**Remove Solar Facilities from the Agricultural Zoning District. Have it in Industrial Zoning District only.**

**DEFINITION (to be revised)**

**ACCESSORY SOLAR ENERGY SYSTEM**: An area of land or other area used for a solar energy system used to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power primarily for on- site use. Ground mounted or freestanding solar energy systems with an output size not capable of generating greater than 130% of the prior year’s Kilowatt hour (kWh) power consumption or 10kw, whichever is less, shall be considered Accessory Solar Energy Systems. Roof Mounted Solar Energy Systems on the roofs of buildings on-site used primarily for on-site use shall have no limit as to energy output. An accessory solar energy system consists of one (1) or more free- standing ground, or roof mounted solar arrays or modules, or solar related equipment and is intended to primarily reduce on-site consumption of utility power or fuels.

**DEFINITIONS (to be added)**

**GLARE:** The effect produced by light with an intensity sufficient to cause annoyance, discomfort, or loss in visual performance and visibility.

**SOLAR ARRAY:** A grouping of multiple solar modules with purpose of harvesting solar energy.

**SOLAR CELL:** The smallest basic solar electric device which generates electricity when exposed to light.

**SOLAR MODULE**: A grouping of solar cells with the purpose of harvesting solar energy.

 [**§ 175-73.1 Solar energy systems.**](https://ecode360.com/37464452#37464452)

1. Accessory solar energy systems (ASES).
2. Criteria applicable to all accessory solar energy systems.
3. ASES shall be permitted as a use by right in all zoning districts.
4. Conformance to standards; maintenance.

[[1]](https://ecode360.com/37467579#37467579)The ASES layout, design, installation, and ongoing maintenance shall conform to applicable industry standards, such as those of the American National Standards Institute (ANSI), Underwriters Laboratories (UL), the American Society for Testing and Materials (ASTM), Institute of Electrical and Electronics Engineers (IEEE), Solar Rating and Certification Corporation (SRCC), Electrical Testing Laboratory (ETL), Florida Solar Energy Center (FSEC) or other similar certifying organizations, and shall comply with the Pennsylvania Uniform Construction Code as enforced by Franklin Township, and with all other applicable fire and life safety requirements.

[[2]](https://ecode360.com/37467580#37467580)Upon completion of installation, the ASES shall be maintained in good working order in accordance with standards of the Franklin Township codes under which the ASES was constructed. Failure of the property owner to maintain the ASES in good working order is grounds for appropriate enforcement actions by Franklin Township in accordance with applicable ordinances.

[(c)](https://ecode360.com/37467581#37467581)All on-site utility, connection lines, and plumbing shall be placed underground.

 [(d)](https://ecode360.com/37467582#37467582)Glare.

[[1]](https://ecode360.com/37467583#37467583)All ASES shall be placed such that concentrated solar radiation or glare does not project onto nearby structures or roadways. Exterior surfaces shall have a nonreflective finish.

[[2]](https://ecode360.com/37467584#37467584)The applicant has the burden of proving that any glare produced does not have significant adverse impact on neighboring or adjacent uses either through siting or mitigation.

 [(e)](https://ecode360.com/37467585#37467585)Decommissioning.

[[1]](https://ecode360.com/37467586#37467586)Each ASES and all solar-related equipment shall be removed within 12 months of the date when the use has been discontinued or abandoned by the system owner and/or operator, or upon termination of the useful life of same.

[[2]](https://ecode360.com/37467587#37467587)The ASES shall be presumed to be discontinued or abandoned if no electricity is generated by such solar collector for a period of 12 continuous months.

[[3]](https://ecode360.com/37467588#37467588)The ASES owner shall, at the request of the Township, provide information concerning the amount of energy generated by the ASES in the last 12 months.

 [(f)](https://ecode360.com/37467589#37467589)Permit requirements.

[[1]](https://ecode360.com/37467590#37467590)Zoning/building permit applications shall document compliance with this section and shall be accompanied by drawings showing the location of the system on the building or property, including property lines.

[[2]](https://ecode360.com/37467591#37467591)The ASES must be properly maintained and be kept free from all hazards, including, but not limited to, faulty wiring, loose fastenings, being in an unsafe condition or detrimental to public health, safety or general welfare.

