

**TOWNSHIP OF HAMPTON
ALLEGHENY COUNTY, PENNSYLVANIA**

ORDINANCE NO. _____

**AN ORDINANCE OF THE TOWNSHIP OF HAMPTON,
ALLEGHENY COUNTY, PENNSYLVANIA, AMENDING
ITS ZONING ORDINANCE, AS CODIFIED AT CHAPTER
310 OF THE TOWNSHIP CODE OF ORDINANCES, TO
PROVIDE FOR THE REGULATION OF SOLAR
PHOTOVOLTAIC SYSTEMS WITHIN THE TOWNSHIP.**

WHEREAS, the Hampton Township Council is authorized by the Municipalities Planning Code to regulate zoning and land use within the Township through its Zoning Ordinance, as embodied in the current Zoning Ordinance, as codified at Chapter 310 of the Hampton Township Code of Ordinances;

WHEREAS, the Hampton Township Council desires to amend its Zoning Ordinance to include for the regulation of solar photovoltaic systems within the Township;

WHEREAS, by letter dated _____, 2018, the Township has, in accordance with the requirements of the Municipalities Planning Code, submitted the proposed amendments to the Allegheny County Planning Agency (ACED) for review and comment, in response to which the Township did receive a comment letter from ACED;

WHEREAS, the Township has, in accordance with the requirements of the Municipalities Planning Code, submitted the proposed amendments to its Planning Commission, which gave its recommendations regarding the proposed amendments at its duly noticed public meeting(s).

WHEREAS, on _____, 2018, the Hampton Township Council held a duly noticed and advertised public hearing to take public comments on the proposed amendments, and has duly advertised this Ordinance for consideration and enactment; and

WHEREAS, the Hampton Township Council, having received the public's comments and the recommendations of the Township's Planning Commission, finds that enactment of the proposed amendments to the Township Zoning Ordinance will be beneficial to the Township and consistent with the Pennsylvania Municipalities Planning Code.

NOW THEREFORE, be it Ordained and Enacted by the Hampton Township Council, and it is hereby Ordained and Enacted by authority of the same, as follows:

ARTICLE XXII

Section 310-129. Definitions.

Array: Any number of electrically connected photovoltaic (PV) modules providing a single electrical output.

Building-Integrated System: A solar photovoltaic system that is constructed as an integral part of a principal or accessory building or structure and where the building-integrated system features maintain a uniform profile or surface of vertical walls, window openings, and roofing. Such a system is used in lieu of a separate mechanical device, replacing or substituting for an architectural or structural component of the building or structure that appends or interrupts the uniform surfaces of walls, window openings and roofing. A building-integrated system may occur within vertical facades, replacing view glass, spandrel glass or other facade material; into semi-transparent skylight systems; into roofing systems, replacing traditional roofing materials; or other building or structure envelope systems.

Building-Mounted System: A solar photovoltaic system attached to any part or type of roof on a building or structure that has an occupancy permit on file with the Township and that is either the principal structure or an accessory structure on a recorded property. This system also includes any solar-based architectural elements.

Cell: The smallest basic solar electric device which generates electricity when exposed to light.

Drip Line: The outermost edge of a roof including eaves, overhangs and gutters.

Ground-Mounted System: A solar photovoltaic system mounted on a structure, pole or series of poles constructed specifically to support the photovoltaic system and not attached to any other structure.

HVAC: Equipment used to heat, cool or ventilate a structure.

Impervious Surface: A surface area that prevents or retards the infiltration of water into the soil and/or a hard surface area that causes water to run off the surface of the ground in greater quantities or at an increased rate of flow from the conditions prior to development, construction, building or installation.

Interconnection: The technical and practical link between the solar generator and the grid providing electricity to the greater community.

Kilowatt (kW): A unit of electrical power equal to 1,000 Watts, which constitutes the basic unit of electrical demand. A watt is a metric measurement of power (not energy) and is the rate (not the duration) at which electricity is used. 1,000 kW is equal to 1 megawatt (MW).

Module: A module is the smallest protected assembly of interconnected PV cells.

Net Metering Agreement: An agreement with a local electric utility that allows customers to receive a credit for surplus electricity generated by certain renewable energy systems.

Photovoltaic (PV): A semiconductor based device that converts light directly into electricity.

Solar-Based Architectural Element: Structural/architectural element that provides protection from weather that includes awnings, canopies, porches or sunshades and that is constructed with the primary covering consisting of solar PV modules, and may or may not include additional solar PV related equipment.

Solar Photovoltaic (PV) Related Equipment: Items including a solar photovoltaic cell, panel or array, lines, mounting brackets, framing and foundations used for or intended to be used for collection of solar energy.

Solar Photovoltaic (PV) System: A solar collection system consisting of one or more building and/or ground-mounted systems, solar photovoltaic cells, panels or arrays and solar related equipment that rely upon solar radiation as an energy source for collection, inversion, storage and distribution of solar energy for electricity generation. A solar PV system is a generation system with a nameplate capacity of not greater than 50 kilowatts if installed at a residential service or not larger than 3,000 kilowatts at other customer service locations and do not produce excess on-site energy greater than currently permitted by Pennsylvania Public Utility Commission guidelines.

