CITY OF WASHINGTON, ILLINOIS
Committee of the Whole Agenda Communication

Meeting Date: November 13, 2023

Prepared By: Jon Oliphant, AICP, Planning & Development Director

Agenda Item: Ground-Mount Solar Array Screening Discussion

Explanation: A first reading ordinance was heard at the November 6 City Council meeting. The direction of the Council was to have further discussion at the November 13 Committee of the Whole meeting regarding a regulation in the draft ordinance that would require a 6' tall privacy fence around the side and rear property lines prior to the installation of the arrays. At its meeting on November 1, the Planning and Zoning Commission recommended the insertion of an alternative regulation that would allow the property owner to place an 8' tall privacy fence closer to the array that meets the minimum 30' side and rear setback as with the array. Aside from the fence placement regulation, the first reading draft amendment included the following regulations:

- **Height – Non-Residential Uses**: Cannot exceed 10' above grade when the system is oriented at maximum design tilt. **Height – Residential Uses**: Cannot exceed 8' above grade when the system is oriented at maximum design tilt;
- **Setback – Non-Residential Uses**: The arrays would only be allowed in the rear yards (not in the front or side yards) with a setback of at least 5' or the applicable setback for the zoning district in which the system is located, whichever is greater, and must be at least 10' from any other principal or accessory structure. The system cannot be located within any known dedicated easement. **Setback – Residential Uses**: The arrays would only be allowed in the rear yards with a setback of 30' from the side and rear property lines. The arrays must also be setback at least 10' from any other principal or accessory structure. The system cannot be located within any known dedicated easement;
- **Minimum Lot Size – Non Residential Uses**: 0.75 acres. **Minimum Lot Size – Residential Uses**: Two acres; and
- Ground-mount systems cannot exceed half the building footprint of the principal structure and would be exempt from impervious surface calculations if the soil under the collector is not compacted and maintained in vegetation. Foundations, gravel, or compacted soils are considered impervious.

Some in attendance at the November 6 Council meeting indicated interest in striking the fencing requirement. In lieu of that, the City of Eureka's ground-mount solar regulations were mentioned as a possible template for shielding that could serve as an alternative having a significant amount of fencing that would be expensive to construct. While Eureka does not allow for ground-mount arrays in any residential areas, their Municipal Code contains a provision as follows: "*Solar energy systems shall be located in a manner to reasonably minimize view blockage for surrounding properties and shading of property to the north while still providing adequate solar access for collectors. They shall be designed to blend into the architecture of the building or be screened from routine view from public rights-of-way provided that the screening shall not affect the operation of the system.*"

Another consideration could be given to having a significant setback from the location of the proposed array to any existing neighboring principal structures. A ground-mount solar array variance request at 1505 Pine Tree Drive was tabled in August by the PZC. The nearest house at 1512 Shellbark Court would be approximately 110 feet from the proposed arrays. It would be about 170 feet to the house at 1516 Shellbark and 245 feet from the house at 1515 Pine Tree. Another ground-mount variance request at 206 Legion Road was tabled in September by the PZC. The nearest house at 212 Legion would be approximately 165 feet from the proposed array. It would be about 335 feet to the house at 218 Legion and 350 feet to the house at 200 Legion. As with fencing, a minimum setback from neighboring homes

would not completely alleviate any potential aesthetic concerns. It may also reduce the viability for ground-mount arrays the further the setback.

Should there be interest in a minimum setback between the proposed array location and any adjacent principal structures, another option could be to require a minimum lineal feet of fencing on the property line buffering the array from the house if a minimum setback could not be met. This could serve as a means to ensure a reduction in the visual impact of any arrays as seen from the principal structure where a minimum setback would not be feasible. Staff could use GIS to determine what that fence length must be prior to the issuance of a ground-mount solar permit. The downside of such a regulation is that it might encourage proposed arrays to be located closer to nearby principal structures.

Fiscal Impact: The allowance of ground-mount arrays for some residential and non-residential uses would likely increase the number of properties to contain solar energy systems, particularly those that do not have strong south-facing roofs or those that have other nearby structures or vegetation that interfere with roof sun angles.

Action Requested: Staff requests feedback on whether to include a screening regulation in the second reading ordinance that will tentatively scheduled for approval at the November 20 Council meeting. The attached draft ordinance has the fencing regulation stricken but it can be re-inserted should that be the direction.

