

**AN ORDINANCE AMENDING TOWN OF CARRBORO LAND USE ORDINANCE
PROVISIONS RELATED TO SOLAR ARRAYS**

Draft 5-1-2017

THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO ORDAINS:

Section 1. Section 15-15 (Definitions) of the Carrboro Land Use Ordinance is amended by adding new subsections (113 through 117), as shown below, and renumbering the subsequent subsections accordingly.

(113) **SOLAR ARRAY** – A photovoltaic cell, module, panel or array that is accessory to the principal use of a property and is designed solely for the purpose of reducing or meeting on-site energy needs. Roof mounted or building integrated arrays must be on a permitted structure, or one that is exempt on the basis of its size. Roof mounted arrays may be no more than 2000 square feet in size. Ground mounted arrays may be no greater than: 500 square feet in R-2 and R-3 districts; 1000 square feet in R-7.5, R-10, and R-S.I.R districts; 2000 square feet in R-15 and R-20 districts; and 5000 square feet in other districts. In addition, ground mounted arrays may be no greater than 50% of the size of the building footprint of the primary structure. Solar water heating panels may also be accessory to the principal use of a property subject to the criteria described above.

(114) SOLAR ARRAY FACILITY – LEVEL 1

Level 1 roof mounted or building integrated arrays must be on a permitted structure. Level 1 ground mounted arrays may be no greater than 50% of the size of the building footprint of the primary structure. In addition, Level 1 roof mounted arrays may not be more than 10000 square feet and Level 1 ground mounted arrays must be not more than: 2000 square feet in R-10 and R-S.I.R; 3000 square feet in R-15 and R-20; and 10000 square feet in other districts.

(115) SOLAR ARRAY FACILITY – LEVEL 2

A Level 2 facility has a solar array (roof-mounted/building integrated or ground mounted) that does not qualify as an accessory or Level 1 facility and is not more than 1 acre.

(116) SOLAR ARRAY FACILITY – LEVEL 3

A Level 3 facility has a solar array greater than 1 acre.

(117) SOLAR WATER HEATER

A solar water heater is a system that uses a solar thermal collector to heat water. A solar water heater may also be accessory to the principal use of a property subject to the criteria described under “solar array” above.

Section 2. Section 15-146 (Table of Permissible Uses) is amended by adding three new use classifications: 17.501, “Solar Array Facility, Level 1,” 17.502, “Solar Array Facility, Level 2,” and 17.503, “Solar Array Facility, Level 3,” allowed with the use of the Designations Z,S,C in the zoning districts shown in the table below.

Use Classification	Solar Array	Zoning Districts					
		R-SIR, SIR2, R10, R-15, R-20	RR, B-1(C), B-1(G), B-2, B-3, B-3-T, B-4, M-1, M-2, CT	C, WR	B-5	WM-3	O, O/A
17.501	Level 1	Z	Z	S	Z	S	Z
17.502	Level 2		S	C	S	C	S
17.503	Level 3		C	C	C	C	C

Section 3. Section 15-150 (Accessory Uses) is amended by adding a new subsection (d), as shown below, and renumbering the subsequent subsections (d), (e) and (f), to (e), (f) and (g):

(d) Without limiting the generality of subsections (a) and (b), the following activities are regarded as accessory to residential and commercial principal uses so long as they satisfy the general criteria set forth above.

- (1) Solar Arrays, and solar water heaters, providing energy for the principal use on the property, in any zoning district.
- (2) The applicant must be able to demonstrate ownership of the subject property or permission by the owner to install the solar device.
- (3) The applicant must prepare and submit a site plan or sketch plan showing the following:
 - a. Installation of the array(s) shall not negatively affect compliance, or any condition of compliance of an existing land use permit or building permit.
 - b. The panels are designed, positioned, and oriented such that concentrated solar radiation or glare shall not be directed onto nearby properties or road rights-of-way, or shall otherwise create a safety hazard.
 - c. All on-site utility lines shall be placed underground.
 - d. The top of any roof mounted devices, located on the principal structure or any accessory structure, shall not exceed the maximum building height for the district in accordance with Section 15-185.
 - e. Ground mounted systems shall not exceed a maximum height of 15 feet from finished grade to the top of the device.
 1. The installation of the solar device and associated mechanical equipment shall not affect tree screening or buffer requirements outlined in Article XIX.
 2. Mechanical equipment, including batteries or other similar storage devices, shall be located within the required building setbacks as provided for in Section 15-184, and shall be shielded to avoid damage.
 3. All solar devices and mechanical equipment, including batteries or other similar storage devices, shall be located outside of the designated open