Tracking System: A number of photovoltaic modules mounted such that they track the movement of the sun across the sky to maximize energy production, either with a single-axis or dual-axis mechanism.

Unregulated Yard Area: Area not within a building and not in a defined setback or yard area.

Section 310-130. Purpose.

It is the purpose of this regulation to promote the safe, effective and efficient use of installed solar energy systems that reduce on-site consumption of utility-supplied energy while protecting the health, safety and welfare of adjacent and surrounding land uses and properties. This Ordinance seeks to:

Provide property owners and business owners/operators with flexibility in satisfying their on-site energy needs.

Reduce overall energy demands within the Township and to promote energy efficiency.

Integrate alternative energy systems seamlessly into the Township's neighborhoods and landscapes without diminishing quality of life in the neighborhoods.

Section 310-131. Applicability.

This Ordinance applies to all solar photovoltaic systems installed and constructed after the effective date of the Ordinance.

Solar PV systems constructed prior to the effective date of this Ordinance are not required to meet the requirements of this Ordinance.

Any upgrade, modification or structural change that materially alters the size or placement of an existing solar PV system shall comply with the provisions of this Ordinance.

Section 310-132. Permitted Zoning Districts.

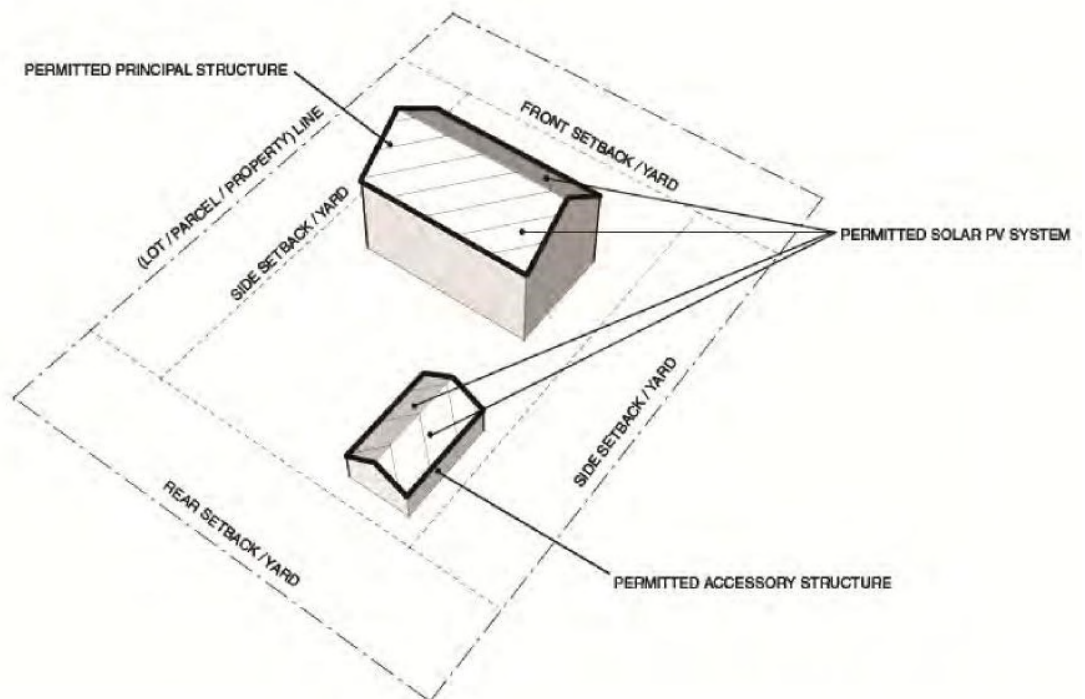
All types of solar photovoltaic systems are permitted in all zoning districts as an accessory use to any lawfully permitted principal use on the same property upon issuance of the proper permit pursuant to Article XXII, Section 310.143 and upon compliance with all requirements of this section and as elsewhere specified in this Ordinance.

Section 310-133. Location within a Property.

Building-mounted systems are permitted to face any rear, side and front yard or any unregulated yard area as defined in Section 1 of this Ordinance. Building-mounted systems may only be mounted on lawfully permitted principal or accessory structures.

Ground-mounted systems are permitted based on the requirements for accessory uses or structures in the property's zoning district.

**PERMITTED LOCATION: BUILDING-MOUNTED SOLAR PV SYSTEM
ISOMETRIC**



Section 310-134. Design and Installation Standards.

The solar PV system must be constructed to comply with the Pennsylvania Uniform Construction Code (UCC), Act 45 of 1999, as amended, and any regulations adopted by the Pennsylvania Department of Labor and Industry as they relate to the UCC, except where an applicable industry standard has been approved by the Pennsylvania Department of Labor and Industry under its regulatory authority.