(g) The ASES installers must certify they are listed as a certified installer on the PA Department of Environmental Protection’s (DEP) approved solar installer list or that they meet the criteria to be a DEP approved installer by meeting or exceeding one of the following requirements:

[1] Is certified by the North American Board of Certified Energy Practitioners (NABCEP).

[2] Has completed an Interstate Renewable Energy Council (IREC) Institute for Sustainable Power Quality (ISPQ) accredited PV training program or a PV manufacturer’s training program and successfully installed a minimum of three PV systems.

[3] For residential applications, a registered home improvement contractor with the Attorney General’s office.

(h) The owner of an ASES shall provide Franklin Township written confirmation that the public utility company to which the ASES will be connected has been informed of the customer’s intent to install a grid connected system and approved of such connection. Off-grid systems shall be exempt from this requirement.

(i) The display of advertising is prohibited except for reasonable identification of the manufacturer of the system.

(j) Solar Easements

[1] Where a subdivision or land development involves the use of solar energy systems, solar easements may be provided. Said easements shall be in writing, and shall be subject to the same conveyance and instrument recording requirements as other easements.

[2] Any such easements shall be appurtenant; shall run with the land benefited and burdened; and shall be defined and limited by conditions stated in the instrument of conveyance. Instruments creating solar easement shall include but not be limited to:

[a] A description of the dimensions of the easement including vertical and horizontal angles measured in the degrees or the hours of the day, on specified dates, during which direct sunlight to a specified surface or structural design feature may not be obstructed;

[b] Restrictions on the placement of vegetation, structures, and other objects which may impair or obstruct the passage of sunlight through the easement;

[c] Enumerate terms and conditions, if any, under which the easement may be revised or terminated;

[d] Explain the compensation for the owner of the real property subject to the solar easement for maintaining the easement and for the owner of the real property benefiting from the solar easement in the event of interference with the easement.

[3] If required, an ASES owner and/or operator must obtain any solar easements necessary to guarantee unobstructed solar access by separate civil agreement(s) with adjacent property owner(s).

(k) Prior to the issuance of a zoning permit, applicants must acknowledge in writing that the issuing of said permit for a solar energy system shall not and does not create in the property owner, its, his, her or their successors and assigns in title or, create in the property itself : (a) the right to remain free of shadows and/or obstructions to solar energy caused by development of adjoining or other property or the growth of any trees or vegetation on such property; or (b) the right to prohibit the development on or growth of any trees or vegetation on such property.

[(2)](https://ecode360.com/37467592#37467592)Roof-mounted and wall-mounted accessory solar energy systems.

[(a)](https://ecode360.com/37467593#37467593)A roof-mounted or wall-mounted ASES may be located on a principal or accessory building.

[(b)](https://ecode360.com/37467594#37467594)The total height of a building with an ASES shall not exceed by more than three feet above the maximum building height specified for principal or accessory buildings within the applicable zoning district.

[(c)](https://ecode360.com/37467595#37467595)Wall-mounted ASES shall comply with the setbacks for principal and accessory structures in the underlying zoning districts.

[(d)](https://ecode360.com/37467596#37467596)Solar panels shall not extend beyond any portion of the roof edge.

[(e)](https://ecode360.com/37467597#37467597)For roof- and wall-mounted systems, the applicant shall provide evidence that the plans comply with the Uniform Construction Code and adopted building code of the Township, including that the roof or wall is capable of holding the load imposed on the structure.

[(3)](https://ecode360.com/37467598#37467598)Ground-mounted accessory solar energy systems.

 [(a)](https://ecode360.com/37467599#37467599)Setbacks.

[[1]](https://ecode360.com/37467600#37467600)The minimum yard setbacks from side and rear property lines shall be equivalent to the accessory structure setback in the applicable zoning district.

[[2]](https://ecode360.com/37467601#37467601)A ground-mounted ASES shall not be located in the required front yard, unless the principal structure is set back more than 250 feet from the front lot line, in which case, the ASES shall be set back not less than 200 feet from the front lot line.

[(b)](https://ecode360.com/37467602#37467602)Height. Ground-mounted ASES shall not exceed 15 feet in height above the ground elevation surrounding the systems.

