

APPENDIX A

STANDARDS AND PROCEDURES  
FOR  
COMMERCIAL TELECOMMUNICATIONS FACILITIES

(As incorporated, by reference, in the  
Town of Hardenburgh Zoning Law)

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**A. PURPOSES**

The purposes of this Section are to:

1. Preserve the character and appearance of the Town while simultaneously allowing adequate commercial telecommunication services to be developed, and provide a sufficient number of locations to accommodate the needs of telecommunication service providers;
2. Protect the scenic, historic, environmental, and natural or man-made resources of the community;
3. Provide standards and requirements for regulation, placement, construction, monitoring, design, modification, and removal of CT Facilities;
4. Establish a systematic review process that ensures action within a reasonable period of time for requests for authorization to place, construct, operate, or modify CT Facilities;
5. Preserve property values;
6. Minimize the total number and height of facilities throughout the community while providing adequate coverage for the Town of Hardenburgh;
7. Locate CT Facilities so that they do not have negative impacts, such as, but not limited to, attractive nuisance, noise and falling objects, on the general safety, welfare, and quality of life of the community;
8. Require owners or sponsors of CT Facilities to configure them so as to minimize and mitigate the adverse visual impact of the facilities.
9. To provide opportunities for the location of emergency service telecommunications systems on commercial facilities and to encourage commercial facilities to expedite such co-location.

**B. APPLICATION FOR SPECIAL PERMIT REQUIRED**

1. An Applicant shall be required to submit an application for a special permit in accordance with the requirements of Section 8.2. of the Zoning Law of the Town of Hardenburgh.
2. In addition to the data required in Section 8.2.1 the site plan shall be accompanied by the supporting documentation set forth in F. below.
3. The cost of any reviews by outside experts deemed necessary by the Planning Board to fulfill any of its responsibilities hereunder shall be at the applicant's expense. Such experts may include, but not be limited to civil engineers, professional planners, attorneys and radio frequency engineers.

**C. DESIGN STANDARDS**

## 1. **Policies**

The standards set forth below are intended to implement the following policies regarding location and design of CT Facilities:

- a. The visibility of a CT Facility shall be limited to the absolute minimum necessary to provide adequate service.
- b. Visibility shall be kept to a minimum by use of a combination of appropriate techniques including height limits, color and texture of material, camouflage or “stealth” design, size, scale and shape of equipment.
- c. Limited visibility is most important when a CT Facility is located within or visible from significant viewsheds, open spaces or historic sites.
- d. Co-location of facilities is preferred to new facilities only when such co-location does not increase the height or visibility of the CT Facility.
- e. Several small facilities which have minimal visibility are preferred to one facility which has significant visibility.
- f. Type 4 or 5 facilities, as described in 2. below, shall only be approved if the applicant can demonstrate that adequate service cannot be provided by use of Type 1, 2 or 3 facilities.

## 2. **Priority of Facility Types**

In accord with the policies set forth in 1., above, the Town of Hardenburgh shall give preference to the location and design of CT Facilities in the following descending order:

Type 1: Facilities that are incorporated into the design of new or existing structures such as church steeples, farm silos, flag poles, light standards, water towers, etc. in such a way that the commercial communications towers is indistinguishable from the structure itself.

Type 2: Facilities that are attached to or mounted on existing tall structures but do not increase the height of such structure by more than 10 feet or facilities which simulate a tree or other natural feature.

Type 3: Facilities that are co-located on existing commercial telecommunications towers that have previously been approved under this section.

Type 4: New commercial telecommunications towers located on the same

site as a similar tower previously approved under this section.

Type 5: New commercial telecommunications towers on new sites.