All wiring must comply with the National Electrical Code, most recent edition, as amended and adopted by the Commonwealth of Pennsylvania.

For ground-mounted systems, all exterior electrical lines must be buried below the surface of the ground where possible or be placed in conduit.

Section 310-135. Setback Requirements.

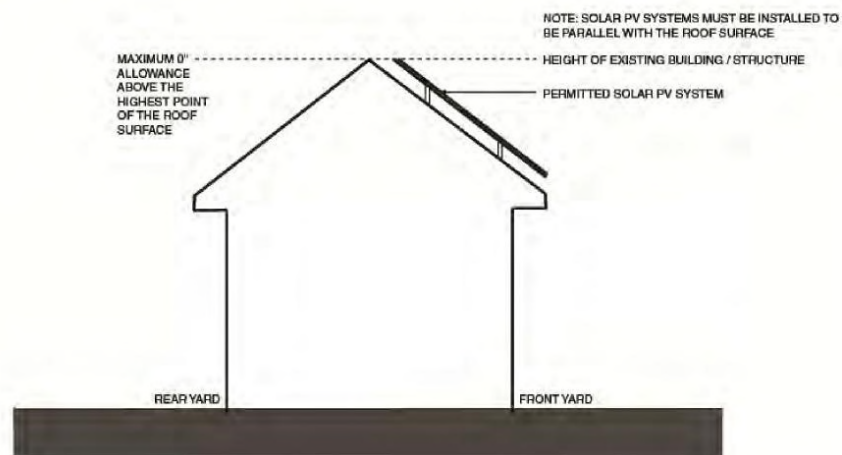
Ground-mounted systems. Ground-mounted systems are subject to the accessory use or structure setback requirements in the zoning district in which the system is to be constructed. The required setbacks are measured from the property line to the nearest part of the system. No part of the ground-mounted system shall extend into the required setbacks due to a tracking system or other adjustment of solar PV related equipment or parts.

Section 310-136. Height Restrictions.

Notwithstanding the height limitations of the zoning district:

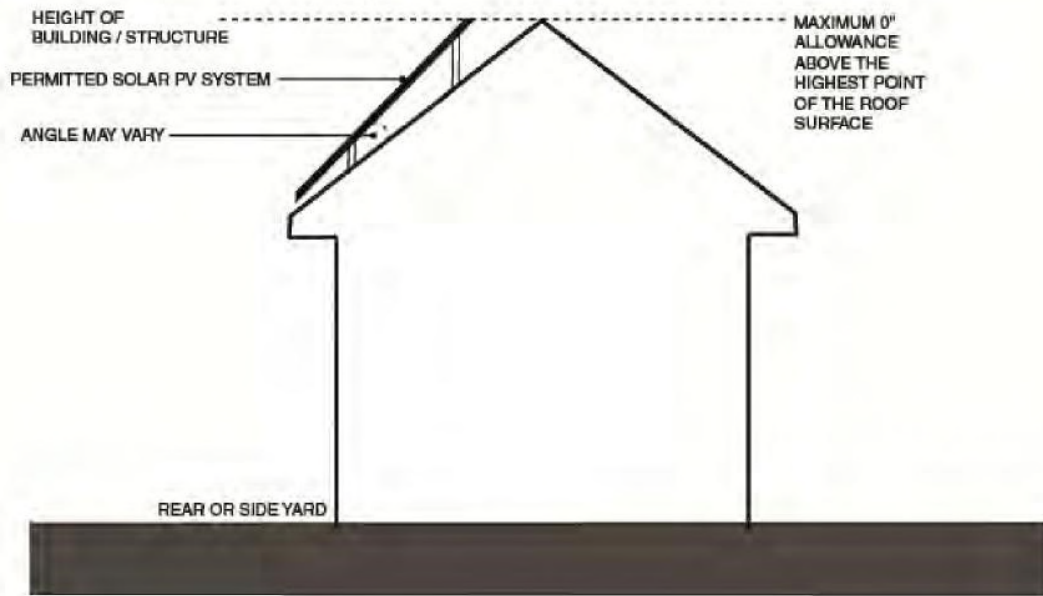
For a building-mounted system installed on a sloped roof that faces the front yard of a property, the system must be installed at the same angle as the roof on which it is installed with a maximum distance, measured perpendicular to the roof, of eighteen (18) inches between the roof and highest edge or surface of the system.

HEIGHT RESTRICTION, SLOPED ROOF FACING FRONT YARD: BUILDING-MOUNTED SOLAR PV SYSTEM ELEVATION



For a building-mounted system installed on a sloped roof, the highest point of the system shall not exceed the highest point of the roof to which it is attached.