[(c)](https://ecode360.com/37467603#37467603)Stormwater management.

[[1]](https://ecode360.com/37467604#37467604)Stormwater runoff from an ASES shall be managed in accordance with the requirements of the Franklin Township Stormwater Management Ordinance.[[1]](https://ecode360.com/37464452#ft37467604-1)

[[2]](https://ecode360.com/37467605#37467605)Where solar panels are mounted above the ground surface allowing for vegetation below the panels, the horizontal area of the panel may be considered a disconnected impervious area ("DIA") and therefore, will have no increase from the predevelopment to post-development runoff coefficient. The horizontal area of the panel can only be considered a DIA if the following conditions apply:

[[a]](https://ecode360.com/37467606#37467606)Where natural vegetative cover is preserved and/or restored utilizing low-impact construction techniques from the Pennsylvania Department of Environmental Protection Stormwater Best Management Practices Manual, including, but not limited to, the following: minimizing the total disturbed area, minimizing soil compaction in disturbed areas, and revegetating and reforesting disturbed areas using native species.

[[b]](https://ecode360.com/37467607#37467607)Where the vegetative cover has a minimum uniform 90% perennial vegetative cover with a density capable of resisting accelerated erosion and sedimentation.

[[i]](https://ecode360.com/37467608#37467608)For panels located on slopes of 0% to 5%, a minimum four-inch height of vegetative cover shall be maintained.

[[ii]](https://ecode360.com/37467609#37467609)For panels located on slopes between 5% and 10%, a meadow condition shall be maintained.

[[iii]](https://ecode360.com/37467610#37467610)Panels located on slopes between 10% and 15% cannot be considered DIA.

[[iv]](https://ecode360.com/37467611#37467611)Solar panels located on slopes over 15% are not permitted.

[[v]](https://ecode360.com/37467612#37467612)Vegetated areas shall not be subject to chemical fertilization or herbicide/pesticide application, except for those applications necessary to establish the vegetative cover or to prevent invasive species and in accordance with an approved erosion and sediment control plan.

[[vi]](https://ecode360.com/37467613#37467613)Agrivoltaics, the codevelopment of the same area of land for both solar photovoltaic power and conventional agriculture, may be used, provided that:

[[A]](https://ecode360.com/37467614#37467614)Only shade-tolerant crops may be used;

[[B]](https://ecode360.com/37467615#37467615)Crops must be no tilled in;

[[C]](https://ecode360.com/37467616#37467616)A written erosion and sediment control plan must be developed for agricultural plowing or tilling activities, or a portion of the overall farm conservation plan must identify BMPs used;

[[D]](https://ecode360.com/37467617#37467617)Any cutting or mowing of the agricultural crop is limited to a height of no less than four inches;

[[E]](https://ecode360.com/37467618#37467618)Application of chemical fertilization or herbicides/pesticides is limited to the agronomic needs to the crop(s).

[[c]](https://ecode360.com/37467619#37467619)Where the solar panels within a solar array are arranged in a fashion that:

[[i]](https://ecode360.com/37467620#37467620)Allows the passage of runoff between each solar panel, thereby minimizing the creation of concentrated runoff.

[[ii]](https://ecode360.com/37467621#37467621)Allows for the growth of vegetation beneath the panel and between the solar arrays.

[[d]](https://ecode360.com/37467622#37467622)Where the length of the receiving, overland, vegetated area, downhill of each solar array is equal to or greater than the contributing, maximum, combined, horizontal length of the solar arrays. The grass area below each solar array shall not be considered in the length of the receiving, overland, vegetated area.

[[e]](https://ecode360.com/37467623#37467623)Where the contribution flow path or total combined horizontal length of a solar array is less than 75 feet.

[[f]](https://ecode360.com/37467624#37467624)Where less than 5% of the horizontal area of the solar panels themselves are disturbed and/or covered by the ground-mounted support structures or foundation.

[[g]](https://ecode360.com/37467625#37467625)Where the lowest vertical clearance along the drip edge or drip line of all solar panels within a solar array is 10 feet or less from the surface of the ground but an adequate height to promote vegetative growth below the solar array.