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE SOLAR ENERGY CODE TO ALLOW FOR GROUND MOUNT SOLAR ENERGY SYSTEMS ON REAL PROPERTIES THAT HAVE RESIDENTIAL AND NON-RESIDENTIAL USES

WHEREAS, the City of Washington, Tazewell County, Illinois (the "City"), is a home rule unit of government; and

WHEREAS, the City has established municipal zoning regulations for the purpose of improving and protecting the public health, safety, comfort, convenience and general welfare of the people; and

WHEREAS, within the municipal zoning regulations, the City previously established a Solar Energy Code (the "Code") within Chapter 154, the Zoning Code, which provides for solar energy regulations; and

WHEREAS, the City currently expressly prohibits ground mount solar energy systems; and

WHEREAS, allowance of ground mount solar energy systems would likely increase the number of properties to obtain solar energy systems, particularly those that do not have strong south-facing roofs or those that have other nearby structures or vegetation that interfere with roof sun angles; and

WHEREAS, the allowance of certain ground mount solar energy systems would offer advantages to citizens, as it could reduce utility costs for those that install such systems; and

WHEREAS, in light of the benefits provided by ground mount solar energy systems, the City believes that ground mount solar energy systems should now be allowed, with restrictions, on real properties located in the City limits that have residential and non-residential uses; and

WHEREAS, the City desires to amend the Code to allow for such ground mount solar energy systems and the corporate authorities of the City, in the interest of the public health, safety and welfare have determined that it is appropriate to regulate ground mount solar energy systems due to their impact, both from an economical and a public welfare standpoint; and

WHEREAS, a public hearing on proposed textual amendments to the Code regarding the regulation of ground mount solar energy systems was held before the Planning and Zoning Commission on November 1, 2023, in the manner prescribed by the City's Municipal Code and by Illinois law; and

WHEREAS, after holding such public hearing, the Planning and Zoning Commission has unanimously recommended approval of the textual amendments (as amended by the Planning and Zoning Commission on November 1, 2023); and

WHEREAS, the City Council has determined it is necessary and in the best interests of the City that the textual amendments to the Code be passed to allow for certain ground mount solar energy systems in residential and non-residential areas.

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Washington, Illinois as follows:

Section 1: The recitals; as set forth above, are incorporated herein as though fully set forth and shall be considered the express findings of the City Council.

Section 2: That the minutes of the Planning and Zoning Commission made at the public hearing held on November 1, 2023, and the recommendation of staff contained in its Memorandum to the Planning and Zoning Commission dated October 19, 2023, are hereby incorporated by reference as additional findings of the City Council, as completely as if fully recited herein at length. All exhibits, if any, submitted at the public hearing are hereby incorporated by reference as fully as if attached hereto.

Section 3: That Chapter 154 of the City Code of the City of Washington, Tazewell County, Illinois, be, and the same hereby is amended by deleting Section 154.727 in its entirety and replacing it as follows:

"§ 154.727 GROUND MOUNT AND ROOF MOUNT SOLAR ENERGY SYSTEMS

(A) Ground Mount Solar Energy Systems and Roof Mount Solar Energy Systems are designed to serve only the occupants of the parcel on which they are located. Ground Mount Solar Energy Systems are installed onto the ground and shall not require a special use. Roof Mount Solar Energy Systems are placed on the roof of a principal structure or an accessory structure and shall not require a special use. Such systems are accessory structures allowed only on zoning lots with a principal structure. An application shall be submitted to the Code Enforcement Officer demonstrating compliance with all applicable provisions of the City Code and with the following requirements:

(1) Ground Mount Solar Energy System Requirements for Real Property With Non-Residential Uses

(a) Height: Ground Mount Solar Energy Systems shall not exceed ten (10) feet above the grade of the real property when the system is oriented at maximum design tilt.

(b) Setback: Ground Mount Solar Energy Systems must be setback a minimum of five (5) feet from the rear property line or the applicable setback for the zoning district in which the system is located, whichever is greater. Such systems must

also be setback at least ten (10) feet from any other principal or accessory structure.

