

**ORDINANCE OF THE
TOWN OF MIDDLETOWN, RHODE ISLAND**

**AN ORDINANCE AMENDING THE TOWN CODE
OF THE TOWN OF MIDDLETOWN**

NOW THEREFORE BE IT ORDAINED AS FOLLOWS:

FIRST: The following new article, Article 25A, Wind Turbines, is inserted immediately after Article 25, Wireless Telecommunications Facilities, in Chapter 152, Zoning Ordinance: (Language to be deleted from the “final draft” presented to the Council is ~~[stricken out within brackets]~~; language to be added is underlined):

ARTICLE 25A: WIND TURBINES

Section

- 25A00 Purpose
- 25A01 Applicability
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- 25A03 Basic Requirements
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Section 25A00 - Purpose

The purpose of this article is to provide for the construction and operation of wind turbines, also known as wind energy conversion facilities, and to provide standards for the placement, design, construction, monitoring, modification and removal of wind turbines that address public safety, minimize impacts on scenic, natural and historic resources of the town, and provide adequate financial assurance for the costs of decommissioning and removal.

Section 25A01 - Applicability

This article applies to all wind turbines constructed or substantially modified after the effective date of this article.

Section 25A02 - Definitions

- (A) Building-mounted Wind Turbine. A wind turbine mounted on an existing building.

(B) Fall zone. The calculated area of the land surrounding a wind turbine that may be affected by debris should the supporting structure collapse or any component of the wind turbine or anything attached to it fall to the ground. The fall zone for all wind turbines shall be measured at ground level below the center of the wind turbine as a circular area with a radius of 125 percent of the height of the wind turbine. ~~[The fall zone shall not be considered a dimensional requirement that can be modified by means of a dimensional variance, but it may be modified by means of a special-use permit.]~~

(C) Height. The height of a wind turbine measured from pre-development grade to the tip of the rotor blade at its highest point, or blade-tip height.

(D) Large-tower Wind Turbine. A wind turbine mounted on a free-standing tower that exceeds 120 feet in height.

(E) Medium-tower Wind Turbine. A wind turbine mounted on a free-standing tower that is between 55 and 120 feet in height.

(F) Occupied building. Any building regularly occupied by one or more persons on a daily basis. Buildings ordinarily used for storage, such as garages, sheds, and the like, are not occupied buildings even though they may be entered for brief periods on a daily basis.

(G) Setback. The setback requirements for wind turbines shall be those applicable to principal structures, as defined in Article 4.

(H) Small-tower Wind Turbine. A wind turbine mounted on a free-standing tower that does not exceed 55 feet in height.

(I) Wind Monitoring or Meteorological Tower: A temporary tower equipped with devices to measure wind speeds and direction, used to determine how much wind power a site can be expected to generate.

(J) Wind Turbine. A device that converts kinetic wind energy into rotational energy that drives an electrical generator. A wind turbine typically consists of a tower, nacelle body, and a rotor with two or more blades. Unless the wording or context indicates otherwise, a wind turbine for purposes of this article includes the tower and the base or foundation on which it is mounted (but not the building supporting a building-mounted wind turbine), and all equipment, machinery and structures on site utilized in connection with the collection, storage, and transmission of electricity from the wind turbine.

Section 25A03 - Basic Requirements

(A) No wind turbine may be constructed or substantially modified without first obtaining a special-use permit from the Zoning Board of Review.

[(A)] (B) Generally.

(1) Wind facilities shall be constructed and operated in a manner that minimizes any adverse visual, safety, and environmental impacts.

(2) Wind turbines shall have an automatic braking, governing, or feathering system to prevent uncontrolled rotation, overspeeding and excessive pressure on the tower structure, rotor blades and other turbine components.

(3) FAA Regulations. Wind facilities shall comply with applicable requirements of the Federal Aviation Administration (FAA).

(4) Setbacks. Wind turbines shall not be located within the areas designated as Minimum Yard Dimensions in Table 6-2, Section 603, for the district in which they are located. In the case of a building-mounted wind turbine, the fact that part of the building supporting the wind turbine is located within a setback area is irrelevant as long as the wind turbine itself is not so located.

(5) Fall zone. The fall zone shall be a condition of obtaining a special-use permit for a wind turbine, which may not be varied by means of a dimensional variance or special-use permit. The fall zone shall be located entirely within the boundaries of the lot on which the wind turbine is located. Except for building-mounted wind turbines ~~and wind turbines not requiring a special-use permit~~, no occupied building shall be located within the fall zone of a wind turbine.