[[h]](https://ecode360.com/37467626#37467626)Where the drip edge or drip line of the solar panels is mounted level to promote sheet flow discharge unless no more than 500 square feet of contributing surface will discharge to any one point, in which case a spreading device is required for the concentrated discharges.

[[3]](https://ecode360.com/37467627#37467627)The horizontal area of any solar panel or solar array that cannot meet all the conditions to be considered DIA shall be treated as impervious area. These areas shall be included in the predevelopment to post-development runoff analysis as impervious area to determine the need for post-construction stormwater management ("PCSM") best management practices.

[[a]](https://ecode360.com/37467628#37467628)Use of gravel is permissible under a panel or in the receiving downhill flow path; however, the use of gravel would not allow the horizontal area of the solar panel or solar array to be considered as a DIA.

[[b]](https://ecode360.com/37467629#37467629)All impervious areas associated with the ASES such as roadways and support buildings cannot be considered a DIA and shall follow normal protocols when performing the PCSM stormwater analysis.

[(d)](https://ecode360.com/37467630#37467630)Buffering. Ground-mounted ASES shall be buffered from any adjacent land uses or properties that are residentially zoned or used for residential purposes in accordance with Article [IV](https://ecode360.com/10759567#10759567), § [175-22](https://ecode360.com/10759664#10759664) of the Zoning Ordinance around the perimeter of the project.

[(e)](https://ecode360.com/37467631#37467631)Appropriate safety/warning signage concerning voltage shall be placed at ground-mounted electrical devices, equipment, and structures. All electrical control devices associated with the ASES shall be locked to prevent unauthorized access or entry.

[(f)](https://ecode360.com/37467632#37467632)Ground-mounted ASES shall not be placed within any legal easement or right-of-way location or be placed within any stormwater conveyance system, unless the applicant can demonstrate, to the satisfaction of the Township, that the ASES will not impede stormwater management, or in any other manner alter or impede stormwater runoff from collecting in a constructed stormwater conveyance system.

[B.](https://ecode360.com/37467633#37467633)Solar energy facility (SEF).

 [(1)](https://ecode360.com/37467634#37467634)Criteria applicable to all SEFs.

[(a)](https://ecode360.com/37467635#37467635)The SEF layout, design and installation shall conform to applicable industry standards, such as those of the American National Standards Institute (ANSI), Underwriters Laboratories (UL), the American Society for Testing and Materials (ASTM),), Institute of Electrical and Electronics Engineers (IEEE), Solar Rating and Certification Corporation (SRCC), Electrical Testing Laboratory (ETL), Florida Solar Energy Center (FSEC) or other similar certifying organizations, and shall comply with the Pennsylvania Uniform Construction Code as enforced by Franklin Township and with all other applicable fire and life safety requirements. The manufacturer specifications for the key components of the system shall be submitted as part of the application.

[(b)](https://ecode360.com/37467636#37467636)All on-site transmission and plumbing lines shall be placed underground.

[(c)](https://ecode360.com/37467637#37467637)Solar facility connections shall be placed underground unless:

[[1]](https://ecode360.com/37467638#37467638)The electric lines will be placed on existing utility poles that host existing electric, cable, or telephone lines; or

[[2]](https://ecode360.com/37467639#37467639)The applicant can demonstrate, to the satisfaction of the Township, that it is not possible to place the connection underground, in which case, only the portion of the line which is not capable of placement underground, as determined by the Township, may be placed above ground.

[(d)](https://ecode360.com/37467640#37467640)No portion of the SEF shall contain or be used to display advertising. The manufacturer's name and equipment information or indication of ownership shall be allowed on any equipment of the SEF, provided they comply with the prevailing sign regulations.

[(e)](https://ecode360.com/37467641#37467641)Glare.

[[1]](https://ecode360.com/37467642#37467642)All SEF shall be placed such that concentrated solar radiation or glare does not project onto nearby structures or roadways. Exterior surfaces shall have a nonreflective finish.

[[2]](https://ecode360.com/37467643#37467643)The applicant has the burden of proving that any glare produced does not have significant adverse impact on neighboring or adjacent uses either through siting or mitigation.