### **3. Detailed Design Standards**

- a. Type 2 facilities located on existing utility poles or similar structures shall be of a size, color and profile to minimize visibility.
- b. Type 3 facilities (co-located) shall be designed so that the height of the structure is not increased and the existing design elements are maintained.
- c. Type 3, 4 and 5 facilities shall be subject to the following standards:
  - (1) The facility shall not be sited in an open field, meadow or similar unwooded area.
  - (2) The maximum height of any facility shall not exceed 15 feet above the average tree height as measured within a 100 foot radius of the facility or 10 feet above the height of the tallest tree within a 50 foot radius of the facility whichever is less.
  - (3) The height of any new tower shall be below that which would require the need for artificial lighting.
  - (4) No facility shall be silhouetted against the sky as seen from any viewpoint located 1,000 feet or more from the base of the facility.
  - (5) Unless specifically required by other regulations, all facilities shall have a neutral, earth tone or similar painted finish that will minimize the degree of visual impact that a new facility may have.
  - (6) Alternate designs shall be considered for new towers, including lattice and single pole structures and facilities that simulate natural features or indigenous structures (steeple, silos, etc.).
- d. Antennas should be designed with a minimum of protruding elements and shall be as close to the supporting building, pole or tower as possible.
- e. Equipment shelters and similar accessory structures shall be of the minimum size necessary and either concealed in existing structures or utilize materials, colors, shapes and textures to blend with the immediate surroundings or buried underground.
- f. No new antenna or ground equipment shall be placed on any existing facility or at any existing facility site which is nonconforming with

respect to the height or setback standards set forth herein.

- g. Except as required by law, no tower, antenna or ground equipment shall be lighted in such a way that the light source or any illumination is visible beyond the boundaries of the property.
- h. The Planning Board shall require a review by a qualified structural engineer or other expert of the height and structural design of any new tower.
- i. All proposed Type 4 or 5 commercial telecommunications towers and accessory structures shall be set back from abutting residential parcels, public property or street lines a distance sufficient to contain on-site substantially all ice-fall or debris from tower failure and preserve the privacy of adjoining residential properties.
  - (1) All tower bases must be located at a minimum setback of 500 feet from any property line. However, no facility shall be located within 1,500 feet of a district or structure listed, or eligible for listing, on the National or State Register of Historic Places.
  - (2) Accessory structures and repeaters must comply with the minimum setback requirements in the underlying district.

**D. SITE PLANNING STANDARDS**

1. **Existing Vegetation.** Existing on-site vegetation shall be preserved to the maximum extent possible and no cutting of trees exceeding eight (8) inches in diameter (measured at a height of (4) feet off the ground) shall take place prior to approval of the special permit. Clearcutting of all trees in a single contiguous area exceeding 20,000 square feet shall be prohibited.
2. **Screening.** Deciduous or evergreen tree plantings shall be required where deemed necessary to screen portions of the facility and accessory structures from nearby residential property as well as from public sites known to include important views or vistas. Where the site abuts residential or public property, including streets, the following vegetative screening shall be required. For all towers, at least one row of native evergreen shrubs or trees capable of forming a continuous hedge at least ten (10) feet in height within two (2) years of planting shall be provided to effectively screen the tower base and accessory facilities. In the case of poor soil conditions, planting may be required on soil berms to assure plant survival. Plant height in these cases shall include the height of any berm.
3. **Access.** Adequate emergency and service access shall be provided. Maximum use of existing roads, public or private, shall be made. Road construction shall, at all times, minimize ground disturbance and vegetation

cutting to within the toe of fill, the top of cuts, or no more than ten (10) feet beyond the edge of any pavement. Road grades shall closely follow natural contours to assure minimal visual disturbance and reduce soil erosion potential. Straight roads perpendicular to the prevailing grade shall be avoided to the maximum extent possible.

4. **Parking.** No parking space shall be located in any required setback.
5. **Fencing.** Sites of proposed new towers and sites where modifications to existing towers are proposed, shall be adequately enclosed by a fence, unless the applicant demonstrates to the Planning Board that such measures are unnecessary to ensure the security of the facility. The applicant shall be wholly responsible for ensuring that the telecommunication facility site and all structures situate thereon are safe and secure for all purposes, uses and activities.

**E. LOCATION AND CO-LOCATION OF CT FACILITIES**

1. **Location.** Commercial Telecommunications Towers shall only be located, upon issuance of a special permit, in accord with the following standards:
  - a. Commercial Telecommunications towers and CT Facilities which qualify as preferred facility Types 1 or 2, as defined herein are permitted at any location in Town.
  - b. Commercial telecommunications towers and CT Facilities which qualify as Types 3, 4 or 5 as defined in Section C.2. above shall be permitted only below an elevation of 2,500 feet above sea level.

