authorized to employ on behalf of the town, 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. (Ord. 900, 18 Apr 22)

**XX-27-7: ZONING DISTRICTS:** Antennas and towers shall be allowed in the following zoning districts with a permit, if the standards set forth in this chapter and the following criteria are met:

A. Rural Districts:

1. Permitted Uses: The following uses are permitted if all general and performance standards are met.
  - a. Antenna located on an existing high power overhead transmission tower or attached to a pole integrated into the tower.
  - b. Antenna mounted on an existing structure and does not extend a maximum of 15 feet beyond the height of the structure.
  - c. Towers up to 175 feet and accessory equipment located on public land more than mile from the nearest residence other than the applicants, and built to accommodate additional users, the number depending on the height of the tower.
2. Conditional Uses: The following uses require a conditional use permit based upon procedures set forth in and regulated by chapter 4 of this ordinance. Additionally, besides the specific standards and criteria which may be cited below for respective conditional uses, each request for a conditional use permit shall be evaluated based upon the standards and criteria set forth in section XX-4-2 and section XX-4-3 of this ordinance.

- a. Antenna mounted on an existing structure and does extend more than 15 feet beyond the height of the structure.
  - b. 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.
  3. Prohibited: All freestanding antenna towers and accessory structures located within a residential plat or residential area as defined in section XX-2-2 of this ordinance.
- B. Commercial and Industrial Districts:
1. Permitted Use: The following uses are permitted if all general and performance standards are met.
    - a. Antenna located on a existing high power overhead transmission tower or attached to a pole integrated into the tower.
    - b. A freestanding tower up to 200 feet, which has been constructed to accommodate additional tenants; the number depending on the tower height.
    - c. Antenna mounted on an existing structure and does not extend a maximum of 15 feet beyond the height of the structure.
  2. Conditional Use: The following uses require a conditional use permit based upon procedures set forth in and regulated by chapter 4 of this ordinance. Additionally, besides the specific standards and criteria which may be cited below for respective conditional uses, each request for a conditional use permit shall be evaluated based upon the standards and criteria set forth in section XX-4-2 and section XX-4-3 of this ordinance.
    - a. Antennas over 200 feet built to accommodate at least three additional users, depending on the height of the tower.
    - b. Antenna and supporting structures mounted on an existing structure, and extends more than 15 feet beyond the height of the structure.
    - c. Towers up to 200 feet, located more than one-quarter 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 shall meet the required setback from the property line, which is 50 feet.

C. S District:

1. Permitted Use: The following uses are permitted if all general and performance standards are met.
  - a. None.
2. Conditional Use: The following uses require a conditional use permit based upon procedures set forth in and regulated by chapter 4 of this ordinance. Additionally, besides the specific standards and criteria which may be cited below for respective conditional uses, each request for a conditional use permit shall be evaluated based upon the standards and criteria set forth in section XX-4-2 and section XX-4-3 of this ordinance.
  - a. Antenna located on an existing high power overhead transmission tower or attached to a pole integrated into the tower, and does not exceed 15 feet above the height of the structure.
  - b. Antennas mounted on an existing structure and does not extend a maximum of 15 feet above the height of the structure.
3. Prohibited:
  - a. All freestanding antenna towers and accessory structures.

D. WS District:

1. Permitted Use: The following uses are permitted if all general and performance standards are met.
  - a. None.
2. Conditional Use: The following uses require a conditional use permit based upon procedures set forth in and regulated by chapter 4 of this ordinance. Additionally, besides the specific standards and criteria which may be cited below for respective conditional uses, each request for a conditional use permit shall be evaluated based upon the standards and criteria set forth in section XX-4-2 and section XX-4-3 of this ordinance.
  - a. 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.

- b. Antenna mounted on an existing structure and does not extend a maximum of 15 feet above the height of the structure.
3. Prohibited:
    1. All freestanding antenna towers and accessory structures. (Ord. 900, 18 Apr 22)

**XX-26-8: AMATEUR RADIO SERVICE:** The following standards shall apply to all accessory use antennas and towers used in the amateur radio service:

- A. Exempt Provisions: Antennas and support structures for federally licensed amateur radio stations and used in the amateur radio service shall be exempt from the following requirements this chapter:
  1. Sections XX-26-2.D, E, G, H, and M of this chapter.
  2. Sections XX-26-3.F and G of this chapter.
  3. Section XX-26-4 of this chapter.
  4. Section XX-26-6 of this chapter.
- B. Installation Requirements: Antennas and towers used in the amateur radio service shall be installed in accordance with the instructions furnished by the manufacturer of the antenna or tower. Because of the experimental nature of the amateur radio service, antennas mounted on such towers may be modified or changed at any time so long as the published allowable load on the tower is not exceeded and the structure of the tower remains in accordance with the manufacturer's specifications.
- C. Location:
  1. Amateur radio service antennas and towers shall not be erected in any required yard except a rear yard or within a public drainage and utility easement and shall be set back a minimum of 10 feet from all lot lines.
  2. Guywires or guywire anchors shall not be erected within public drainage and utility easements and shall be set back a minimum of five feet from all lot lines.
- D. More Than One Tower: The installation of more than one tower or support structure per property shall require approval of an interim use permit, subject to the provisions of chapter 5 of this ordinance. (Ord. 900, 18 Apr 22)