[(f)](https://ecode360.com/37467644#37467644)The SEF owner and/or operator shall maintain a phone number and identify a person responsible for the public to contact with inquiries and complaints throughout the life of the project and provide this number and name to the Township. The SEF owner and/or operator shall make reasonable efforts to respond to the public's inquiries and complaints.

[(g)](https://ecode360.com/37467645#37467645)Decommissioning.

[[1]](https://ecode360.com/37467646#37467646)The SEF owner is required to notify the Township immediately upon cessation or abandonment of the operation. The SEF shall be presumed to be discontinued or abandoned if no electricity is generated by such system for a period of 12 continuous months.

[[2]](https://ecode360.com/37467647#37467647)The SEF owner shall then have 12 months in which to dismantle and remove the SEF, including all solar-related equipment or appurtenances related thereto, including but not limited to buildings, cabling, electrical components, roads, foundations, solar facility connections and other associated facilities.

[[3]](https://ecode360.com/37467648#37467648)To the extent possible the materials shall be resold or salvaged. Materials that cannot be resold or salvaged shall be disposed or at a facility authorized to dispose of such materials by federal or state law.

[[4]](https://ecode360.com/37467649#37467649)Any soil exposed during the removal shall be stabilized in accordance with applicable erosion and sediment control standards.

[[5]](https://ecode360.com/37467650#37467650)Any access drive paved aprons from public roads shall remain for future use.

[[6]](https://ecode360.com/37467651#37467651)The SEF site area shall be restored to its preexisting condition, suitable for its prior use, except the landowner may authorize, in writing, any buffer landscaping or access roads installed to accommodate the SEF to remain.

[[7]](https://ecode360.com/37467652#37467652)Any necessary permits, such as erosion and sedimentation and NPDES permits, shall be obtained prior to decommissioning activities.

[[8]](https://ecode360.com/37467653#37467653)At the time of issuance of the permit for the construction of the SEF, the owner shall provide financial security in the form and amount acceptable to the Township to secure its obligations under this section.

[[a]](https://ecode360.com/37467654#37467654)The SEF developer shall, at the time of application, provide the Township with an estimate of the cost of performing the decommissioning activities required herein, together with an administrative and inflation factor of 25% to account for the cost of obtaining permits to complete said activities. The estimate may include an estimated salvage and resale value, discounted by a factor of 20%. The decommissioning cost estimate formula shall be: gross cost of decommissioning activities plus administrative factor of 25% minus salvage and resale credit of 80% equals the decommissioning cost estimate.

[[b]](https://ecode360.com/37467655#37467655)On every fifth anniversary of the date of providing the decommissioning financial security, the SEF owner shall provide an updated decommission cost estimate, utilizing the formula set forth above with adjustments for inflation and cost and value changes. If the decommissioning security amount changes, the SEF owner shall remit the increased financial security to the Township within 30 days of the approval of the updated decommissioning security estimate by the Township.

[[c]](https://ecode360.com/37467656#37467656)Decommissioning security estimates shall be subject to review and approval by the Township and the SEF developer. The owner shall be responsible for administrative, legal, and engineering costs incurred by the Township for such review.

[[d]](https://ecode360.com/37467657#37467657)At no time shall the financial security be an amount less than $500,000.

[[e]](https://ecode360.com/37467658#37467658)The decommissioning security may be in the form of cash, letter of credit, or an investment grade corporate guarantee rated BBB-/Baa3 or better by S&P, Moody's, or AM Best, as applicable.

[[f]](https://ecode360.com/37467659#37467659)Prior to approval of any plan or permit for an SEF, the SEF developer shall enter into a decommissioning agreement with the Township outlining the responsibility of the parties under this agreement as to the decommissioning of the SEF.

[(h)](https://ecode360.com/37467660#37467660)Permit requirements.

[[1]](https://ecode360.com/37467661#37467661)The SEF shall comply with the Township subdivision and land development requirements through submission of a land development plan. The installation of the SEF shall be in compliance with all applicable permit requirements, codes, and regulations.

[[2]](https://ecode360.com/37467662#37467662)The SEF owner and/or operator shall repair, maintain and replace the SEF and related solar equipment during the term of the permit in a manner consistent with industry standards as needed to keep the SEF in good repair and operating condition.

