

# MONTACHUSETT

## REGIONAL PLANNING COMMISSION

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### MEMO

TO: Ashburnham Board of Selectmen  
Ashburnham Planning Board

FROM: Chantell Fleck, MRPC Regional Planner (CF)

DATE: December 31, 2012

RE: District Local Technical Assistance Services Provided by MRPC

Last year, the Commonwealth of Massachusetts provided funding for the District Local Technical Assistance (DLTA) Program enabling the Montachusett Regional Planning Commission (MRPC) to provide technical assistance to member communities. On June 12, 2012 the Town of Ashburnham submitted a request for DLTA services from the MRPC to be provided at no cost to your community. Your community's request was for the following: Work with local officials and the Ashburnham Planning Board planning assistance to draft a Zoning Bylaw for the regulation and development of an overlay district for solar energy facilities and equipment within the Town of Ashburnham. On June 26, 2012 the above stated project was awarded by MRPC to the Town of Ashburnham and a contract was signed with a starting date of August 20, 2012. As of December 31, 2012, all DLTA services to communities effectively concluded.

Our work included correspondence throughout the duration of this project with William Nolan, Ashburnham Planning Board Chairman per phone conversations, and email and Planning Board Members through Planning Board meetings, to obtain input necessary to assist the town and provide current status. MRPC attended Planning Board Meetings on September 13<sup>th</sup>, October 11<sup>th</sup>, and November 8<sup>th</sup>.

Utilizing the above mentioned resources coupled with much research, please find below a list of activities that MRPC assisted you with to conclude MRPC's work on this project:

- MRPC met with the Ashburnham Planning Board at the outset of the project on September 13<sup>th</sup>, 2012 to discuss the scope and gather information about the project. MRPC and the Ashburnham Planning Board worked in full cooperation throughout the

duration of this project. Additional meetings were attended the Ashburnham Town Hall on an as needed basis on October 11<sup>th</sup>, and November 8<sup>th</sup>.

- Throughout the duration of the project comments were sought by other Town Departments including the Conservation Commission, the Building Department, and the Municipal Light Company in the formation of the Large-Scale Ground-Mounted Solar Photovoltaic Installations Bylaw. After multiple meetings, comments, and discussion, the a draft bylaw and draft overlay map, as well as a definition for Lot Coverage were completed and are attached to this MEMO.

MRPC enjoyed providing the above stated services to the Town of Ashburnham and we look forward to any future participation in MRPC's DLTA Program. If you have any questions about the services that were provided, please feel free to contact Chantell Fleck at (978) 345-7376 Ext. 304 ([cfleck@mrpc.org](mailto:cfleck@mrpc.org)).

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## 5.20 Large-Scale Ground-Mounted Solar Photovoltaic Installations

### 5.20.1 Purpose and Applicability

The purpose of this bylaw is to promote the creation of new large-scale ground-mounted solar photovoltaic installations by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such installations that address public safety, minimize impacts on scenic, natural and historic resources and to provide adequate financial assurance for the eventual decommissioning of such installations.

The provisions set forth in this section shall apply to the construction, operation, and/or repair of large-scale ground-mounted solar photovoltaic installations.

This section applies to large-scale ground-mounted solar photovoltaic installations proposed to be constructed after the effective date of this section. This section also pertains to physical modifications that materially alter the type, configuration, or size of these installations or related equipment.

### 5.20.2 Definitions

*Large-Scale Ground-Mounted Solar Photovoltaic Installation:* A solar photovoltaic system that is structurally mounted on the ground and is not roof-mounted, and has a minimum nameplate capacity of 50 kW DC.

*On-Site Solar Photovoltaic Installation:* A solar photovoltaic installation that is constructed at a location where other uses of the underlying property occur.

*Rated Nameplate Capacity:* The maximum rated output of electric power production of the Photovoltaic system in Direct Current (DC).

*Solar Photovoltaic Array:* an arrangement of solar photovoltaic panels.

### 5.20.3 Use Standards

1. Large-Scale Ground-Mounted Solar Photovoltaic Installation Overlay District is hereby established over all of the zoning districts of the Town of Ashburnham, except the following parcels: Map 28 Parcels 1 & 2 and Map 29 Parcels 8-13. The Large-Scale Ground-Mounted Solar Photovoltaic Installation Overlay District is located and bounded as shown on a map entitled "Large-Scale Ground-Mounted Solar Photovoltaic Installation Overlay District" Ashburnham, MA prepared by Montachusett Regional Planning Commission, dated \_\_\_\_\_, and on file with the offices of the Town Clerk, and the Zoning Enforcement Officer.
2. Large-Scale Ground-Mounted Solar Photovoltaic Installations are hereby allowed by Special Permit in Large-Scale Ground-Mounted Solar Photovoltaic Installation Overlay District.