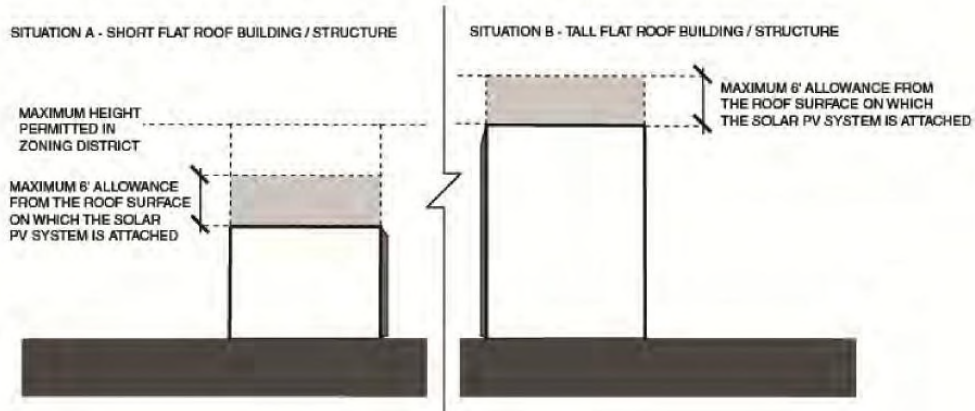
HEIGHT RESTRICTION, SLOPED ROOF FACING REAR OR SIDE YARD: BUILDING-MOUNTED SOLAR PV SYSTEM ELEVATION



Notwithstanding the height limitations of the zoning district:

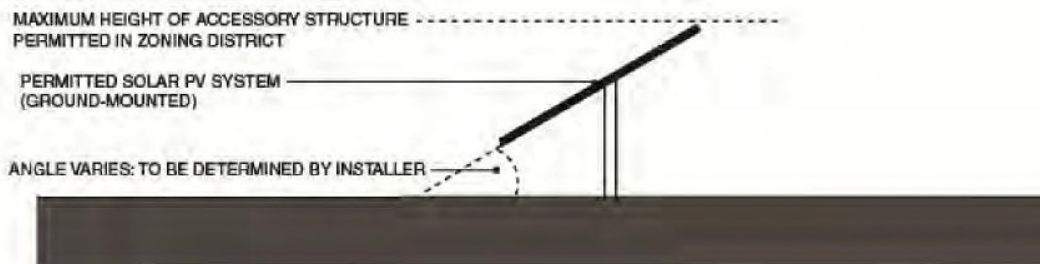
For a building-mounted system installed on a flat roof, the highest point of the system shall be permitted to extend up to six (6) feet above the roof to which it is attached, subject to Section 310-60.C(1) of the Township's current Zoning Ordinance requiring a written opinion of a registered professional engineer attesting to the ability of the structure to withstand maximum forces upon it as to wind, ice and snow loads.

HEIGHT RESTRICTION, FLAT ROOF: BUILDING-MOUNTED SOLAR PV SYSTEM ISOMETRIC



Ground-mounted systems may not exceed the permitted height of accessory structures in the zoning district where the solar PV system is to be installed.

HEIGHT RESTRICTION: GROUND-MOUNTED SOLAR PV SYSTEM ELEVATION



Section 310-137. Screening and Visibility.

Building-mounted systems on a sloped roof shall not be required to be screened. Building-mounted systems mounted on a flat roof shall not be readily visible from the public right-of-way.

Section 310-138. Impervious Property Coverage Restrictions.

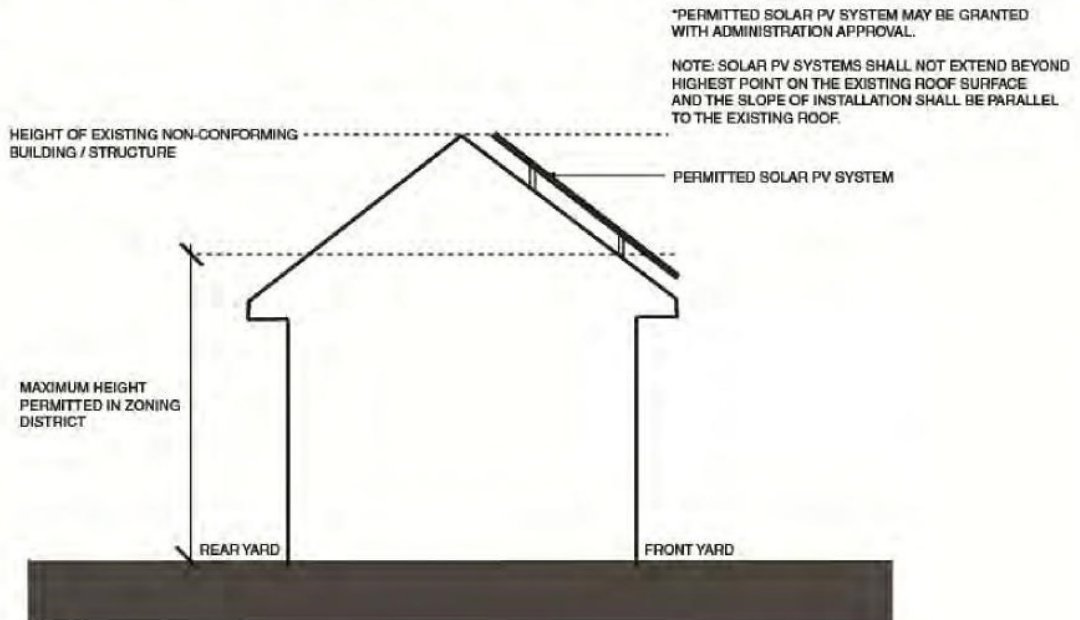
The surface area of any ground-mounted system, regardless of the mounted angle of any portion of the system, is considered impervious surface and shall be calculated as part of the property lot coverage limitations for the zoning district. If the ground-mounted system is mounted above existing impervious surface, it shall not be calculated as part of the property lot coverage limitations for the zoning district.