(i) SEF installers must certify they are listed as a certified installer on the PA Department of Environmental Protection’s (DEP) approved solar installer list or that they meet the criteria to be a DEP approved installer by meeting or exceeding one of the following requirements:

[1] Is certified by the North American Board of Certified Energy Practitioners (NABCEP).

[2] Has completed an Interstate Renewable Energy Council (IREC) Institute for Sustainable Power Quality (ISPQ) accredited PV training program or a PV manufacturer’s training program and successfully installed a minimum of three PV systems.

[3] For residential applications, a registered home improvement contractor with the Attorney General’s office.

(j) The owner of an SEF shall provide Franklin Township written confirmation that the public utility company to which the SEF will be connected has been informed of the customer’s intent to install a grid connected system and approved of such connection. Off-grid systems shall be exempt from this requirement.

(k) A noise study will be performed and included in the application. The noise study will be performed by an independent noise study expert and paid for by the applicant. Noise from a SEF shall not exceed 45 dBA, as measured at the property line.

(l) No trees or other landscaping otherwise required by the municipal ordinances or attached as a condition of approval of any plan, application, or permit may be removed for the installation or operation of a SEF.

 [1] An Operation and Maintenance Agreement is required.

 [2] A Maintenance Bond is required.

(m) Prior to the issuance of a zoning permit, applicants must acknowledge in writing that the issuing of said permit for a solar energy system shall not and does not create in the property owner, its, his, her or their successors and assigns in title or, create in the property itself : (a) the right to remain free of shadows and/or obstructions to solar energy caused by development of adjoining or other property or the growth of any trees or vegetation on such property; or (b) the right to prohibit the development on or growth of any trees or vegetation on such property.

(n) Solar Easements

[1] Where a subdivision or land development proposes a SEF, solar easements may be provided. Said easements shall be in writing, and shall be subject to the same conveyance and instrument recording requirements as other easements.

[2] Any such easements shall be appurtenant; shall run with the land benefited and burdened; and shall be defined and limited by conditions stated in the instrument of conveyance. Instruments creating solar easement shall include but not be limited to:

[a] A description of the dimensions of the easement including vertical and horizontal angles measured in the degrees or the hours of the day, on specified dates, during which direct sunlight to a specified surface or structural design feature may not be obstructed;

[b] Restrictions on the placement of vegetation, structures, and other objects which may impair or obstruct the passage of sunlight through the easement;

[c] Enumerate terms and conditions, if any, under which the easement may be revised or terminated;

[d] Explain the compensation for the owner of the real property subject to the solar easement for maintaining the easement and for the owner of the real property benefiting from the solar easement in the event of interference with the easement.

[3] If necessary, a SEF owner and/or operator must obtain any solar easements necessary to guarantee unobstructed solar access by separate civil agreement(s) with adjacent property owner(s).

(o) If a ground mounted SEF is removed, any earth disturbance resulting from the removal must be graded and reseeded.

 [(2)](https://ecode360.com/37467663#37467663)Ground-mounted principal solar energy systems.

[(a)](https://ecode360.com/37467664#37467664)Portion of lot to be devoted to solar arrays. For each lot on which an SEF, or a component of an SEF, is proposed, the following calculations shall be performed to determine the proportion of the lot on which solar arrays may be authorized.

[[1]](https://ecode360.com/37467665#37467665)Calculate constrained area. Calculate the constrained area by calculating the sum of the acreage of the following features that appear on a lot:

[[a]](https://ecode360.com/37467666#37467666)Floodplains, as identified in the Franklin Township Floodplain Ordinance.[[2]](https://ecode360.com/37464452#ft37467666-2)

[[b]](https://ecode360.com/37467667#37467667)Natural and man-made drainage corridors, extending 25 feet from the center line of any such drainage feature.

[[c]](https://ecode360.com/37467668#37467668)Wetlands.

[[d]](https://ecode360.com/37467669#37467669)Wetlands buffer extending 50 feet from any wetland.

[[e]](https://ecode360.com/37467670#37467670)Slopes in excess of 15%.

[[f]](https://ecode360.com/37467671#37467671)Wooded areas.