(6) The minimum ground clearance for the wind turbine blades of horizontal axis turbines shall be twenty-five (25) feet. The minimum ground clearance for blades of vertical axis turbines shall be ten (10) feet.

(7) Temporary wind monitoring or meteorological towers shall be permitted in all zoning districts subject to issuance of a building permit and subject to reasonable conditions imposed by the Building Official. Such towers shall be erected as near as reasonably possible to the proposed location of the wind turbine on the site, and shall comply with the setback and fall zone requirements of this article. Temporary wind monitoring or meteorological towers shall not remain in place for more than one year.

(8) Maintenance. Wind turbines shall be maintained in good condition. Such maintenance shall include painting, structural repairs, and integrity of security measures. Large-tower wind turbines shall be equipped with instruments for remote monitoring and shall be inspected for structural integrity by a qualified licensed structural engineer at least once each year. The inspection report shall be submitted annually to the Department of Building and Zoning on the anniversary of the issuance of the building permit.

(9) Insurance obligation. At all times from the installation of a wind turbine until its removal the owner shall maintain liability insurance in an amount sufficient to cover loss or damage to persons and structures that might proximately caused by the wind turbine. The insurance policy shall provide for notification to the Department of Building and Zoning a minimum of thirty days prior to its expiration or cancellation.

~~[(B) Building-mounted wind turbines. A building-mounted wind turbine may be installed in any zoning district as a matter of right, provided that other applicable requirements of this article are satisfied and the height of the wind turbine is not more than 15 feet above the height limit for the type of building on which it is mounted. A building-mounted wind turbine exceeding this limit may be installed only by obtaining a special-use permit from the zoning board.]~~

~~[(C) Small tower wind turbines. A small tower wind turbine may be installed in any non-residential zoning district as a matter of right, provided that other applicable requirements of this article are satisfied. A small tower wind turbine may be installed in a residential zoning district only by obtaining a special-use permit from the zoning board.]~~

~~[(D) Medium-tower and large-tower wind turbines may be installed in a nonresidential district by obtaining a special-use permit from the zoning board.]~~ (C) In residential districts other than R-10 and R-20, ~~[M]~~medium-tower and large-tower wind turbines may not be installed ~~[in a residential district]~~ unless ~~[a special-use permit is obtained from the zoning board and]~~ the proposed site is on a parcel of five acres or more for a large-tower wind turbine or on a parcel of three acres or more for a medium-tower wind turbine.

(D) In the R-10 and R-20 zoning districts, a building-mounted wind turbine may be installed by obtaining a special-use permit from the Zoning Board of Review, but its height may not exceed ten feet above the height limit for the type of building on which it is mounted. All other types of wind turbines are prohibited in the R-10 and R-20 zoning districts.

(E) In all zoning districts except R-10 and R-20, the height of a building-mounted wind turbine may not exceed 15 feet above the height limit for the type of building on which it is mounted.

Section 25A04 - Design Standards

~~[A. This section does not apply to building-mounted wind turbines or to small-tower wind turbines located more than 500 feet from any public street or abutting property.]~~

[B] (A) Color and Finish. All components of the wind turbine shall be painted a neutral,

non-reflective exterior color designed to blend with the surrounding environment, such as white, light gray or light blue.

[E] (B) Lighting. Wind turbines shall be lighted only if required by the FAA. Lighting of non-tower parts of the wind turbine, such as appurtenant structures, shall be limited to that required for safety, security, and operational purposes, and shall be reasonably shielded from abutting properties. Lighting shall be designed to minimize glare on abutting properties and except as required by the FAA be directed downward with full cut-off fixtures to reduce light pollution.

[D] (C) Shadow/Flicker. Wind turbines shall be sited to minimize shadowing or flicker impacts on neighboring property. The applicant has the burden of proving that the wind turbine will not have a significant adverse impact on neighboring property. A failure to meet this burden of proof shall result in denial of the wind turbine application.

[E] (D) Noise. The wind turbine shall conform with the provisions of the Middletown noise ordinance; however, these provisions are to be considered minimum standards and the Zoning Board of Review may impose more restrictive requirements deemed necessary because of the location and size and type of wind turbine.