Section 310-139. Non-conformance.

Building-mounted systems:

If a building-mounted system is to be installed on any building or structure that is non-conforming because its height violates the height restrictions of the zoning district in which it is located, the building-mounted system shall be permitted so long as the building-mounted system does not extend above the peak or highest point of the roof to which it is mounted and so long as it complies with the other provisions of this Ordinance.

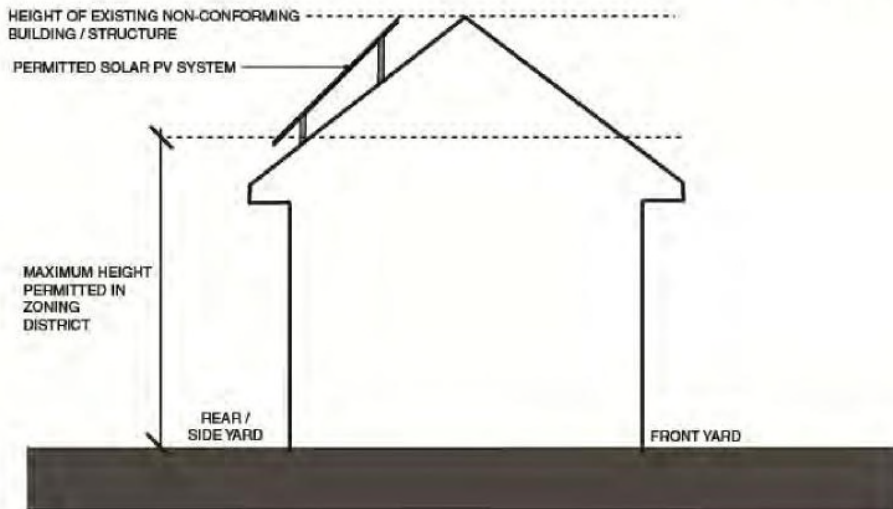
NON-CONFORMING BUILDING, SLOPED ROOF FACING FRONT YARD: BUILDING-MOUNTED SOLAR PV SYSTEM ELEVATION



NON-CONFORMING BUILDING, SLOPED ROOF FACING REAR OR SIDE YARD: BUILDING-MOUNTED SOLAR PV SYSTEM ELEVATION

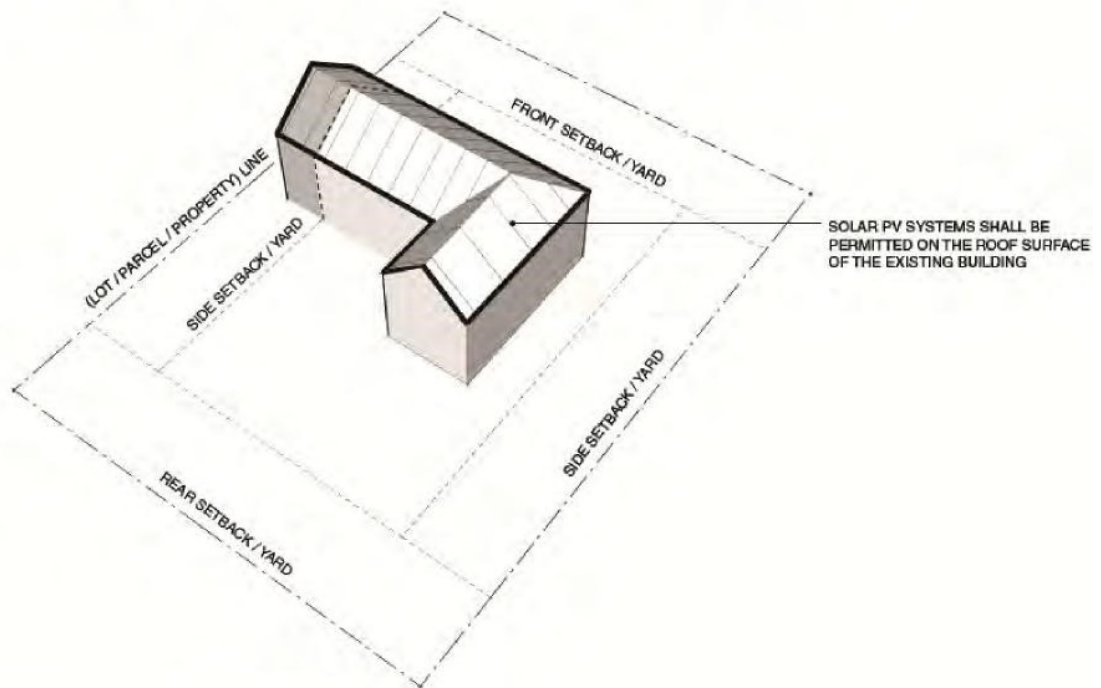
*PERMITTED SOLAR PV SYSTEM MAY BE GRANTED WITH ADMINISTRATION APPROVAL.