### 5.20.4 General Standards

#### A. Special Permit Granting Authority

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It is hereby established under this bylaw that the Planning Board will be the special permit granting authority under this section.

## **B. Special Permit Requirements**

Ground-mounted large scale solar photovoltaic installations with 50 kW or larger of rated nameplate capacity shall undergo Special Permit as regulated under Massachusetts Chapter 40A Section 9, and the provisions set forth herein .

### **1. General**

All plans and maps shall be prepared, stamped and signed with license number by a Professional Engineer licensed to practice in Massachusetts.

### **2. Required Documents**

Pursuant to the special permit review process, the project proponent shall provide the following documents:

- (a) A site plan showing:
  - i. Property lines and physical features, including roads, for the project site;
  - ii. Proposed changes to the landscape of the site, grading, vegetation clearing and planting, stormwater flows, exterior lighting, screening vegetation or structures;
  - iii. Drawings of the solar photovoltaic installation will be signed and stamped with a license number by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts showing the proposed layout of the system and any potential shading from nearby structures
  - iv. One or three line electrical diagram detailing the solar photovoltaic installation, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and overcurrent devices;
  - v. Documentation of the major system components to be used, including the PV panels, mounting system, and inverter;
  - vi. Name, address, and contact information for proposed system installer;
  - vii. Name, address, phone number and signature of the project proponent, as well as all co-proponents or property owners, if any;
  - viii. The name, contact information and signature of any agents representing the project proponent; and
- (b) Documentation of actual or prospective access and control of the project site;
- (c) An operation and maintenance plan (see also Section 5.20.12);
- (d) Zoning district designation for the parcel(s) of land comprising the project site (submission of a copy of a zoning map with the parcel(s) identified is suitable for this purpose);
- (e) Proof of liability insurance; and
- (f) Description of financial surety that satisfies Section 5.20.16.

### **3. Waiver**

The Planning Board may waive documentary requirements as it deems appropriate.

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## **5.20.5 Compliance with Laws, Bylaws and Regulations**

The construction and operation of all large scale solar photovoltaic installations shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, electrical, and communications requirements. All buildings and fixtures forming part of a solar photovoltaic installation shall be constructed in accordance with the State Building Code.

## **5.20.6 Utility Notification**

No Special Permit or Building Permit for large-scale ground-mounted solar photovoltaic installation shall be constructed until written agreement between the project owner and the Ashburnham Municipal Light Company has been given to the Planning Board and that Ashburnham Municipal Light Company has been informed of the solar photovoltaic installation owner or operator's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.

## **5.20.7 Building Permit**

No large scale solar photovoltaic installation shall be constructed, installed or modified as provided in this section without first obtaining a building permit.

## **5.20.8 Fees**

At the time of an application submittal an Administration Fee will be required. (See the Planning Board Fee Schedule for the amount required.)

A Review Fee will be determined by the Planning Board before the Public Hearing by acquiring an estimate from the peer review engineer appointed by the Planning Board to review the project. The estimated amount shall be collected for deposit into a 53G Account for the duration decision process.

## **5.20.9 Design Standards**

### **A. Dimension and Density Requirements**

#### **Setbacks**

For large - scale ground-mounted solar photovoltaic installations, front, side and rear setbacks and Lot Coverage shall be as follows:

(1) Front yard. The front yard depth shall be at least 40 feet; provided, however, that where the lot abuts a Conservation-Recreation or Residential district, the front yard shall not be less than 50 feet.

(2) Side yard. Each side yard shall have a depth at least 25 feet; provided, however, that where the lot abuts a Conservation-Recreation or Residential district, the side yard shall not be less than 50 feet.

(3) Rear yard. The rear yard depth shall be at least 25 feet; provided, however, that where the lot abuts a Conservation-Recreation or Residential district, the rear yard shall not be less than 50 feet.