[F] (E) Signs. A clearly visible warning sign concerning voltage shall be placed at the base of all large-tower wind turbines. No other signs shall be permitted on any wind turbine, except signs necessary to identify the owner, provide emergency contact information, and warn of other dangers associated with the wind turbine. Also permitted are educational signs providing information about the wind turbine and the benefits of renewable energy. All signs shall comply with the requirements of Article 12, Signs.

[G] (F) Utility Connections. Utility connections for the wind turbine shall be installed underground on the subject property. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

[H] (G) Unauthorized Access. Wind turbines shall be designed to prevent unauthorized access. When deemed reasonably necessary because of the location of the wind turbine on the site and the surrounding neighborhood, the Zoning Board of Review may require protective fencing.

[I] (H) Appurtenant Structures. Appurtenant structures, such as equipment shelters, storage facilities, transformers, and substations, shall be contained within the turbine tower or other existing structures on the property whenever technically and economically feasible; shall be used only for housing of equipment for this particular site; and, whenever reasonable, shall be shielded from view by vegetation and/or located in an underground vault and joined or clustered to avoid adverse visual impacts. Appurtenant structures to wind turbines are subject to regula-

tions of this ordinance pertaining to accessory buildings in Table 6-2, Section 603.

[~~F~~] (I) Towers. Monopole towers, rather than lattice or cable-supported towers, shall be used for wind turbines unless the Zoning Board of Review finds, for reasons stated in its opinion, that the use of a monopole tower is impractical. If a cable-supported tower is used, reflective colored objects, such as flags, reflectors, or tape, shall be placed on the anchor points of guy wires and along the guy wires up to a height of ten feet from the ground.

[~~K~~] (J) Other considerations. In deciding whether to grant a special-use permit for a wind turbine, the Zoning Board of Review may consider relevant matters not expressly mentioned in this article, including the potential adverse impacts of the wind turbine on wildlife habitats and scenic vistas, and interference with electromagnetic communications, such as telephone, radio, and television. The Board shall consider the provisions of Section 904 and impose special conditions reasonably necessary to remove or alleviate any potential adverse impacts.

Section 25A05 - Procedure

~~[A. Wind turbines not requiring a special-use permit. The following information shall be provided on or with the application for a building permit to install a wind turbine not requiring a special-use permit.~~

~~————— (1) A plan, drawn to scale, showing where the wind turbine will be located on the lot, and noting all relevant measurements, including the height of the wind turbine, the area encompassed in the fall zone, and the distances to boundary lines, measured from the center of the wind turbine at ground level. In the case of a building-mounted wind turbine, the plan shall also show where and how the wind turbine will be mounted on a particular building, and the height and footprint of the building.~~

~~————— (2) Details of the proposed wind turbine, including size and color of its primary components. If reasonably available, photographs or drawings, which may be from the manufacturer's brochure or website, shall also be provided.~~

~~————— (3) Documentation showing that the safety requirements of Section 25A03, A(2) will be satisfied.~~

~~————— (4) Documentation showing that a policy of insurance satisfying the requirement of Section 25A03, A(9) has been obtained.]~~

[~~B. Wind turbines requiring a special-use permit.~~] (A) The following information shall be provided to the Zoning Board of Review on or with an application for a special-use permit to

install a wind turbine:

(1) A plan, drawn to scale, showing where the wind turbine will be located on the lot, and noting all relevant measurements, including the height of the wind turbine, the area encompassed in the fall zone, the distances to occupied buildings on the site and to boundary lines, measured from the center of the wind turbine at ground level, and the uses on all abutting properties.

(2) After the special-use permit has been approved by the [z]Zoning [b]Board of Review, a copy of the site plan shall be provided to the Middletown Fire Department. Upon request of the Fire Department, the applicant shall cooperate with local emergency services in developing an emergency response plan.

(3) Documentation showing that the safety requirements of Section 25A03, A(2) will be satisfied.

(4) Documentation showing that a policy of insurance satisfying the requirement of Section 25A03, A(9) is available to the applicant. Further documentation showing that such insurance has been obtained must be presented to the building official in order to obtain a building permit for the wind turbine.

[C:] (B) Additional procedural requirements for large-tower wind turbines. Applicants for large-tower wind turbines shall submit the information required by subsection B of this section to the Planning Board for its review and recommendation as well as to the Zoning Board of Review. In addition, an application for a special-use permit to install a large-tower wind turbine shall include the following:

(1) Location Map. Copy of a portion of the most recent USGS Quadrangle Map, at a scale of 1:25,000, or other similar topographic map showing the proposed wind turbine site, including turbine location(s), and the area within at least two miles from the site. Zoning district designation for the subject parcel should be included; however a copy of a zoning map with the parcel identified is suitable.