NOTE: SOLAR PV SYSTEMS SHALL NOT EXTEND BEYOND HIGHEST POINT ON THE EXISTING ROOF SURFACE



If a building-mounted system is to be installed on a building or structure on a non-conforming property that does not meet the minimum setbacks required and/or exceeds the lot coverage limits for the zoning district in which it is located, a building-mounted system shall be permitted so long as there is no expansion of any setback or lot coverage non-conformity and so long as it complies with the other provisions of this Ordinance.

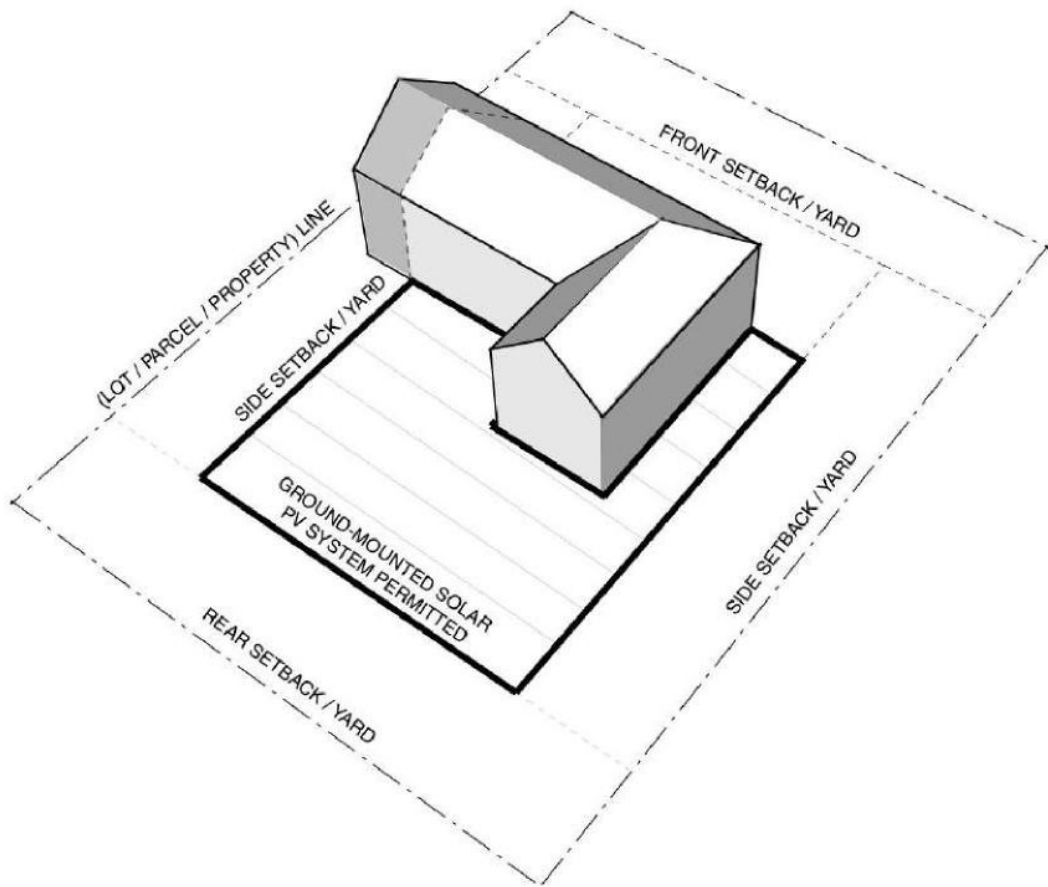
**NON-CONFORMING LOT, SETBACKS, AND / OR LOT COVERAGE LIMITS: BUILDING-MOUNTED SOLAR PV SYSTEM
ISOMETRIC**



Ground-mounted systems:

If a ground-mounted system is to be installed on a property containing a structure that is non-conforming because the required minimum setbacks are exceeded, the proposed system shall be permitted so long as the system does not encroach into the established setback for the property. If a ground-mounted system is to be installed on a property that is non-conforming because it violates zoning district requirements other than setbacks, then a variance must be obtained for the proposed installation.

**NON-CONFORMING LOT, SETBACKS: GROUND-MOUNTED SOLAR PV SYSTEM
ISOMETRIC**



Section 310-140. Signage and/or Graphic Content.

