

Ordinance 2020-266

AN ORDINANCE TO AMEND THE GROWTH MANAGEMENT ORDINANCE OF THE TOWN OF ORIENTAL

THAT WHEREAS, the Planning and Zoning Board of the Town of Oriental recommends that certain amendments be made to the Growth Management Ordinance (GMO);

WHEREAS, the proposed document changes are consistent with the Town’s adopted Land Use Plan; and,

WHEREAS, the Board of Commissioners of the Town of Oriental deems it advisable and in the public interest to effect certain revisions to the GMO of the Town of Oriental.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COMMISSIONERS OF THE TOWN OF ORIENTAL:

SECTION 1. The GMO is to be amended by adding section 137 Entitled **Solar Energy Systems** as follows:

Section 137. Solar Energy Systems

137.1 Purpose

The purpose of this ordinance is to facilitate the construction, installation, and operation of Solar Energy Systems (SEs) in the Town of Oriental in a manner that promotes economic development and ensures the protection of health, safety, and welfare while also avoiding adverse impacts to important areas such as agricultural lands, endangered species habitats, conservation lands, and other sensitive lands. It is the intent of this ordinance to encourage the development of SEs to reduce reliance on foreign and out-of-state energy resources, bolster local economic development and job creation, support the diversification of the state’s energy portfolio, strengthen energy and grid security, reduce greenhouse gas emissions, reduce local air and water pollution, and aid North Carolina in meeting its Renewable Portfolio Standard. This ordinance is not intended to abridge safety, health or environmental requirements contained in other applicable codes, standards, or ordinances. The provisions of this ordinance shall not be deemed to nullify any provisions of local, state or federal law.

137.2 Applicability

137.2.1 This ordinance applies to the construction of any new SES within the jurisdiction of the Town.

137.2.2 An SES established prior to the effective date of this ordinance shall remain exempt:

137.2.3 Exception: Modifications to an existing SES that increases the SES area by more than 5% of the original footprint or changes the solar panel type (e.g., photovoltaic to solar thermal) shall be subjected to this ordinance.

137.2.4 Maintenance and repair are not subject to this ordinance.

137.2.5 This ordinance does not supersede regulations from local, state, or federal agencies.

Some important examples of such regulations include, but are not limited to:

137.2.5.1 Building/Electrical Permits Required

Nothing in this ordinance modifies already established building standards required to construct a SES.

137.2.5.2 Onsite Wastewater System Avoidance

Nothing in this ordinance modifies already established Department of Health and Human Services requirements. A SES shall not be constructed over onsite waste water systems (e.g., septic systems) unless approved by the Department of Health and Human Services.

137.2.5.3 Stormwater/Coastal Area Management Act (CAMA) Permit Required

Nothing in this ordinance modifies the requirements or exempts any SES of complying with the various stormwater jurisdictions and regulations established by the Department of Environment and Natural Resources or with CAMA. North Carolina statute requires the

acquisition of stormwater permits for construction projects that impact stormwater runoff.

137.3 Permits Required

The type of permit required for an SES is displayed in the Table of Permissible Uses (Section 60)

137.4 Parcel Line Setbacks

137.4.1 Section 113.4.1 provides the Parcel Line setback to ground mounted Level I SES equipment, including any security fencing, poles, and wires necessary to connect to facilities of the electric utility.

137.4.1.1 SESs may not be installed within the area set off by a line running across the façade of the structure extending to the property boundaries on either side of the facade, and those areas of common or public access faced by the structure.

137.4.2 The following provisions shall apply to the location of all Level 2 SESs and Improvement Areas:

- 137.4.2.1 Improved areas shall not be located in a federally designated Special Flood Hazard Area.
- 137.4.2.2 All site plans for Solar Energy Systems located in areas covered by the most recent AICUZ (Air Installation Compatible Use Zoning) report or subsequent reports must be sent to the North Carolina Department of Military and Veterans Affairs and the North Carolina Commanders' Council for comment within 30 days from the date the site plans are sent.
- 137.4.2.3 All Improved Areas shall be at least 100 feet from a public road and 25 feet from the fence line.
- 137.4.2.4 Improved Areas shall be at least 100 feet from any contiguous property line not associated with a Solar Energy System.
- 137.4.2.5 All access roads and storage areas shall be established on a 30-foot minimum easement to a public right-of-way.
- 137.4.2.6 All Solar Energy Systems shall have a minimum landscape buffer containing evergreen vegetation screening where existing buffers do not obscure solar energy system perimeters from dwelling units on adjacent parcels. At maturity required vegetative screening shall not be less than 15 feet tall regardless of line of sight.