(2) Site Plan. In lieu of the plan required in Section 25A05, B(1), a plan of the proposed wind turbine site, scaled at one inch equals 20 feet, with contour intervals of no more than 2 feet, showing the following:

(a) Property lines for the site parcel and adjacent parcels within 200 feet.

(b) Outline of all existing buildings, including purpose (e.g. residence, garage, etc.) on site parcel and all adjacent parcels within 200 feet. Include distances from the

wind turbine to each building shown.

(c) Location of all roads, public and private, on the site parcel and on adjacent parcels within 200 feet, and proposed roads or driveways, either temporary or permanent.

(d) Existing areas of tree cover, including average height of trees, on the site parcel and on adjacent parcels within 200 feet.

(e) Proposed location and design of the wind turbine(s), including ground equipment, appurtenant structures, transmission infrastructure, access, fencing, and exterior lighting.

(f) Location of the representations required by subsection (3)(c) below.

(3) Visual impact illustrations. The purpose of this requirement is to show how the proposed wind turbine will affect the existing viewscape in the area. To satisfy this requirement the applicant shall submit color photo representations of the proposed wind turbine, including three to six sight lines, one from the nearest occupied building with a view of the wind turbine. Such representations shall include actual photos for pre-construction views and accurate post-construction simulations (e.g. superimpositions of the wind turbine onto photographs of existing views). Sites for the view representations shall be selected from populated areas or public ways within a 2-mile radius of the wind turbine. View representations shall include existing and proposed buildings and tree coverage, and shall describe the technical procedures followed in producing the representations (distances, angles, lens, etc.).

(4) An impact statement prepared by a qualified individual or firm which identifies the potential adverse impacts of the wind turbine to the community, neighborhood, and the natural environment. Measures for mitigating any potential adverse impacts, such as noise, flicker or shadowing, shall be identified in the statement.

(5) Landscape Plan. A plan indicating all proposed changes to the landscape of the site, including temporary or permanent roads or driveways, grading, vegetation clearing and planting, exterior lighting, and screening vegetation or structures.

(6) An operation and maintenance plan, describing the general procedures for operational maintenance of the wind turbine and for maintenance of access roads and storm water controls, if applicable. The plan shall also describe the provisions for remote monitoring, and the proposed maintenance and inspection schedule.

(7) Independent Consultants. The Zoning Board of Review ~~[be]~~ is authorized to hire outside consultants, at the applicant's expense, as necessary to fully evaluate the design and

potential impacts of the proposed wind turbine.

Section 25A06 - Unused or Abandoned Wind Turbines

~~[A:]~~ (A) Any wind turbine which has been abandoned shall be removed. Abandonment shall be presumed if the wind turbine is not operated for a period of 60 days or more. This presumption may be rebutted by submission of a letter or other signed document from the owner to the Building Official which satisfactorily states the reasons for cessation of operation and plans for restoring operation, including an estimated time for repairs or other work necessary.

~~[B:]~~ (B) At least 30 days before a large-tower wind turbine is scheduled to be decommissioned, the owner shall notify the Building Official by certified mail of the proposed date of discontinued operations and plans for removal. The owner is responsible for securing any necessary state and local permits prior to dismantling the wind turbine.

~~[C:]~~ (C) Abandoned wind turbines, including towers and their base or foundation and all associated structures and components, shall be physically removed from the site. Medium-tower and large-tower wind turbines shall be removed within 90 days from cessation of operation. If the owner fails to remove the wind turbine in accordance with the requirements of this section, the town shall have the authority to enter the property and physically remove the wind turbine. In that case, the owner of the wind turbine shall be responsible for removal costs incurred by the Town, and the obligation shall be recorded in the Land Evidence Records as a lien against the property.

~~[D:]~~ (D) When a medium-tower or large-tower wind turbine is removed, the site shall be restored to the state it was in before the wind turbine was constructed. If applicable, solid and hazardous waste generated by the wind turbine shall be disposed in accordance with local and state waste disposal regulations, and the site shall be stabilized and vegetation planted to minimize erosion.

Section 25A07 - Enforcement

Violations of this article shall be enforced by the Zoning Officer under Article 3.

SECOND: This ordinance shall take effect upon passage and its provisions shall supersede any inconsistent or contrary provision in any other ordinance.