

DRAFT LANGUAGE PROPOSED FOR WARRANT ARTICLE:

ARTICLE 621 Solar Photovoltaic Facilities

TOWN CLERK
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DUXBURY, MASS.

621.1. Purpose

The purpose of this bylaw is to facilitate and appropriately regulate the creation of solar photovoltaic facilities by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such facilities that address public safety, minimize impacts on environmental, scenic, natural and historic resources and to provide adequate financial assurance for the maintenance, repair and eventual decommissioning of such facilities.

621.2. Applicability

This Section 621 applies to all large-scale and small-scale solar photovoltaic electric facilities and modifications of existing facilities which are located in the Residential Compatibility, Planned Development, or Neighborhood Business zoning districts; however, this Section does not apply to solar photovoltaic electrical facilities in the Ground Mounted Solar Facilities Overlay District.

In instances where restrictions specific to overlay districts which may also be applicable, the more restrictive regulations shall apply; unless specifically called out otherwise in this Section 621.

When a proposed ground mounted solar photovoltaic facility is located in the Wetlands Protection Overlay District and would be subject to a special permit per Section 404.10 of the Zoning By-law for such use, the Planning Board will serve as the Special Permit Granting Authority, and shall weigh the criteria in Section 404, in the consideration of any special permit as may be issued under its authority as the Special Permit Granting Authority per this Section 621.

If the proposed non accessory ground mounted solar facility is subject to a special permit from the Planning Board for Land Clearing and Grading per Section 611 of the Zoning By-law, for such use the Planning Board shall weigh the criteria of Section 611 in the consideration of its Administrative Site Plan Review, or special permit consideration if applicable, per this Section 621.

621.3. Compliance with Applicable Laws and Regulations

The construction, operation, use, maintenance, repair, modification and removal of all SPVF shall be subject to and comply with all applicable local, state and federal statues, rules, regulations, bylaws and requirements, including, and without limitation, all Town of Duxbury General and Zoning By-laws, including those concerning design criteria, the bulk and height of buildings and structures, lot area, setbacks, open space, parking and building coverage requirements as applicable, whether or not specifically stated in, and in addition to, this Section 621.

621.4. Definitions

Accessory Solar Photovoltaic Facility – An Accessory Solar Photovoltaic Facility with a nameplate capacity of less than 50 kW_{DC} (kilowatts of direct current), provided that the facility is sized so that the electricity generated by the facility as measured by the Rated Nameplate Capacity is no more than 125% of the load used by the principal use on the lot, and where the facility is located and is incidental and subordinate to the principal use on the lot.

Solar Photovoltaic Facility (SPVF) shall mean and include all devices, equipment, structures and structural design features used for, as part of, or in connection with, the collection, storage, generation, and/or distribution of solar energy, and all appurtenant facilities, structures and equipment thereto.

Ground mounted SPVF any Solar Photovoltaic Facility that is structurally mounted on the ground, is not roof mounted, or is mounted as permitted by the Planning Board.

Ground mounted Canopy SPVF any ground mounted Solar Photovoltaic Facility that is elevated above a parking area, pool or other use incidental to the principle use on the lot as may be allowed in the zoning district.

Roof mounted SPVF any Solar Photovoltaic Facility that is affixed to the roof of a building.

Rated Nameplate Capacity is the maximum rated output of electric power production of the photovoltaic facility in direct current (DC). Such capacity shall mean and include the aggregate capacity of all SPVF located on any lot.

621.5. Use Requirements

- a. No SPVF shall be constructed without a Building Permit.
- b. Except for off-grid systems, no building or other permit or approval for an SPVF shall be issued unless the applicant has provided satisfactory evidence that the utility company has been informed of the owner or operator's intent to install the SPVF and that the utility company has agreed to interconnect the SPVF to the electric power grid.
- c. Roof-mounted Accessory SPVF in the RC, PD and NB districts, and systems or parts of a SPVF located interior to a primary or accessory structure, shall be permitted As-of-Right provided they meet the requirements of this Section 621.
- d. All Ground mounted Accessory SPVF and Ground mounted Canopy SPVF, whether Accessory or non accessory, in the NB districts shall require Administrative Site Plan review and approval per Section 615 of the Zoning By-law, and shall also submit the information requested per Section 618.5.2 Ground Mounted Solar Photovoltaic Installations Overlay District, with respect to the application.
- e. Accessory Ground mounted SPVF and Accessory Ground mounted Canopy SPVF in the RC and PD districts, shall be subject to both a special permit from the Planning Board

per this Section 621 and per Sections 906.2 and 906.5 of the Zoning By-law, and also subject to Administrative Site Plan review and approval per Section 615 of the Zoning By-law, and shall also submit the information requested per Section 618.5.2 Ground Mounted Solar Photovoltaic Installations Overlay District, with respect to the application.

[Note – there has been discussion at the Zoning Workshops of possibly not permitting any Ground mounted SPVF or Ground mounted Canopy SPVF in these districts; however, a final decision on this recommendation has not been made. This draft makes consideration for accessory SPVF uses in these districts. The Planning Board public hearing on this zoning is scheduled for 7:05 pm on January 10, 2017 in the Mural Room of Town Hall]

- f. Ground mounted non accessory SPVF are not permitted in the RC and PD districts.