2. **Shared Use of Existing Towers.** At all times, shared use of existing towers shall be preferred to the construction of new towers provided any additional equipment does not increase the height or visibility of the existing facility. An applicant shall be required to present an adequate report inventorying existing towers and other facilities within reasonable distance of the proposed site and outlining opportunities for shared use of existing facilities as an alternative to a proposed new tower.
  - a. An applicant proposing to share use of an existing tower shall be required to document intent from an existing tower owner to allow shared use.
  - b. The Planning Board may consider a new commercial telecommunications tower where the applicant demonstrates that shared usage of an existing tower is impractical. The applicant shall be required to submit a report demonstrating good faith efforts to secure shared use from existing towers as well as documentation of the physical and/or financial reasons why shared usage is not practical. Written requests and response for shared use shall be provided.
3. **Shared Usage of Site with New Tower.** Where shared usage of an existing tower is found to be impractical, the applicant shall investigate shared usage of an existing tower site for its ability to accommodate a new tower and accessory uses. Documentation and conditions shall be in accordance with Section 2 above.
4. **New Tower at a New Location.** The Planning Board may consider a new commercial telecommunications tower on a site not previously developed with an existing tower when the applicant demonstrates that shared usage of an existing tower site is impractical, and submits a report as described in Section 2 above.
5. **Future Shared Usage of New Towers.** The applicant shall design any proposed new commercial telecommunications tower to accommodate future demand for new facilities and shall provide written commitment to allow such future co-location of facilities for other CT service providers. The scope of this analysis shall be determined by the Planning Board. This requirement may be waived only if the applicant demonstrates that provisions of future shared usage of the facility is not feasible and an unnecessary burden, based upon:
  - a. The number of Federal Communications Commission (FCC)

licenses foreseeably available for the area;

- b. The kind of tower site and structure proposed;
- c. The number of existing and potential licenses without tower spaces;
- d. Available spaces on existing and approved towers; and
- e. Potential adverse visual impact by a tower designed for shared usage.

- 6. **Emergency and Municipal Services.** Applicants for commercial telecommunication facilities are strongly encouraged to provide space on new or existing towers for emergency services and municipal agencies.

**F. SUPPORTING DOCUMENTATION.**

In addition to the application for a special permit, the applicant shall also submit the following:

- 1. **Visual Impact Report.** For any facility Type 3, 4 or 5 as described in Section C.2 above, a “zone of visibility” map showing all land area within five miles of the proposed facility from which the proposed facility will be visible. In addition, a brightly colored balloon with a five foot diameter shall be suspended at the maximum height of the proposed facility for at least four hours at a time and date specified by the Planning Board. The applicant shall place an advertisement announcing such test in the Town’s official paper at least seven and no more than 10 days prior to the test.
- 2. **Visual Impact Assessment.** Based on the results of the zone of visibility map and balloon test, the Planning Board may require submission of additional data including, but not limited to, a visual simulation of the proposed facility from specific viewpoints. Construction of a new tower or modification of an existing tower shall be subject to the relevant guidelines and criteria below that are determined by the Planning Board at the pre-submission conference to be appropriate:
  - a. Assessment of "before and after" views from key viewpoints both inside and outside of the Town, including state highways and other major roads, state and local parks, and other public lands from any privately-owned preserves and historic sites normally open to the public, and from any other location where



the site is visible to a large number of visitors or travelers. In its review of the visual impact assessment, the Planning Board shall consider, among other impacts, the visibility of the facility above nearby ridgelines, its height in relation to the tree crown in the surrounding area, its color and materials in relation to those of nearby structures and other factors which contribute to or detract from the harmony of the visual environment. A photo simulation to evaluate such impacts may be required.

- b. Assessment of alternative tower designs and color schemes.
- c. Assessment of the visual impact of the tower base, guy wires, accessory buildings and overhead utility lines from abutting properties and streets.

