

## **MOTION**

### **Article 30**

**Move that the Town vote to amend the Zoning By-Laws as follows:**

**- In Section 200 – Definitions insert:**

“Solar Energy System: A device or structural design feature, a substantial purpose of which is to provide daylight for interior lighting or provide for the collection, storage, and distribution of solar energy for space heating or cooling, electricity generation, or water heating. Solar Energy Systems include the following system types:

- a) Solar Energy System, Active: A solar energy system whose primary purpose is to harvest solar energy into another form of energy or to transfer heat from a collector to another medium using mechanical, electrical, or chemical means. Active Solar Energy Systems include, but are not limited to, the following installation types:
  - i) Solar Energy System, Building-mounted: An Active Solar Energy System that is structurally mounted to a building or structure.
    - 1) Solar Energy System, Roof-mounted: A special application of a Building-mounted Solar Energy System that is structurally mounted to the roof of a building or structure.
  - ii) Solar Energy System, Ground-mounted: An Active Solar Energy System that is structurally mounted to the ground.
    - 1) Solar Energy System, Small-Scale Ground-mounted: A Ground-mounted Solar Energy System that occupies 1,750 square feet of surface area or less.
    - 2) Solar Energy System, Medium-Scale Ground-mounted: A Ground-mounted Solar Energy System that occupies more than 1,750 square feet, but less than 40,000 square feet of surface area.
    - 3) Solar Parking Canopy: A special application of a Ground-mounted Solar Energy System that is installed on top of a parking surface or paved surface that maintains the function of the area beneath the canopy.
  - iii) Solar Energy System, Building-integrated Photovoltaic (BIPV): An Active Solar Energy System that consists of integrating solar photovoltaic (PV) modules into the surface of a building or structure, where the solar panels themselves function as, or are integrated into, a building material (i.e., roof shingles, siding, windows, skylights) or structural element (i.e., façade). The generation of solar energy is secondary to the function of the building material or structural element.
  - iv) Solar Energy System, Surface-integrated: An Active Solar Energy System that is not building-mounted and is integrated into a ground-level surface, such as a driveway, walkway, patio surface, path, or parking area, where the solar panels themselves function as, or are integrated into, the surface material. The generation of solar energy is secondary to the function of the surface element.

- b) Solar Energy System, Passive: A Solar Energy System that captures solar light or heat without transforming it to another form of energy or transferring the energy via a heat exchanger.”

- **In Section V A.2 – Special Requirements, Nonconforming Uses, Extension; insert the following sentence at the end of the paragraph:**

“Roof-mounted Solar Energy Systems shall not be considered a change, extension or alteration that requires a finding by the Board of Appeals.”

- **In Section V – Special Requirements; insert a new section V-B.3 Accessory Uses – Solar Energy Systems:**

“V-B.3 Accessory Uses – Solar Energy Systems:

- 1) Roof-mounted Solar Energy Systems shall be permitted in all use districts.
- 2) In residential districts: Small-scale Ground-mounted Solar Energy Systems and Solar Parking Canopies shall be permitted in rear and side yards. Medium-scale Ground-mounted Solar Energy Systems shall be permitted subject to site-plan review by the Special Permit Granting Authority.
- 3) In nonresidential districts or with exempted uses as defined by M.G.L. c.40A s.3 or other state and federal statutes regarding exempted uses in residential districts: Small-scale Ground-mounted Solar Energy Systems shall be permitted in rear and side yards. Medium-scale Ground-mounted Solar Energy Systems and Solar Parking Canopies are permitted subject to site plan review by the Special Permit Granting Authority.
- 4) Where Solar Energy Systems would be installed in a Historic District, the system shall require approval by the Historic District Commission.
- 5) Maximum Percentage (%) Building Coverage
  - a) Active Solar Energy Systems are not buildings as defined in Natick’s zoning bylaws and should not be treated as such. However, for the purpose of regulating lot coverage, the area of Active Solar Energy Systems shall count toward the Maximum Percentage (%) Building Coverage as defined in the Intensity Regulations provided in this By-Law.
  - b) An Active Solar Energy System’s contribution toward Maximum Percentage (%) Building Coverage shall be calculated as the total area of the system’s panels. For example, if a system includes ten (10) panels that are each three (3) feet by five (5) feet, the system’s contribution to Maximum Percentage (%) Building Coverage would equal to 150 square feet.
  - c) Such part of a Building-mounted Solar Energy System or Solar Parking Canopy that extends beyond the impervious area over which it is placed shall count toward Maximum Percentage (%) Building Coverage.
  - d) For Ground-mounted Solar Energy Systems, the total surface area of the Solar Energy System shall count toward Maximum Percentage (%) Building Coverage.