(4) Lot coverage. For purposes of determining compliance with lot coverage standards of the underlying zone (See Schedule of Dimensional Regulations), the total surface area of all ground-mounted and freestanding solar collectors including solar photovoltaic cells, panels, and arrays, shall be considered impervious and as structures (See Section 5.1 definition Lot Coverage). The surface area of a ground mounted

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system, regardless of the mounted angle, shall be calculated as part of the overall lot coverage.

## **B. Lighting**

Lighting of solar photovoltaic installations shall be consistent any state and federal law. Lighting of other parts of the installation, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Where feasible, lighting of the solar photovoltaic installation shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

## **C. Signage**

Solar photovoltaic installations shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the solar photovoltaic installation.

## **D. Utility Connections**

Reasonable efforts, as determined by the Planning Board, 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.

### **5.20.10 Safety, Emergency Services and Environmental Standards**

- A. The large scale solar photovoltaic installation owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the fire chief. Upon request the owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the solar photovoltaic installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation.

#### **B. 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 the large – scale ground-mounted solar photovoltaic installation. Any proposed land disturbance including earth removal or moving, and land clearing shall be mitigated and such measures shall be illustrated with in the Operation and Maintenance Plan submitted with the special permit application. **The Applicant shall attempt to implement Low Impact Development Techniques to manage stormwater, in accordance with the Low Impact Development General Bylaw.**

### **5.20.11 Accessory Buildings**

All appurtenant structures to large- scale ground-mounted solar photovoltaic installations shall be subject to reasonable regulations concerning the bulk and height of structures, lot area, setbacks, open space, parking and building coverage requirements. All such appurtenant structures, including but not limited to, equipment shelters, storage facilities,

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transformers, and substations, shall be architecturally compatible with each other. Whenever reasonable, structures should be shaded from view by vegetation and/or joined or clustered to avoid adverse visual impacts.

## **5.20.12 Operation and Maintenance Plans**

- A. The project proponent shall submit a plan for the operation and maintenance of the installation, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operational maintenance of the installation.
- B. The large - scale ground-mounted solar photovoltaic installation owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the local Fire Chief and Emergency Medical Services. The owner or operator shall be responsible for the cost of maintaining the solar photovoltaic installation and any access road(s), unless accepted as a public way.

## **5.20.14 Modifications**

- A. All material modifications to a Solar Energy Collection System installation made after approval of the special permit shall require a modification of the approval.
- B. The Planning Board shall review each site plan at intervals of not less than five years and may, after public notice and hearing, modify the approved plan to insure the public safety and compliance with the town bylaws and regulations.

## **5.20.15 Abandonment**

Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the solar photovoltaic installation shall be considered abandoned when it fails to operate for more than one year without the written consent of the Planning Board. The Municipal Light Company shall have the right of first refusal as to whether they will choose to assume responsibly for the solar operation. If the Municipal Light Co. chooses to forgo the operation and the owner or operator of the large- scale ground-mounted solar photovoltaic installation fails to remove the installation in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the town may enter the property and physically remove the installation.

## **5.20.16 Financial Surety**

Proponents of large-scale ground-mounted solar photovoltaic projects shall provide a form of surety either through the Planning Board or Ashburnham Municipal Light Company before construction. If setting up a surety with the Planning Board the form of surety must be either through escrow account, bond or otherwise, to cover the cost of removal in the event the town must remove the installation and remediate the landscape, in an amount and form determined to be reasonable by the Planning Board, but in no event to exceed more than 125 percent of the cost of removal and compliance with the additional requirements set forth herein, as determined by the project proponent. Such surety will not be required for municipally- or state-owned facilities. The project proponent shall submit a fully inclusive estimate of the costs associated with removal, prepared by a qualified engineer. The amount shall include a mechanism for calculating increased removal costs due to inflation.

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## **5.20.17 Severability**

If any section or provision of this bylaw is found by a court of competent jurisdiction to be invalid, such invalidity shall not affect the validity of any other section or provision of this Bylaw.