**3. Site Selection Report**

a. Inventory of Existing Sites

The site selection report shall include an inventory of existing wireless telecommunications facilities, towers, and antenna sites within a reasonable distance (at least two miles in all directions) from the proposed site, outlining opportunities for shared use as an alternative to the proposed site. The applicant must demonstrate that the proposed tower, facility, or antenna cannot be accommodated on an existing tower, building, or structure. The documentation of existing sites shall include but not be limited to: location (address and latitude and longitude), ground elevation, type of structure, antenna height, type of service, and name of owner or service provider.

b. Siting Criteria

A description of the siting criteria and the process by which other possibilities were considered and eliminated, including but not limited to real estate search areas, accessibility to roads and utilities, distances and bearings to other system sites, acceptable radio signal levels and radio coverage areas, and/or microwave interconnection path requirements. The applicant shall support this statement with the submission of a study comparing all potential host sites within an approximate two-mile radius of the subject site. This study should include a description of the surrounding sites and a discussion of the ability or inability to host a facility.

c. Radio Coverage Analysis

Radio coverage maps and/or overlays shall be provided that show the existing service coverage in the vicinity of the proposed site, and the predicted service coverage from the proposed site at the requested antenna height. These maps shall demonstrate how the proposed facility works with existing facilities in the area to fill coverage gaps and/or holes in service. Measured data or “drive testing” results may be requested to demonstrate the accuracy of computer generated simulations of radio coverage.

d. Radio Frequency Effect

Federal law currently provides that local municipal regulation of cellular and PCS communication towers based upon the environmental effect of radio frequency emissions is preempted and prohibited as long as those emissions comply with FCC standards. The applicant shall provide sufficient evidence that the telecommunication facility will comply with Federal Communications Commission (FCC) radio frequency emission standards (FCC OET Bulletin 65).

4. **Build-out Plan.** With any carrier’s first application for a CT Facility, following the date of passage of this local law, a build-out plan shall be submitted which depicts the general location, height and design of all other facilities which are deemed necessary within the Town to accomplish the applicant’s coverage objectives and capacity requirements. Such build-out plan shall be based on the height, location and output of the initial proposed facility and shall include predicted coverage propagation plots indicating the signal level depicted showing all existing and future facilities within the Town and within a five mile radius of the Town’s boundaries. The build-out plan shall include a narrative which explains the basis for selecting or eliminating sites.
5. **Alternative Build-out Plans.** If the applicant is proposing a Type 3, 4 or 5 facility, as defined in Section C.2. above, the buildout plan described above shall be accompanied by an alternative plan(s) utilizing a combination of Type 1 or 2 facilities or an analysis demonstrating that such an alternative is not feasible.

**G. MAINTENANCE AND REMOVAL OF FACILITIES**

1. **Maintenance and/or Performance Bond.** The Planning Board shall require the applicant and/or owner to post and file with the Town Clerk of the Town of Hardenburgh, prior to approval of any application and/or license, a maintenance and/or performance bond

in an amount sufficient to cover the cost of installation, maintenance and/or construction of said facility during its lifetime including all screening, landscaping and accessory structures. The amount required shall be determined in the sole discretion of the Planning Board, based upon the unique characteristics of the tower and site. In furtherance of the foregoing, the applicant and/or owner shall cooperate with the Planning Board in supplying all necessary construction and maintenance data to the Board prior to approval of any application and/or license to accomplish the foregoing.

**2. Structural Inspection.**

- a. The CT Facility owner shall establish an escrow account with the Town of Hardenburgh to pay for an independent licensed structural engineer, hired by the Town of Hardenburgh to conduct inspections of the facility's structural integrity and overall safety every two (2) years. A written report of the inspection results shall be prepared by the licensed structural engineer and submitted to the Building Inspector for review and action thereon.
- b. Should the inspection of any CT Facility reveal any defect or change which the Building Inspector determines render the facility, or portion thereof, unsafe the Building Inspector shall notify the facility owner of the unsafe conditions and thereafter take necessary actions under law to have the unsafe conditions remedied.
- c. Any modification of any existing CT Facility shall require a structural analysis which shall be submitted to the Building Inspector for review. For the purposes of this paragraph "modification" is defined as any alteration, change or proposed change in structure or dimension of an existing facility, number of antennas, change in antenna type or model and repositioning of any antenna.