137.5 Enclosure Fencing and Security (LEVEL 2 ONLY)

Solar energy systems shall be fenced completely by a continuous barrier extending from the surface of the ground to a uniform height of not less than 6 feet from the ground at any given point, constructed of dirt, wood, stone, steel, or other metal, or any substance of a similar nature and strength. The perimeter fence shall be designed to restrict unauthorized access.

137.6 Height Limitations

The height of ground mounted systems may not exceed sixteen (16) feet in height as measured from the front property line abutting a public roadway. Roof mounted systems are subject to the same height restrictions as roof structures listed in section 114.

137.7 Wind Rating

All Systems must be able to withstand 140MPH wind load.

137.8 Aviation Notification

The requirements below apply to all systems:

137.8.1 A map analysis showing a radius of five (5) nautical miles from the center of the SES

with any airport operations within this area highlighted shall be submitted with permit application.

137.8.2 For consideration of potential impacts to low altitude military flight paths, notification of intent to construct the SES shall be sent to the NC Commanders Council¹ at least 30 days before the SUP hearing for Level 2 SESs and at least 45 days before starting construction for applicable Level 1 systems. Proof of delivery of notification and date of delivery shall be submitted with permit application. Notification shall include:

137.8.2.1 Location of SES (i.e., map, coordinates, address, or parcel ID)

137.8.2.2 Solar technology (i.e., polycrystalline PV, monocrystalline PV, Cadmium Telluride PV, evacuated tube solar thermal, flat plate solar thermal, etc.)

137.8.2.2 Approximate number of solar modules/panels

137.8.2.3 System mounting (i.e., fixed-tilt on flat roof, fixed-tilt ground-mount, 1-axis tracking ground- mount, etc.)

137.8.2.4 The maximum height of the array from the ground or roof surface

137.8.2.5 Power capacity of the system, in both DC and AC Watts where applicable

137.8.2.6 Acreage of array and acreage of total project

137.8.2.7 Explain how will the project connect (i.e., net meter, to existing distribution line, to new distribution line, to transmission line)

137.8.2.8 Explain whether a substation will be constructed. Provide location and size

137.8.2.9 State if the site is within five nautical miles (5.75mi) of aviation operations? If so, provide the required Solar Glare Hazard Analysis Tool (SGHAT) analysis results.

137.8.3 The latest version of the SGHAT or equivalent² shall be used per its user's manual to evaluate the solar glare aviation hazard. The full report for each flight path and observation point, as well as the contact information for the zoning administrator, shall be sent to the authority indicated below at least 30 days before the SUP hearing for Level 2 SESs and at least 45 days before starting construction for Level 1 SESs. Proof of delivery of notification and date of delivery shall be submitted with permit application.

137.8.4 For airport operations at airports *not* in the National Plan of Integrated Airport Systems NPIAS), including military airports, within 5 nautical miles of the center of SES: provide required information to the NC Commanders Council for military airports and to the management of the airport for non-military airports
Any applicable SES design changes (e.g., module tilt, module reflectivity, etc.) after initial submittal shall be rerun in the SGHAT tool and the new full report shall be sent without undue delay to the contact specified in 137.7.2 above for accurate records of the as-built system.

¹ Mail: Commanding General MCIEAST; Attn: Mr. Bill Meier (NC Commanders Council); Marine Corps Installations East G-7 (MCIEAST); PSC Box 20005; Camp Lejeune, NC 28542

Email: Subject: NC Commanders' Council Notification of Solar Development Project in "*Town of Oriental*"

Address: Meier CIV William A [William.meier@mcw.usmc.mil], Ayers CIV Bryan C [bryan.ayers@usmc.mil]

² <http://sandia.gov/glare> (as of May 2016 Sandia licensed the technology of the SGHAT to Forge Solar (www.SolarForge.com) who offers a subscription-based software called GlareGauge based on the same technology used in SGHAT. This software offers one free trial to new users then charges over \$100/month to use the software. As of October 2016, the free SGHAT is available at the Sandia glare website. It is not known how long it will remain available. GlareGauge analysis should be accepted anywhere this ordinance requires use of the SGHAT.)

