

DRAFT – 4-19-11

“10-7-6: SOLAR ENERGY SYSTEMS

(A) Policy Statement: Riverside is committed to encouraging the use of small scale passive and active Solar Energy Systems and other green building techniques for residential and other building projects within the Village, to further energy savings and conservation and to help improve the quality of life and environmental health of the community as a whole. At the same time, the Village recognizes that the regulation and the construction, placement, and operation of Solar Energy Systems and other green building techniques are matters of public importance which concern aesthetics and other issues. While not all specifically regulated hereunder, green building techniques that may include, but are not limited to, green landscape roofs, reflective white roofs, permeable pavement, storm water harvesting, use of landscaping to reduce geothermal demand, passive architectural design features, active solar photovoltaic systems, geothermal systems and solar thermal collectors are encouraged within the Village. Prohibited renewable energy systems within the Village include all types of wind systems, biogas and biomass energy or “power plant” solar energy production. Riverside encourages green initiatives and green design principles with residential and other property development.

(B) Definitions:

BUILDING AND ROOF-MOUNTED SOLAR ENERGY SYSTEM – a Solar Energy System that is affixed to either a principal or accessory structure.

GROUND-MOUNTED SOLAR ENERGY SYSTEM – A Solar Energy System that is not attached to another structure and is instead affixed to the ground, or that is attached to an antenna, light pole or other utility facility.

NET METERING – an arrangement by which excess energy generated by a Solar Energy System is distributed back to the electrical utility grid.

SOLAR CELL - a photovoltaic cell that is used to convert solar energy into electricity.

SOLAR ENERGY - means radiant energy (direct, diffuse and/or reflected) received from the sun.

SOLAR ENERGY SYSTEM – a system that uses radiant energy received from the sun to capture, distribute and/or store energy for on-site consumption of utility power.

(C) Applicability:

1. This Section applies to Solar Energy Systems installed and constructed after August 1, 2011, and all applications for Solar Energy Systems on existing structures or property.

2. Solar Energy Systems constructed prior to August 1, 2011 shall not be required to meet the requirements of this Section.

3. Any upgrade, modification or structural change that materially alters the size or placement of an existing Solar Energy System, regardless of date of construction, shall comply with the requirements of this Section.

(D) General Requirements: The following requirements are applicable to both Building and Roof-Mounted Solar Energy Systems and Ground-Mounted Solar Energy Systems:

1. Permitted Districts. Solar Energy Systems are permitted as accessory structures as detailed in this Section in all Zoning Districts.

2. Structures. Solar Energy Systems shall be considered to be structures for the purpose of compliance with all Village ordinances and other regulations, shall require a building permit and certificate of occupancy issued by the Building Inspector or other designated official, and shall comply in their design, construction and operation with all other Village ordinances and other regulations.

3. Permits. Solar Energy Systems may be installed upon receipt of any applicable building, electrical and/or mechanical permits.

4. Design. The design of any Solar Energy System shall conform to applicable industry standards.

5. No Resale – All energy produced by a Solar Energy System shall be utilized on-site, except for net metering as authorized by the applicable electric or other utility.

6. Utility Provider Notification: Written evidence must be provided at the time a building permit for a Solar Energy System is requested that the utility company has been notified of the customer's intent to install such a system.

7. Glare. To the extent possible, efforts to minimize the glare of solar collectors and the effect of glare should be made by directing glare away from any adjoining property or by the use of non-glare glazing.

8. No Advertising. Solar panels and their related systems shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the system. In no case shall any identification be visible from a property line.

9. Blending. The design of solar panels and their related systems shall, to the extent reasonably possible, use materials, colors, textures, screening and landscaping that will blend the system into the natural setting and existing environment.

10. Visibility Preference. Installation of Solar Energy Systems in a manner that minimizes visibility from public rights-of-way is encouraged but not required where such installation will impair the functional integrity and viability of a System.

11. Wiring and Piping: All exterior electrical and plumbing lines for Solar Energy Systems shall be placed in a conduit and installed underground or contained within a raceway that complements the building materials of the principal structure, and shall comply with all other Village requirements relative to electrical or plumbing lines.

12. Plans submitted to the Building Inspector as a requirement for the issuance of a building permit for any Solar Energy System shall indicate all existing and proposed grading, excavating, filling, paving, fencing and screening as it may relate to the proposed System, shall indicate the location of all property lines and neighboring buildings, and shall comply with the requirements and standards of this Section.

(E) Building and Roof-Mounted Solar Energy Systems:

1. Building and Roof-Mounted Solar Energy Systems and their related solar collectors are permitted in the following locations:

- (a) Principal and accessory structures;
- (b) Any roof face;
- (c) Side and rear building facades;
- (d) Front or corner building facades, if the following conditions are met:
  - (1) Solar access is optimized on the front and corner facades;
  - (2) Systems are simultaneously used to shade the structure's windows. See figures \_\_ and \_\_.

2. Area and Protrusion: The area of solar collector installation may not be greater than the roof section where the Solar Energy System shall be mounted. All Roof-Mounted solar collectors shall be positioned within the field of the roof plane, and shall not protrude over any edges or overhang of the roof.

3. Orientation: Solar collectors may be angled to maximize solar access. Where installed solar collectors vary from the pitch/angle of the roof on which the Solar Energy System is mounted, however, they shall not be visible from the public right of way, excluding public alleys.

4. Projection: Solar panels shall not project more than four feet (4') from a building façade or roof plane where not visible from a public right-of-way and shall not project

more than twelve inches (12") from a building façade or roof plane where visible from a public right-of-way, excluding public alleys.