**3. Removal of Facilities.**

- a. Any CT Facility which ceases to operate for a period in excess of six (6) months shall be wholly removed from the site. "Cease to operate" is defined as not performing all normal functions associated with operation of the CT Facility and its equipment on a continuous basis for a period in excess of six (6) months.
- b. Prior to Special Use Permit approval being granted by the Planning Board, the CT Facility applicant, sponsor, lessee,

contract vendee or owner, their successors and assigns shall obtain a financial surety, bond or similar undertaking sufficient to cover the entire cost of removal of the CT Facility and related facilities such as power lines, transformers, etc. and the reclamation of the affected landscape to substantially the same condition as prior to the facilities construction. Said financial surety, bond or similar undertaking shall be in an amount acceptable to the Planning Board and substantiated by a qualified and independent engineering expert as designated by the Planning Board. The amount of financial surety shall be reviewed every three years and, if necessary, increased to reflect current costs of facility removal and site reclamation.

- c. As part of the application process the applicant shall submit to the Planning Board a letter of commitment, which shall commit the CT Facility owner and its successors and assigns to notify the Building Inspector, in writing, within thirty (30) days of the discontinuance of use of the facility. Failure to notify and thereafter remove the facility and all appurtenances within a period not to exceed six (6) months from the giving of said written notice, shall be deemed a violation punishable under applicable provisions of the Town of Hardenburgh Zoning Law. Notwithstanding this provision, the Building Inspector shall have the right to independently investigate any discontinuance of the facility and render a written determination setting forth the extent, duration and facts evidencing the violation and the discontinuance of the facility. Upon rendering said written determination, written notice of the determination shall be provided to the owner and the lessees of the facility and the owners of the real property upon which the facility is situate by certified mail, return receipt requested. Upon proven receipt of the notice of the determination by the facility owner, any lessee of the facility and the owners of the real property said facility is situate thereon, the Building Inspector and the Town of Hardenburgh may commence legal proceedings to levy upon the financial surety, bond or similar undertaking and have the facility removed from the site in accordance with all applicable law.
- d. Upon recommendation of the Planning Board, the Town Board may waive or defer the requirement that a commercial communication tower be removed if it determines that retention of such tower is in the best interest of the Town.

## **H. APPROVAL AND CONDITIONS**

1. **Criteria for Approval.** Notwithstanding any other findings which it may make, the Planning Board shall specifically make all of the following findings before granting the Special Use Permit:
  - a. That Applicant is not already providing adequate coverage and/or adequate capacity to the Town of Hardenburgh; and
  - b. That Applicant is not able to use existing facilities or sites to provide adequate coverage and/or adequate capacity to the Town of Hardenburgh; and
  - c. That the Applicant has agreed to rent or lease available space on the facility, under the terms of a fair-market lease, without discrimination to other commercial telecommunication providers; and
  - d. That the proposed CT Facility does not exceed the minimum height required to provide adequate service and will not have a significant adverse impact on historic resources, scenic views, residential property values, natural or man-made resources; and
  - e. That the proposed CT Facility shall comply with all FCC Regulations regarding emissions of electromagnetic radiation and that the required Monitoring program described in Section I below is in place and shall be wholly paid for by the Applicant.

2. **Authority to Impose Conditions**

The Planning Board shall have the authority pursuant to Special Use Permit review to impose such reasonable conditions as are directly related to and incidental to the proposed CT Facility including that the special permit may require periodic renewal.