- e) To avoid double counting, the surface area of any Active Solar Energy System that is above an existing impervious surface shall not be included in the calculation of Maximum Percentage (%) Building Coverage (i.e. the addition of a Roof-mounted Solar Energy System shall not increase the calculated Maximum Percentage Building Coverage on a lot because it will be located within a surface area - the building's footprint - that is already counted).

6) Height

- a) Building-mounted Solar Energy Systems:

System Type	Roof Pitch	Siting	Maximum Height
Roof-mounted Solar Energy System	Pitch is greater than or equal to 3.2:12 (a fifteen (15) degree angle)	All districts	Roof-mounted Solar Energy Systems may extend up to one (1) foot above the roof surface on which the system is installed beyond applicable building height limits. Systems shall be surface-mounted and installed parallel to the roof surface.
Roof-mounted Solar Energy System	Pitch is less than 3.2:12 (a fifteen (15) degree angle)	All districts	Roof-mounted Solar Energy Systems may extend upto three (3) feet above the roof surface on which the system is installed beyond applicable building height limits.  If the surface on which the system is to be mounted is below maximum building height, the Roof-mounted Solar Energy System may extend up to six (6) feet above the roof surface on which the system is installed, provided it does not exceed building height limits by more than three (3) feet. Any six (6) foot high Roof-mounted Solar Energy System must also be installed at least three (3) feet from the roof's edge.
Other Building-mounted Solar Energy System (e.g., awnings)	Not Applicable	All districts	No greater than the highest point of the roof.

- b) Ground-mounted Solar Energy Systems:

System Type	Siting	Maximum Height
Small-Scale Ground-mounted Solar Energy System	All districts	Twelve (12) vertical feet from grade.

Medium-Scale Ground-mounted Solar Energy System	All districts	Subject to site plan review by Special Permit Granting Authority.
Solar Parking Canopy	Residential	The maximum height allowed on the lot or the height of the principal structure, whatever is less.
Solar Parking Canopy	Non-residential	Subject to site plan review by Special Permit Granting Authority.

7) Setbacks

- a) Ground-mounted Solar Energy Systems that move along an axis, unfold, or open shall be located so that the furthest reach of the equipment falls within the setback requirements.
  - b) Solar Parking Canopies in residential districts shall meet setback requirements for Accessory Structures.
  - c) Solar Parking Canopies and Surface-integrated Solar Energy Systems in non-residential zones shall be allowed where parking is permitted in accordance with requirements defined in Section V-D, Off-street Parking and Loading Requirements. The requirements for the planting of trees in landscaped strips as defined in Section V-D, Subsection 16, Landscaping Adjacent to Right-of-Way should be met elsewhere on the lot.
  - d) All other Ground-mounted Solar Energy Systems shall meet requirements for District-level setbacks as defined in this By-Law.
  - e) Any reach of a Building-Mounted Solar Energy System shall comply with the setback requirements for that building.
- 8) BIPV Solar Energy Systems and Surface-integrated Solar Energy Systems shall be subject to any requirements in this By-Law that relate to the material or structural element into which the system is integrated or functions as. For example, solar roofing would be subject to regulations for roofing; solar pavement would be subject to regulations for pavement.
- 9) The impervious portion of Ground-mounted Solar Energy Systems and Surface-integrated Solar Energy Systems shall be subject to any requirements in this By-Law that relate to paving, including impervious lot coverage requirements within the Aquifer Protection District. The systems shall also comply with regulations identified in the Town of Natick's Stormwater Management and Erosion Control By-Law, Article 79A of the By-Laws.
- 10) Site Plan Review: Medium-scale Ground-mounted Solar Energy Systems in all districts and Solar Parking Canopies in non-residential districts are subject to Site Plan Review prior to construction, installation or modification as provided in this section and in accordance with Section VI-DD - Special Permit Procedures and Site Plan Review.