space, well/septic system areas as identified by Orange County Environmental Health, utility easements, water quality buffers as identified in Section 15-269.5 and Special Flood Hazard Areas.

Section 4. Article XI (Supplementary Use Regulations) is amended by adding a new Section 15-175.11 to read as follows:

Section 15-175.11 Solar Arrays

- (a) In addition to other applicable provisions of this chapter, use classifications 17.501 (Solar Array Level 1 Facility) and 17.502 (Solar Array Level 2 Facility) shall be subject to the following requirements:
 - (1) Installation of the array(s) shall (i) not negatively affect compliance, or any condition of compliance of an existing land use permit or building permit, or (ii) approval shall be subject to the modification of the subject permit.
 - (2) The panels are designed, positioned, and oriented such that concentrated solar radiation or glare shall not be directed onto nearby properties or road rights-of-way, or shall otherwise create a safety hazard.
 - (3) All on-site utility and transmission lines shall, to the extent feasible, be placed underground.
 - (4) A clearly visible warning sign concerning voltage must be placed at the base of all pad-mounted transformers and substations.
 - (5) The height of the array and supporting structures shall not exceed the height requirements of the underlying zoning district where the property is located as described in Section 15-185.
 - (6) Mechanical equipment, including batteries or other similar storage devices, shall be located within the required building setbacks as provided for in Section 15-184, and shall be shielded to avoid damage.
 - (7) All mechanical equipment, including any structure for batteries or storage cells, shall be completely enclosed by a minimum eight (8) foot high fence with a self-locking gate, and provided with a Type A-Screen.
 - (8) All solar devices and mechanical equipment, including batteries or other similar storage devices, shall be located outside of the designated open space, well/septic system areas as identified by Orange County Environmental Health, utility easements, water quality buffers as identified in Section 15-269.5 and Special Flood Hazard Areas.
 - (9) The facility shall have sufficient parking on site to accommodate the number of vehicles likely to be present on a regular basis.
 - (10) The applicant shall submit proof of liability insurance covering bodily injury and property damage demonstrating a minimum coverage limit of \$500,000.00 per occurrence.
- (b) In addition to other applicable provisions of this chapter, use classifications 17.503 (Solar Array Level 3 Facility) shall be subject to all of the requirements of use classifications 17.501 and 17.502 above as well as the following requirements:

- (1) A soils report denoting the types of soil on the property including detail on the compaction necessary to support the proposed development.
- (2) Demonstration of compliance with the decommissioning protocol, described below in paragraphs (a. through f) should the device become damaged, or removed from service.
 - a. The owner/operator of the facility is required to notify the Town Planning Director in writing 60 days prior to the planned cessation or abandonment of the facility for any reason. This notice shall provide the exact date when the use of the facility will cease.
 - b. Documentation shall be provided indicating that the public utility purchasing the power has been made aware of the decision.
 - c. The facility shall be removed within 12 months from the date the applicant ceases use of the facility.
 - d. Once the infrastructure is removed the property, the owner shall obtain the necessary Erosion Control permits to re-stabilize the property. The time frame for completion shall be determined by the Orange County Erosion Control Officer.
 - e. The owner shall provide financial security in form and amount acceptable to the County to secure the expense of dismantling and removing said structures.
 - f. Upon removal of the facility, the Planning Department shall cause a notice to be recorded with the Orange County Registrar of Deeds office indicating that the Conditional Use Permit has been revoked.

Section 5. All provisions of any Town Ordinance in conflict with this Ordinance are repealed.

Section 6. This Ordinance shall become effective upon adoption.