5. Extension Beyond Peak of Roof: Solar panels shall not extend vertically more than five feet (5') above the highest peak of a pitched roof where installed, or five feet (5') above the maximum permitted height in the district, whichever is less.

6. Setback Encroachment: Solar panels may project into a side or rear setback, but shall be no closer than five feet (5') to the side or rear property line.

**[Do you want to include stronger provisions creating default preference for rear or side-facing panels, such as requiring showing that system ineffective unless mounted on front-facing roof?]**

7. Flat Roof Installations: Solar panels may be installed on a flat roof provided they do not project more than eight feet (8') above the flat roof on which they are installed, as measured from the roof base to the highest edge of the System. Solar panels on a flat roof shall not project higher than the permitted building height without a zoning variance.

(F) Ground-Mounted (freestanding) Solar Energy Systems:

1. Permitted Yards: Ground-Mounted Solar Energy Systems are permitted only in the rear and interior side yards.

2. Setback: Ground-Mounted Solar Energy Systems shall be set back ten feet (10') feet from the interior side and rear property lines and shall not be located in any utility, water, sewer or other type of public easement.

3. Screening: Ground-Mounted systems must be screened from view from the public right-of-way through the use of architectural features, earth berms, fencing, a landscaped combination of evergreen and deciduous plants, or other screening which will harmonize with the character of the property and surrounding area **[require to be fully enclosed?]**.

4. Height: Ground-Mounted solar systems shall not exceed a height of ten feet (10') above the ground, as measured from the average grade at the base to the highest edge of the system.

(G) Maintenance, Repair, Abandonment and Removal:

1. Maintenance: All Solar Energy Systems must be maintained in good repair and operable condition at all times, including compliance with all standards in applicable building and technical codes to ensure structural and technical integrity of such Systems, except for maintenance and repair outages.

2. Repair: If a Solar Energy System becomes inoperable or damaged, operations must cease and prompt repairs must be made.
  3. Notification: If the Village determines that a Solar Energy System fails to comply with the applicable provisions of this Section or appears to have been abandoned, the Village shall provide written notification to the property owner. The owner shall have a period of ninety (90) days from the date of notification to either restore the Solar Energy System to operation or remove the System.
  4. Enforcement: In the event the System is not removed or brought into compliance within the specified time period following notification, the Village may pursue any and all available legal remedies to ensure that a Solar Energy System which fails to comply with this and other applicable Codes, or which constitutes a danger to persons or property, is removed or brought into compliance.
  5. No Waiver: Any delay by the Village in taking enforcement action against the owner, shall not waive the Village's right to take any action at a later time. The Village may seek to have a Solar Energy System removed regardless of the owner's intent for such System, and regardless of any permits that may have been issued or granted.
  6. Restoration: After a Solar Energy System is removed, the owner of the property shall promptly restore the property to a condition consistent with the property's condition prior to the installation of the System.
- (H) Variations: Variations to the height, setback and other requirements set forth herein may be obtained upon application and the granting of a variation in conformance with the variation procedures set forth in Section 10-2-2-2 of this Zoning Ordinance. In addition to the standards for granting of a variation set forth therein, no variation relative to a Solar Energy System shall be recommended for approval unless it is found that the proposed Solar Energy System is located in such a manner as to minimize intrusions on adjacent residential uses through sitting on the lot, selection of appropriate equipment and other applicable means.
- (I) Government Installations: Solar Energy Systems or installations related to governmental uses, including solar-powered traffic speed display devices or solar-powered traffic signals or parking meters, are exempt from the requirements of this Section.
- (J) Permit Fee Waiver: Permit fees shall be waived for all Solar Energy System installations that are not visible from the public right-of-way. Permit fees for systems visible from the public right-of-way are subject to applicable fees as determined by the building department.
- (K) Solar Water Heating:

1. Solar Water Heating Units: Solar water heating units which are an integrated part of the roof design are preferred. If the solar water heating units are not flat, as preferred, they shall be installed as not to rise more than twelve inches (12") from the roof plane. They must appear to be part of the roof structure itself and be the same color as the roof or glass enclosed. Collectors requiring a high angle of installation shall be fully screened from view with a material that blends with existing architecture and color.

2. Tanks: No preheat, tempering or holding water tanks shall be located on the roof or building. Heating/air conditioning units shall be ground-mounted on a concrete pad.

(L) Historic Structures:

Solar Energy Systems installed on structures designated as National, State or local historic landmark structures shall comply with all regulations applicable to such structures, including Title 11, Chapter 1 (Historic Preservation) of the Village Code of the Village of Riverside.

(M) Solar Access Protection:

1. Creation of Easements: Solar Energy System access easements across contiguous or nearby lots, tracts or land may be created to establish a window of exposure to the sun so as to protect an existing or intended solar collector's exposure to the sun from obstruction of buildings and trees. Such easements may be purchased, reserved, granted or otherwise obtained. Adverse possession cannot create such an easement. An easement infringed upon is a compensable property right through private remedy.

2. Recording and Filing of Easements: Solar access easements shall be recorded with the Cook County recorder of deeds and filed with the Village's building department.

3. Construction in Easement Areas: Any person seeking a building permit to construct or modify any structure or buildings so as to increase the consumption of airspace over that lot shall certify in writing to the building department that no solar access easement exists over that lot.

4. Denial of Permit: Should the building department determine that the proposed construction would intrude upon a Solar Energy System access easement, no building permit shall be granted.

5. Approvals. Absent the existence of a Solar Energy System access easement that is recorded and filed with the Village's building department, approvals granted to a property owner for a Solar Energy System shall not be construed to bar owners or tenants of any adjacent property from ordinary or permitted building, landscaping or other improvements, even if such improvements may diminish the function of said Solar Energy System."