No signage or graphic content may be displayed on the solar PV system except the manufacturer's badge, safety information and equipment specification information. Said information shall be depicted within an area no more than thirty-six (36) square inches in size.

Section 310-141. Performance Requirements.

All solar PV systems are subject to compliance with applicable performance standards detailed elsewhere in the Zoning Ordinance.

Section 310-142. Inspection, Safety and Removal.

A. Inspection

1. The Township reserves the right to inspect a solar PV system for building or fire code compliance and safety.
2. If upon inspection the Township determines that a fire code or building code violation exists, or that the system otherwise poses a safety hazard to persons or property, the Township may order the property owner to repair or remove the system within a reasonable time. Such an order shall be in writing, shall offer the option to repair, shall specify the code violation or safety hazard found and shall notify the property owner of his or her right to appeal such determination.
3. If a property owner fails to repair or remove a solar PV system as ordered, and any appeal rights have been exhausted, the Township may enter the property, remove the system and charge the property owner for all costs and expenses of removal, including reasonable attorney's fees or pursue other legal action to have the system removed at the property owner's expense.
4. In addition to any other available remedies, any unpaid costs resulting from the Township's removal of a vacated abandoned or de-commissioned solar PV system shall constitute a lien upon the property against which the costs were charged. Legal counsel of the Township shall institute appropriate action for the recovery of such cost, plus attorney's fees, including, but not limited to filing of municipal claims pursuant to 53 P.S. § 7107, et seq., for the cost of such work, 6% interest per annum, plus a penalty of 5% of the amount due plus attorney's fees and costs incurred by the Township in connection with the removal work and the filing of the Township's claim.

B. Marking

1. Marking is required on interior and exterior direct-current (DC) conduit, enclosures, raceways, cable assemblies, junction boxes, combiner boxes and disconnects.
 - a. The materials used for marking shall be reflective, weather resistant and suitable for the environment. Marking as required in this section shall have all letters capitalized with a minimum height of 3/8 inch (9.5 mm) white on red background.
 - b. Marking Content. The marking shall contain the words "WARNING: PHOTOVOLTAIC POWER SOURCE."
 - c. Shall include a diagram depicting all access and pathways or a clear warning if there are none.

- d. **Main Service Disconnect.** The marking shall be placed adjacent to the main service disconnect in a location clearly visible from the location where the disconnect is operated.
- e. **Location of Marking.** The marking shall be placed on interior and exterior DC conduit, raceways, enclosures and cable assemblies every ten (10') feet (3,048 mm), within one (1') foot (305 mm) of turns or bends and within 1 (1') foot (305 mm) above and below penetrations of roof/ceiling assemblies, walls or barriers.
- f. **Photovoltaic system warning signs** require an emblem in the shape of a Maltese cross made up of a three inch diameter circle with a stroke width of one-half inch and Maltese cross wings that are one and one-eighth inches in height or width with a stroke width of one-half inch. Signs must also have a white reflective background with red lettering. Three different legends; "PV Roof Mounted", "PV Adjacent", and "PV Roof Mounted and Adjacent." All lettering shall be one and one-quarter inch in height with a stroke width of one-quarter inch. The emblem shall be permanently affixed to the left of the main entrance door at a height between four and six feet above the ground and shall be installed and maintained by the owner of the building.



- 2. **Locations of DC conductors.** Conduit, wiring systems, and raceways for photovoltaic circuits shall be located as close as possible to the ridge or hip or valley and from the hip or valley as directly as possible to an outside wall to reduce trip hazards and maximize ventilation opportunities. Conduit runs between sub arrays and to DC combiner boxes shall be installed in a manner that minimizes the total amount of conduit on the roof by taking the shortest path from the array to the DC combiner box. The DC combiner boxes shall be located such that conduit runs are minimized in the pathways between arrays. DC wiring shall be installed in metallic conduit or raceways when located within enclosed spaces in a building. Conduit shall run along the bottom of load bearing members.

3. Access and pathways. All building integrated systems and building mounted systems shall provide roof access, pathways, and spacing requirements as required herein (unless otherwise approved by the Fire Chief.)

Exceptions:

- a. Residential structures shall be designed so that each photovoltaic array is no greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in either axis.
- b. Panels/modules shall be permitted to be located up to the roof ridge where an alternative ventilation method approved by the fire chief has been provided or where the fire chief has determined vertical ventilation techniques will not be employed.
 - i. Roof access points. Roof access points shall be located in areas that do not require the placement of ground ladders over openings such as windows or doors, and located at strong points of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs.
 - ii. Residential systems for one- and two-family dwellings. Access to residential systems for one- and two-family dwellings shall be provided in accordance with subsections c. through f. below.
 - iii. Residential buildings with hip roof layouts. Panels/modules installed on residential buildings with hip roof layouts shall be located in a manner that provides a 3-foot-wide (914 mm) clear access pathway from the eave to the ridge on each roof slope where panels/modules are located. The access pathway shall be located at a structurally strong location on the building capable of supporting the live load of fire fighters accessing the roof.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

- iv. Residential buildings with a single ridge. Panels/modules installed on residential buildings with a single ridge shall be located in a manner that provides two, 3-foot-wide (914 mm) access pathways from the eave to the ridge on each roof slope where panels/modules are located.