The Planning Board shall act and render any Special Permit final decision upon an application for a CT Facility in conformance within 47 USC Section 332 (7) of the Telecommunications Act of 1996, as promulgated and amended. In addition to the definition set forth in the Town of Hardenburgh Zoning Law, the term “Commercial Telecommunications Facility” shall be deemed to encompass and regulate “personal wireless service facilities” as said facilities are defined at 47 USC Section 332 (7) (c) (i-iii)

- I. **MONITORING AND EVALUATION OF COMPLIANCE**

1. **Pre-testing:** After the granting of a special permit and before the CT Facility begins transmission, the applicant shall retain an independent

consultant, at the applicant's expense, to monitor the background levels of EMF radiation around the proposed facility site and/or any repeater locations to be utilized for applicant's facility. The independent consultant shall use a monitoring protocol consistent with accepted engineering practice. A report of the monitoring results shall be prepared by the independent consultant and submitted to the Planning Board.

2. Post Testing: Within 30 days after transmission begins, the owner(s) of any CT Facility located on any facility site shall retain an independent consultant to conduct testing and monitoring of EMF radiation emitted from said site and report results of said monitoring to the Code Enforcement Officer within 15 days. The independent consultant shall use actual field measurement of radiation, utilizing a monitoring protocol consistent with accepted engineering practice, to measure levels of EMF radiation from the facility site's primary antennas as well as from repeaters (if any).
  - a. CT Facility owner(s) shall provide the Code Enforcement Officer with copies of the annual report on emission compliance, certified by a licensed engineer, which is submitted to the FCC.
  - b. Any modification of an existing CT Facility, or the activation of any additional permitted channels, shall require new monitoring.
3. Excessive Emissions: Should the monitoring of a facility site reveal that the site exceeds the FCC OET-65 standard, then the owner(s) of all facilities utilizing that site shall be so notified. The owner(s) shall take all necessary measures to reduce emission within 30 days of initial notification of non-compliance. Failure to accomplish this reduction of emission to comply with the FCC OET-65 standard within 30 days of initial notification of non-compliance shall be a violation of the Special Permit and subject to penalties, fines and enforcement as specified in the Town of Hardenburgh Zoning Law. Such fines shall be payable by the owner(s) of the facilities with antennas on the facility site, until compliance is achieved.
4. All structural and non-structural elements of the site including towers, accessory structures, landscaping and "stealth" design features shall be maintained in the condition on which the original special permit was based.

## J. DEFINITIONS

For purposes of this law, 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 in the present tense include the future tense; words used in the plural number include words in the singular number, and words in the singular number include the plural number. The word “shall” is always mandatory, and not merely directory.

**Accessory Facility or Structure** – An accessory facility or structure serving as, or being used in conjunction with, wireless telecommunications facilities, and located on the same property or lot as the wireless telecommunications facilities, including but not limited to utility or transmission equipment storage sheds or cabinets.

**Adequate Coverage** – Coverage is considered to be “adequate” within that area surrounding a Base Station where the predicted or measured median field strength of the transmitted signal is greater than -86 dbm for an outdoor user for at least 80% of the intended service area. It is acceptable for there to be holes within the area of Adequate Coverage where the signal is less than -86dbm, as long as the signal regains its strength to greater than -86 dbm further away from the base station.

**Antenna** – A system of devices that transmit or receive electromagnetic waves or radio frequency (RF) signals. Such uses shall include, but not be limited to radio, television, cellular, paging, personal (tele)communications services PCS) and microwave telecommunications.

**Collocation** – The use of the same telecommunications tower or supporting structure to carry two or more antennae for the provision of wireless services by two or more persons or entities.

**Height** – When referring to a tower or structure, the distance measured from the preexisting grade level to the highest point on the tower or structure, even if said highest point is an antenna.

**Repeater** – A micro or macro cell designed to extend Personal Wireless Service to areas which are not able to receive Adequate Coverage directly from a Base Station, using the same channels as the Base Station.

**Telecommunication tower** – A structure on which one or more antenna will be located, that is intended for transmitting and/or receiving radio, television, telephone, wireless or microwave communications for an FCC licensed carrier, but excluding those used exclusively for fire, police and other dispatch communications, or exclusively for private radio and television reception and private citizen’s bands amateur radio and other similar private, residential communications.

**Telecommunications antenna** – A system of electrical conductors that

transmit or receive radio frequency waves.

**Telecommunications facility** – Any or all of the physical elements of the central facility that contains all the receivers, transmitters, antennas, towers and other apparatus needed for cellular/pc's operation.