137.9 Level I and Level 2 Solar Energy System Additional Requirements

137.9.1 Level I Ground Mounted System Requirements: These are in addition to height, setback, aviation, and other applicable district standards.

137.9.1.1 The size of the area in which an array can be installed may not exceed 50% of the primary structure's footprint. The footprint of the primary structure is the ground area covered by the primary structure inclusive of an attached garage or carport.

137.9.1.2 Systems are subject to setbacks in section 113.4.1

137.9.1.3 Systems must be configured in a contiguous manner

137.9.1.4 Systems must be mounted above the flood zone.

137.9.1.5 Systems may not exceed sixteen (16) feet in height as measured from the front property line abutting a public roadway.

137.9.1.6 Systems must be permanently affixed.

137.9.2 Level 2 Requirements: These requirements are in addition to height, setback, aviation notification, and applicable district standards.

137.9.2.1 Site Plan³ : site plan shall be submitted to the Land Use Administrator demonstrating compliance with:

-Setback and height limitations established in Sections 137.4.2 and 137.6 ,

-Applicable zoning district requirements such as lot coverage,

-Applicable solar requirements per this ordinance.

137.9.2.2 Visibility- Public signage (i.e., advertising, educational, etc.) as permitted by local signage ordinance (Article X, Signs), including appropriate or required security and safety signage.

137.9.2.3 If lighting is provided at site, lighting shall be shielded and downcast such that the light does not spill onto the adjacent parcel or the night sky. Motion sensor control is preferred.

³ Applicants may choose to provide a sketch plan to the Land Use Administrator ahead of a site plan, as sketch plans do not require much investment and are an opportunity for the Land Use Administrator to point out design changes ahead of more expensive site planning.

137.10 Abandonment and Decommissioning Plans

137.10.1 Abandonment

137.10.1.1 A Solar Energy System that ceases to produce energy on a continuous basis for 12 months will be considered abandoned unless the current responsible party (or parties) with ownership interest in the Solar Energy System provides substantial evidence (updated every 6 months after 12 months of no energy production) to the Building Inspector or his designee of the intent to maintain and reinstate the operation of that facility. It is the responsibility of the responsible party (or parties) to remove all equipment and facilities and restore the parcel to its condition prior to development of the Solar Energy System.

137.10.1.1 Upon determination of abandonment, the Building Inspector shall notify the party (or parties) responsible they must remove the Solar Energy System and restore the site to its condition prior to development of the Solar Energy Facility within 360 days' of notice by the Building Inspector or his designee.

137.10.1.2 If the responsible party (or parties) fails to comply, the Building Inspector or his designee may remove the Solar Energy System, sell any removed materials, and initiate judicial proceedings or take any other steps legally authorized against the responsible parties to recover the costs required to remove the Solar Energy System and restore the site to a non-hazardous pre-development condition.

137.10.2 Decommissioning

137.10.2.1 A decommissioning plan signed by the party responsible for decommissioning and the landowner (if different) addressing the following shall be submitted prior to the issuance of a development permit:

137.10.2.2 Defined conditions upon which decommissioning will be initiated (i.e., end of land lease, no power production for 12 months, abandonment etc.)

137.10.2.3 Removal of all non-utility owned equipment, conduit, structures, fencing, roads, solar panels and foundations.