(c) Allowance: Subject to the requirements set forth herein, Ground Mount Solar Energy Systems are allowed on real property that has a non-residential use, regardless of the real property's zoning classification.

(d) Minimum Lot Size: Ground Mount Solar Energy Systems are only permitted on real property with a non-residential use if such property has a minimum lot size of 0.75 acres.

(e) Placement: Ground Mount Solar Energy Systems are only allowed to be placed in the rear yard of the real property. The system must not be located within any known dedicated easement on the real property.

(f) Lot Coverage: The total coverage of the Ground Mount Solar Energy System shall not exceed half the building footprint of the principal structure. Ground Mount Solar Energy Systems shall be exempt from impervious surface standards/calculations if the soil under the solar collector is maintained in vegetation and not compacted. For purposes of this section, foundations, gravel, or compacted soils are considered impervious.

(2) Ground Mount Solar Energy System Requirements for Real Property With Residential Uses

(a) Height: Ground Mount Solar Energy Systems shall not exceed eight (8) feet above the grade of the real property when the system is oriented at maximum design tilt.

(b) Setback: Ground Mount Solar Energy Systems on real property with a residential use must have a setback of a minimum of thirty (30) feet from the side and rear property line. Such systems must also be setback at least ten (10) feet from any other principal or accessory structure.

(c) Allowance: Subject to the requirements set forth herein, Ground Mount Solar Energy Systems are allowed on real property that has a residential use, so long as the property is in an R-1, R-2, R-1A, or CE District in the City.

(d) Minimum Lot Size: Ground Mount Solar Energy Systems are only permitted on real property with a residential use if such property has a minimum lot size of two (2) acres.

(e) Placement: Ground Mount Solar Energy Systems are only allowed to be placed in the rear yard of real property. The system must not be located within any known dedicated easement on the real property.

(f) Lot Coverage: The total coverage of the Ground Mount Solar Energy System shall not exceed half the building footprint of the principal structure. Ground Mount Solar Energy Systems shall be exempt from impervious surface standards/calculations if the soil under the solar collector is maintained in vegetation and not compacted. For purposes of this section, foundations, gravel, or compacted soils are considered impervious.

~~(g) Screening: Notwithstanding any fencing requirements in the City Code to the contrary, for Ground Mount Solar Energy Systems as provided herein, a solid six (6) foot privacy fence must exist or be constructed around the side and rear property lines or a solid eight (8) foot privacy fence must be constructed around where the Ground Mount Solar Energy System will be installed, while meeting all set back requirements provided herein, prior to the installation of the Ground Mount Solar Energy System.~~

(3) Roof Mount Solar Energy System Requirements-

(a) Height for System on Principal Structure: Roof Mount Solar Energy Systems placed on a principal structure shall not exceed the height of the principal structure on the zoning lot where the system is located.

(b) Height for System on Accessory Structure: Roof Mount Solar Energy Systems placed on an accessory structure shall not exceed the height of the accessory structure on the zoning lot where the system is located.

(c) Mounting on Pitched Roofs: Roof Mount Solar Energy Systems on pitched roofs shall not be permitted to tilt or rotate at a slope greater or less than the roof to which it is attached. Such Roof Mount Solar Energy Systems cannot extend more than eight inches (8") from the roof surface to which it is attached. The roof shall be considered a part of a building completely covering and permanently attached to such building and can be flat or pitched. Any roof that has a pitch of more than 1.5 inches in 12 inches shall be considered a separate roof side.

(d) Mounting on Flat Roofs: Roof Mount Solar Energy Systems on flat roofs on residential or non-residential structures shall not extend more than two feet (2') vertically or extend above the building parapet, whichever is less.

(e) Setback: The solar collector surface and mounting devices for Roof Mount Solar Energy Systems shall not extend beyond the exterior perimeter of the building on which the system is mounted or built. Exterior piping for solar systems generating heated water may extend beyond the perimeter of the building on a side yard exposure. Any Roof Mount Solar Energy Systems proposed to be placed on the roof of an accessory structure that do not meet the side or rear setbacks in place at the time of installation must have a variance approved by the Planning and Zoning Commission.

(f) Color: Roof Mount Solar Energy Systems shall match, as closely as possible, the color of the roof to which it is attached.