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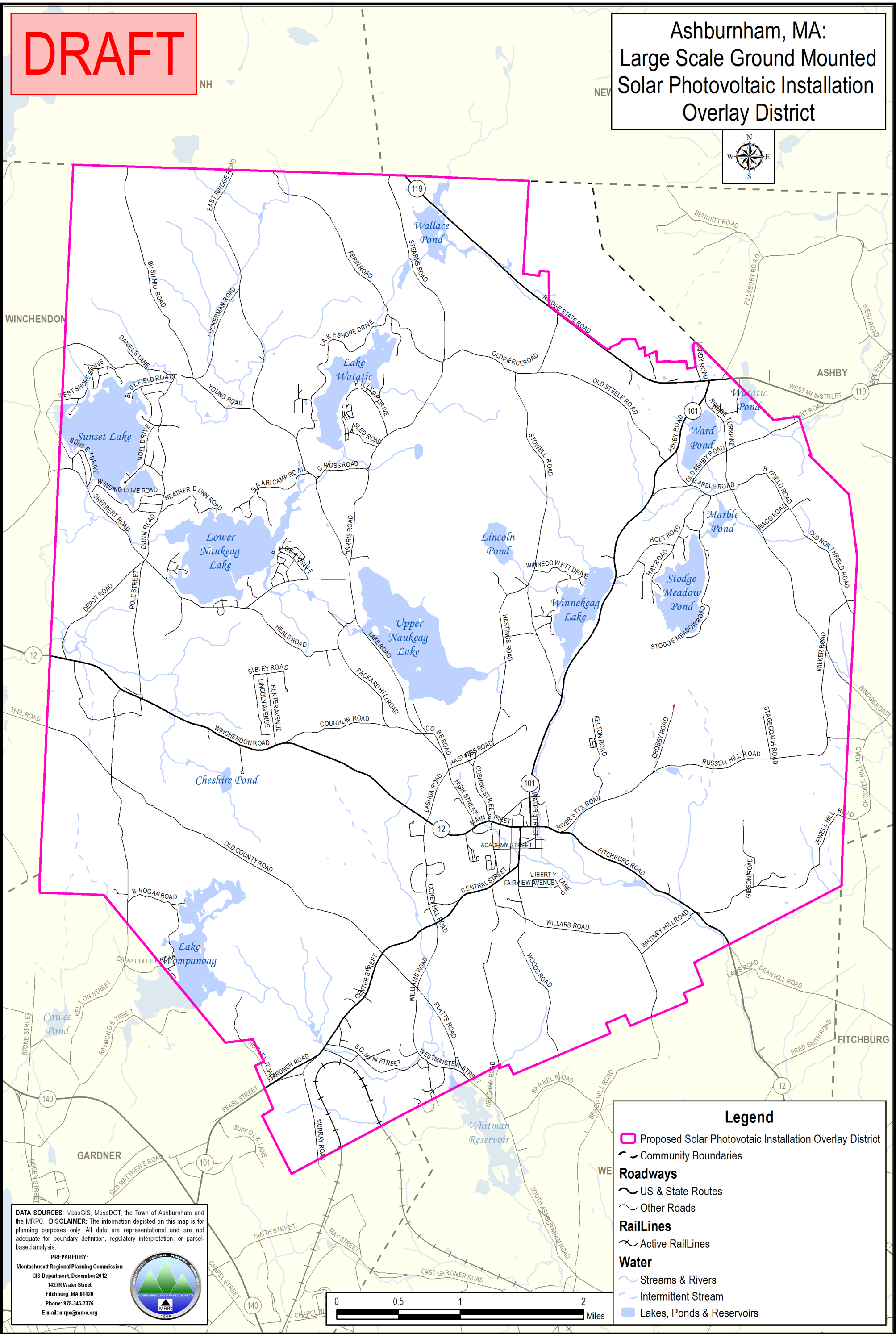
## Lot Coverage

The percentage of total lot area occupied by structures and paving for vehicle use. (See Schedule of Dimensional Regulations for the percentage of lot coverage allowed per Zoning District.)

Structure/building coverage includes the primary structure, solar photovoltaic installations (see Section 5.20.9 of the Zoning Bylaw), and any accessory structures (e.g. carports, garages, and storage sheds, swimming pools, open decks, and three season room.) Excluded are fences, walls, hedges, walkways, patio covers, and lawns.

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Ashburnham, MA:  
Large Scale Ground Mounted  
Solar Photovoltaic Installation  
Overlay District



DATA SOURCES: MassGIS, MassDOT, the Town of Ashburnham and the MRPC. **DISCLAIMER:** The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis.

PREPARED BY:  
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GIS Department, December 2012  
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**Legend**

- Proposed Solar Photovoltaic Installation Overlay District
- Community Boundaries
- Roadways**
  - US & State Routes
  - Other Roads
- RailLines**
  - Active RailLines
- Water**
  - Streams & Rivers
  - Intermittent Stream
  - Lakes, Ponds & Reservoirs