137.10.2.4 Restoration of property to condition prior to development of the Solar Energy System.

137.10.2.5 The timeframe for completion of decommissioning activities.

137.10.2.6 Description of any agreement (e.g., lease) with landowner regarding decommissioning.

137.10.2.7 The party currently responsible for decommissioning.

137.10.2.8 Plans for updating the decommissioning plan.

137.10.2.9 A form of surety equal to 125% of the entire cost of decommission under the plan, as estimated by a North Carolina licensed engineer under seal, and approved by the County Building Inspector and Town Attorney, either through cash, a surety performance bond, irrevocable letter of credit or other instrument readily convertible into cash at face value, either with the Town or in escrow with a financial institution designated as an official depository of the Town. This surety shall be retained by the Town to cover the cost of the decommissioning requirements herein. Following initial submittal of the surety, the cost calculation shall be reviewed annually, and adjusted accordingly based upon an updated estimate of a North Carolina licensed engineer under seal, of the estimated decommissioning costs; provided however, any such periodic adjustment must be approved by the Planning Board. Failure to comply with any requirement of this paragraph shall result in the immediate termination and revocation of all prior approvals and permits; further, Town shall be entitled to make immediate demand upon, and/or retain any proceeds of, the surety, which shall be used for decommissioning and/or removal of the Solar Energy System, even if still operational.

SECTION 2. The following definitions will be added to the GMO, section 251. Definitions of Basic Terms, and the section to be renumbered according to alphabetical placement of new definitions:

- **Integrated Solar Energy System** is a SES where solar materials are incorporated into building materials, such that the two are reasonably indistinguishable, or where solar materials are used in place of traditional building components, such that the SES is structurally an integral part of a house, building, or other structure. An Integrated SES may be incorporated into, among other things, a building facade, skylight, shingles, canopy, light, or parking meter.
- **Rooftop Solar Energy System** is an SES that is permanently affixed to a roof.
- **Ground Mounted Solar Energy System** is an SES that is permanently affixed to the ground. The Footprint of a Ground Mounted SES is calculated by drawing a perimeter around the outermost SES panels and any equipment necessary for the functioning of the SES, such as transformers and inverters.
- **Level 1 SESs** are systems that are an accessory to a principal use (see Sections 251.3 and 64). These include Integrated, Roof Mounted, and Ground Mounted Systems.
- **Level 2 SESs** are Ground Mounted Systems that are an accessory to a principal use and exceed 50% of the primary structure footprint or are the principal use of the property (e.g., a Solar Farm).

SECTION 3. The following additions are to be made to section 66. **Table of Permissible Uses:**

17.500 SOLAR ENERGY SYSTEMS (SESs)	R1	R2	R3	MU1	MU
Level 1 Solar Energy System (SES)					
17.510 Integrated and Roof Mounted SESs	E*	E*	E*	E*	E*
17.520 Ground mounted SES which is an accessory to a new principal construction	E*	E*	E*	E*	E*
17.530 Ground mounted SES added as an accessory to an existing principal construction	L	L	L	L	L
17.540 Level 2 SES	X	X	X	S	S
E* Plans for the Solar Energy System included as accessory under the permit for the principle use					

Statement of Compliance and Consistency

The Planning Board finds that the proposed amendment to the GMO is reasonable and in the public interest. Further, the proposed amendment is consistent with the Town’s GMO, for the following reasons:

1. The proposed amendment is consistent and not in conflict with the existing development standards in Article IV of the GMO.
2. The Planning Board is permitted by GMO Section 20.1.7.1.1 to acquire and maintain, in current form, basic information and material as necessary regarding past trends, present conditions, and forces at work which may cause change in these conditions;
3. The Planning Board is permitted by GMO Section 20.1.7.1.2 to identify needs and problems growing out of those needs;
4. The Planning Board is permitted by GMO Section 20.1.7.1.3 to Determine objectives to be sought in development of the area;
5. The Planning Board is permitted by GMO Section 20.1.7.1.4 to establish principles and policies for guiding action in development of the area;
6. The Planning Board is permitted by GMO Section 20.1.7.1.6 to prepare and recommend to the Town Commissioners ordinances promoting orderly development along lines indicated in the comprehensive plan and advise the Town Commissioners concerning proposed amendments of such ordinances;
7. The Planning Board is permitted by GMO Section to adopt rules and regulations governing its procedures and operations that are consistent with the provisions of the GMO.

SECTION 4. This ordinance shall be effective from and after the date of its adoption.

ADOPTED THIS 11th DAY OF February, 2020.

MAYOR

TOWN CLERK