- a) Site Plan Document Requirements: The project proponent shall provide a Final Site Plan to the Special Permit Granting Authority in compliance with Section VI-DD 3b - Content of Final Site Plan and Other Submittals. In addition, applicants should submit the following:
- i) Name, address, and contact information for proposed system installer.
  - ii) Name, address, contact information and signature of the project proponent, as well as all co-proponents or property owners, if any.
  - iii) The name, contact information and signature of any agents representing the project proponent.
  - iv) Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures.
  - v) Blueprints or drawings of the solar energy system showing the proposed layout of the system, any potential shading from nearby structures, the distance between the proposed solar collector and all property lines and existing on-site buildings and structures, and the tallest finished height of the Solar Energy System.
  - vi) Documentation of the major system components to be used, including the panels, mounting system, and inverter.
  - vii) Operation and Maintenance Plan including measures for maintaining safe access to the installation, stormwater controls, as well as general procedures for operational maintenance of the installation.
  - viii) Locations of active farmland, permanently protected open space, Priority Habitat Areas and BioMap 2 Critical Natural Landscape Core Habitat mapped by the Natural Heritage & Endangered Species Program (NHESP) and "Important Wildlife Habitat" mapped by the Massachusetts Department of Environmental Protection (MassDEP) in relation to the site.
  - ix) Locations of local or National Historic Districts in relation to the site.
- b) Site Plan Review Design Standards: The Special Permit Granting Authority shall consider the following criteria and standards, in addition to those listed in Section VI-DD 5 and 6 - Criteria for Approval and Standards for Site Plan Review when reviewing site plan submittals made under this section:
- (i) Utility Notification: No solar photovoltaic system shall be installed until evidence has been given to the Special Permit Granting Authority that the owner has submitted notification to the utility company of the customer's intent to install an interconnected customer-owned generator. Off-grid systems are exempt from this requirement.
  - (ii) Utility Connections: Reasonable efforts, as determined by the Special Permit Granting Authority, shall be made to place all utility connections from the solar photovoltaic installation underground, depending on appropriate soil conditions, shape, and

topography of the site and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

- (iii) Safety: The owner or operator shall provide a copy of the Site Plan Review application to the Natick Fire Department and shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the solar installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation.
- (iv) Height and Layout: The Special Permit Granting Authority shall also review the height and physical layout of the Solar Energy Systems, utility connections, and appurtenant infrastructure as it relates to the convenience and safety of emergency vehicles, private vehicles and pedestrian movement on the site.
- (v) Visual Impact: Reasonable efforts, as determined by the Special Permit Granting Authority, shall be made to minimize visual impacts by preserving natural vegetation, screening abutting properties, or other appropriate measures.
- (vi) Land Clearing, Soil Erosion and Habitat Impacts: Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of ground-mounted solar energy systems or as otherwise prescribed by applicable laws, regulations, and bylaws.
- (vii) Lighting: The Special Permit Granting Authority shall review the physical lighting of the site, including the methods of exterior lighting for convenience, safety and security within the site, and in consideration of impacts of neighboring properties and excessive light pollution to the standards of Section V-I. Where feasible, lighting of the Solar Energy System shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.”

#### References

##### **MGL c.40A s.3**

<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleVII/Chapter40A/Section3>

“No zoning ordinance or by-law shall prohibit or unreasonably regulate the installation of solar energy systems or the building of structures that facilitate the collection of solar energy, except where necessary to protect the public health, safety or welfare.”

**MGL c.40A s.9B:** <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleVII/Chapter40A/Section9B>

“Zoning ordinances or by-laws may also provide for special permits to protect access to direct sunlight for solar energy systems.”

**Massachusetts Department of Energy Resource, “Model Zoning for the Regulation of Solar Energy Systems”, December 2014.**