Exception: This requirement shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

- v. Residential buildings with roof hips and valleys. Panels/modules installed on residential buildings with roof hips and valleys shall be located no closer than 18 inches (457 mm) to a hip or a valley where panels/modules are to be placed on both sides of a hip or valley. Where panels are to be located on only one side of a hip or valley that is of equal length, the panels shall be permitted to be placed directly adjacent to the hip or valley.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

- vi. Residential building smoke ventilation. Panels/modules installed on residential buildings shall be located no higher than 3 feet (914 mm) below the ridge in order to allow for fire department smoke ventilation operations.
- vii. Other than residential buildings. Access to systems for occupancies other than one- and two-family dwellings shall be provided in accordance with subsections h. through j. below.

Exception: Where it is determined by the fire code official that the roof configuration is similar to that of a one- or two-family dwelling, the residential access and ventilation requirements in subsections c. through f. above shall be permitted to be used.

- viii. Access. There shall be a minimum 6-foot-wide (1829 mm) clear perimeter around the edges of the roof.

Exception: Where either axis of the building is 250 feet (76 200 mm) or less, there shall be a minimum 4-foot-wide (1290 mm) clear perimeter around the edges of the roof.

- ix. Pathways. The solar installation shall be designed to provide designated pathways. The pathways shall meet the following requirements:
 - 1. The pathway shall be over areas capable of supporting the live load of fire fighters accessing the roof.
 - 2. The centerline axis pathways shall be provided in both axes of the roof. Centerline axis pathways shall run where the roof structure is capable of supporting the live load of fire fighters accessing the roof.
 - 3. Shall be a straight line not less than 4 feet (1290 mm) clear to skylights or ventilation hatches.
 - 4. Shall be a straight line not less than 4 feet (1290 mm) clear to roof standpipes.
 - 5. Shall provide not less than 4 feet (1290 mm) clear around roof access hatch with at least one not less than 4 feet (1290 mm) clear pathway to parapet or roof edge.

- x. Smoke ventilation. The solar installation shall be designed to meet the following requirements:
 - 1. Arrays shall be no greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in distance in either axis in order to create opportunities for fire department smoke ventilation operations.
 - 2. Smoke ventilation options between array sections shall be one of the following:
 - 2.1. A pathway 8 feet (2438 mm) or greater in width.
 - 2.2. A 4-foot (1290 mm) or greater in width pathway and bordering roof skylights or smoke and heat vents.

- 2.3. A 4-foot (1290 mm) or greater in width pathway and bordering 4-foot by 8-foot (1290 mm by 2438 mm) "venting cutouts" every 20 feet (6096 mm) on alternating sides of the pathway.
4. Ground-mounted photovoltaic arrays. Ground-mounted photovoltaic arrays shall comply with subsections [1] through [3] above and this section. Setback requirements shall not apply to ground-mounted, free-standing photovoltaic arrays. A clear, brush-free area of 10 feet (3048 mm) shall be required for ground-mounted photovoltaic arrays.
5. The Township reserves the right to inspect a solar PV system for building or fire code compliance and safety.
6. If an owner/property owner/land owner/facility owner/operator fails to repair or remove a solar PV system as ordered, and any appeal rights have been exhausted, the Township may enter the structure/property, remove the system and charge the owner/property owner/land owner/facility owner/operator for all costs and expenses of removal, including reasonable attorney's fees or pursue other legal action to have the system removed at the owner/property owner/land owner/facility owner/operator's expense.
7. In addition to any other available remedies, any unpaid costs resulting from the Township's removal of a vacated abandoned or de-commissioned solar PV system shall constitute a lien upon the property against which the costs were charged. Legal counsel of the Township shall institute appropriate action for the recovery of such cost, plus attorney's fees, including, but not limited to filing of municipal claims pursuant to 53 P.S. §7107, et seq., for the cost of such work, 6 percent interest per annum, plus a penalty of 5 percent of the amount due plus attorney's fees and costs incurred by the Township in connection with the removal work and the filing of the Township claim.

C. Rapid Disconnect Required

1. All PV systems governed by this Ordinance must include a rapid disconnect authorized by the National Electrical Code, most recent edition, as amended and adopted by the Commonwealth of Pennsylvania.

Section 310-143. Permit Requirements.

Before any construction or installation on any solar PV system shall commence, a permit issued by the Township of Hampton shall be obtained to document compliance with this Ordinance. The Council may establish a fee for said permit by Resolution.

ORDAINED AND ENACTED into law this _____ day of _____, 2018.

ATTEST:

TOWNSHIP OF HAMPTON

Township Manager

By: _____
President of Council

APPROVED TO AS TO FORM

Vincent A. Tucceri, Esquire
Township Solicitor