621.6. General, Safety and Environmental Requirements

SPVF shall be subject to the following restrictions:

- a. All SPVF shall require a sign on the SPVF that identifies the owner/operator of the SPVF and provide a 24-hour emergency contact phone number. Said sign shall not display any advertising.
- b. Roof mounted Accessory SPVF may not protrude higher than the highest point of the roofline. The Planning Board may, by special permit, authorize a protrusion of up to six (6) feet upon a finding by the Planning Board that the requested waiver is in the public interest and is consistent with the purpose and intent of the Town of Duxbury Zoning Bylaws. No waiver shall be granted if the height of the structure measured to the highest point of the SPVF will exceed thirty five (35) feet.
- c. All Ground mounted SPVF must be fenced in a manner consistent with *(insert reference - see pool fencing Appendix J?)* of the Building Code to prevent injury;
- d. All Ground mounted SPVF Shall not cast a shadow upon an abutting lot;
- e. All Ground mounted Canopy SPVF must be designed so that the bottom of the lowest horizontal structure is not lower than 8 feet in order to prevent injury.
- f. All Ground mounted SPVF and Ground mounted Canopy SPVF:
 - (i). May not exceed a height of twenty (20) feet, and must provide for stormwater treatment in accordance with the Zoning Bylaw;
 - (ii). Lighting shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Where feasible, lighting shall be directed downward and shall incorporate cutoff fixtures to reduce light pollution;
 - (iii). Shall use panels that each have a similar color, reflectivity and tone, including all replacement panels; however, this requirement may be waived by the Planning

Board under Administrative Site Plan Review if the Planning Board finds that this requirement is impractical for a specific installation on a case-by-case basis;

- (iv). Shall be included in any calculation of the maximum building coverage (%) requirement if applicable, as defined in the Duxbury Zoning Bylaw; and
 - (v). Shall install utilities connections to the external electricity distribution network underground; however, this requirement may be waived by the Planning Board under Administrative Site Plan Review if the Planning Board finds that this requirement is impractical for a specific installation.
- g. Where a Ground mounted SPVF abuts a residential use or public way (excluding Ground mounted Canopy SPVF), there must be increased consideration for mitigating impacts to the residential use or public way. The Planning Board may require items such as, but not limited to, increased setbacks, visual screening such as plantings, or sound buffering as part of the Administrative Site Plan Review.
- h. Ground mounted Accessory SPVF and Ground mounted Canopy Accessory SPVF in an RC or PD zone are subject to the following:
- (i). Shall be located on a minimum lot size of not less than two and a half (2.5) acres;
 - (ii). No more than one (1) SPVF shall be permitted on any lot;
 - (iii). Shall not be located in the front yard as defined by the plane of the front of the primary dwelling nearest the street;
 - (iv). Shall not exceed the height of the primary residential structure;
 - (v). Shall not be located within 50 feet of the rear lot line; however, the Planning Board may, by special permit, authorize a waiver upon a finding by the Planning Board that the requested waiver is in the public interest and is consistent with the purpose and intent of the Town of Duxbury Zoning Bylaws, and that adequate screening is in place;
 - (vi). Shall not be located within 50 feet of the side lot line; however, the Planning Board may, by special permit, authorize a waiver upon a finding by the Planning Board that the requested waiver is in the public interest and is consistent with the purpose and intent of the Town of Duxbury Zoning Bylaws, and that adequate screening is in place;
 - (vii). In instances where there is an existing Planned Development, Cluster Development, 40B Comprehensive Permit, or other special permit governing the creation of the dwellings or lots upon which such dwellings or such SPVF are located, the existing Special Permit shall be reviewed to determine if a modification to the existing special permit is also required.

621.7. Monitoring, Maintenance and Reporting

- a. Owner or operator shall maintain the SPVF in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, inspections, and integrity of security measures.
- b. Ground mounted SPVF access and security shall be maintained at a level acceptable to the Fire Chief and shall provide for access through a lockbox or other acceptable measure for emergency response.
- c. Annual reporting for all Ground mounted SPVF and Ground mounted Canopy SPVF shall be submitted to the Building Inspector demonstrating and certifying compliance with the Operation and Maintenance Plan, and such conditions as may be included in a special permit for such facilities. Said reporting shall include information on the maintenance completed during the year, documentation of continued liability insurance, and the amount of electricity generated by the facility. Copies of the reporting shall be submitted to the Planning Board and to any other Town permitting agencies who have issued permits for the SPVF (such as the Fire Department, Conservation Commission, or other local town authority). All annual reporting shall be submitted within 45 days of the end of the calendar year.
- d. Annual reporting for Rooftop mounted SPVF in the NB District shall be submitted to the Building Inspector demonstrating and certifying regular inspections as may be required, and the amount of electricity generated by the facility, on an annual basis within 45 days of the end of the calendar year.

621.8. Abandonment and Decommissioning

- a. Removal Requirements

Any SPVF which has reached the end of its useful life or has been abandoned shall be removed. The owner or operator shall physically remove the SPVF within 150 days after the date of discontinued operations. The owner or operator shall notify the Building Inspector by certified mail of the proposed date of discontinued operations and plans for removal.

Decommissioning shall consist of physical removal of all components of the SPVF, including but not limited to structures (for Ground mounted SPVF), foundations (for Ground mounted SPVF), equipment, security barriers and above-ground transmission lines, as well as associated off-site utility interconnections if no longer needed.

Disposal of all solid and hazardous waste must be in accordance with local, state and federal waste disposal regulations.

Restoration of the site to its natural pre-existing condition, including stabilization or re-vegetation of the site as necessary to minimize erosion.

- b. Decommissioning by the Town.

If the owner or operator fails to remove a non accessory Ground mounted SPVF in accordance with this Section 621, the Town may enter upon the property and physically remove the installation at the owner's expense, *[insert reference account/liability/source of funding/performance guarantee].*