(g) Safety: Roof Mount Solar Energy Systems, excluding building integrated solar energy systems, shall allow for adequate roof access for firefighting purposes to the south facing or flat roof upon which the panels are mounted.

(4) Requirements Applicable to Both Ground Mount Solar Energy Systems and Roof Mount Solar Energy Systems-

(a) Reflection Angles: Reflection angles for solar collectors shall be oriented such that they do not project glare onto adjacent properties.

(b) Visibility: Solar energy systems shall be located in a manner to reasonably minimize view blockage for surrounding properties and shading of property to the north while still providing adequate solar access for solar collectors. They shall be designed to blend into the architecture of the building or be screened from routine view from public rights-of-way provided that the screening shall not affect the operation of the system.

(c) Approved Solar Components: Electric solar energy system components shall have a UL listing or approved equivalent and solar hot water systems shall have an SRCC rating.

(d) Compliance with Building Codes: All solar energy systems shall meet approval of any currently adopted International Building Code, National Electric Code, and Illinois Plumbing Code.

(e) Utility Notification: All grid-intertie solar energy systems shall comply with the interconnection requirements of the electric utility. Off-grid systems are exempt from this requirement.

(f) Restrictions on Solar Energy Systems Limited: Consistent with 765 ILCS 165, no homeowner's agreements, covenants, common interest community or other

contracts between multiple property owners within a subdivision shall prohibit or restrict homeowners from installing solar energy systems.

(g) Historic Buildings: Solar energy systems on designated historic landmarks or within designated historic districts must receive approval of the Historic Preservation Commission, consistent with the standards for solar energy systems on historically designated buildings published by the U.S. Department of Interior."

Section 4: All ordinances or parts of ordinances in conflict with this Ordinance are hereby repealed insofar as they are in conflict with this Ordinance.

Section 5: If any provision of this Ordinance is adjudged invalid, such adjudication shall not affect the validity of the ordinance as a whole or of any portion not adjudged invalid.

Section 6: This Ordinance shall be in full force and effect from and after its passage, approval and publication as required by law.

PASSED AND APPROVED this _____ day of _____ 2023.

AYES: _____

NAYS: _____

_____
ATTEST: MAYOR

_____
CITY CLERK

Area City/County Ground-Mount Solar Regulations

City/County	Regulations		
	Height	**Setbacks**	**Other**
Bloomington	4' in residential districts; 15' in other districts	Same as accessory structures	
East Peoria	20' (side/rear); 30" (front - w/SU)	Same as accessory structures	Only allowed on lots w/principal structure
El Paso	10' at maximum tilt in any zoning district	30' (side/rear)	Lot size must be at least one acre
			Cannot exceed half the building footprint of the principal structure
Eureka	10'	30' (side/rear)	Only allowed on lots w/principal structure
			Cannot exceed half the building footprint of the principal structure
			Only allowed in non-residential areas
Germantown Hills	10' at maximum tilt in any zoning district	30' (side/rear)	Lot size must be at least one acre
			Cannot exceed half the building footprint of the principal structure
Mackinaw	10' at maximum tilt in any zoning district	30' (side/rear)	Lot size must be at least one acre
			Cannot exceed half the building footprint of the principal structure
Morton	Cannot exceed the maximum allowable height for an accessory structure in the underlying zoning district	Same as accessory structures	Reflection angles shall be oriented such that they do not project glare onto adjacent properties
Normal	4' in residential districts; 15' in other districts	Same as accessory structures	Can only be located in rear yards within residential districts
Pekin	Cannot exceed the maximum allowable height for an accessory structure when oriented at maximum tilt	Same as accessory structures	Only allowed on lots w/principal structure
			Reflection angles shall be oriented such that they do not project glare onto adjacent properties
Peoria	14'	10' from principal structure, 6' from other accessory structures	
Peoria County	Cannot exceed the maximum allowable height for an accessory structure in the underlying zoning district	Same as accessory structures	
Peoria Heights	8' at maximum tilt	Same as accessory structures, no less than 5'	Cannot be located within 50' of any principal structure unless the adjacent owner joins the application
Tazewell County	20' at maximum tilt	Same as accessory structures (side/rear)	Reflection angles shall be oriented such that they do not project glare onto adjacent properties
Woodford County	18' at maximum tilt	10' (side/rear)	