[[g]](https://ecode360.com/37467672#37467672)Road rights-of-way.

[[h]](https://ecode360.com/37467673#37467673) Setback areas, as defined in the underlying zoning district.

[[2]](https://ecode360.com/37467674#37467674)Calculate SEF development area. Calculate the SEF development area by subtracting the constrained area from the lot area.

[[3]](https://ecode360.com/37467675#37467675)Calculate the portion of the SEF development area that may be devoted to solar arrays. Calculate the total acres of land within the SEF development area that are comprised of Class I and II agricultural soils, as identified in official federal soils mapping or a more accurate professional study. Subtract 1/2 of this figure from the SEF development area to determine the portion of the SEF development area that may be devoted to solar arrays.

[[4]](https://ecode360.com/37467676#37467676)For each lot on which an SEF, or a component of an SEF, is proposed, a map shall be provided by the applicant detailing the constrained area, the SEF development area, the Class I and II agricultural soils, and the portion of the SEF development that may be devoted to solar arrays.

[[5]](https://ecode360.com/37467677#37467677)Solar arrays shall only be placed within that portion of any lot that lies within the portion of the SEF development that may be devoted to solar arrays.

[(b)](https://ecode360.com/37467678#37467678)Setbacks. An SEF shall be set back a minimum of 200 feet from any lot line.

[(c)](https://ecode360.com/37467679#37467679)Height. All ground-mounted SEFs shall comply with a fifteen-foot height requirement.

[(d)](https://ecode360.com/37467680#37467680)Stormwater management.

[[1]](https://ecode360.com/37467681#37467681)Stormwater runoff from an ASES shall be managed in accordance with the requirements of the Franklin Township Stormwater Management Ordinance.[[3]](https://ecode360.com/37464452#ft37467681-3)

[[2]](https://ecode360.com/37467682#37467682)Where solar panels are mounted above the ground surface allowing for vegetation below the panels, the horizontal area of the panel may be considered a disconnected impervious area ("DIA") and therefore, will have no increase from the predevelopment to post-development runoff coefficient. The horizontal area of the panel can only be considered a DR if the following conditions apply:

[[a]](https://ecode360.com/37467683#37467683)Where natural vegetative cover is preserved and/or restored utilizing low-impact construction techniques from the Pennsylvania Department of Environmental Protection Stormwater Best Management Practices Manual, including, but not limited to the following: minimizing the total disturbed area, minimizing soil compaction in disturbed areas, and revegetating and reforesting disturbed areas using native species.

[[b]](https://ecode360.com/37467684#37467684) Where the vegetative cover has a minimum uniform 90% perennial vegetative cover with a density capable of resisting accelerated erosion and sedimentation.

[[i]](https://ecode360.com/37467685#37467685)For panels located on slopes of 0% to 5%, a minimum four-inch height of vegetative cover shall be maintained.

[[ii]](https://ecode360.com/37467686#37467686)For panels located on slopes between 5% and 10%, a meadow condition shall be maintained.

[[iii]](https://ecode360.com/37467687#37467687)Panels located on slopes between 10% and 15% cannot be

[[iv]](https://ecode360.com/37467688#37467688)Solar panels located on slopes over 15% are not permitted.

[[v]](https://ecode360.com/37467689#37467689)Vegetated areas shall not be subject to chemical fertilization or herbicide/pesticide application, except for those applications necessary to establish the vegetative cover or to prevent invasive species and in accordance with an approved erosion and sediment control plan.

[[vi]](https://ecode360.com/37467690#37467690)Agrivoltaics, the codevelopment of the same area of land for both solar photovoltaic power and conventional agriculture, may be used, provided that:

[[A]](https://ecode360.com/37467691#37467691)Only shade-tolerant crops may be used;

[[B]](https://ecode360.com/37467692#37467692)Crops must be no tilled in;

[[C]](https://ecode360.com/37467693#37467693)A written erosion and sediment control plan must be developed for agricultural plowing or tilling activities, or a portion of the overall farm conservation plan must identify BMPs used;

[[D]](https://ecode360.com/37467694#37467694)Any cutting or mowing of the agricultural crop is limited to a height of no less than four inches;

[[E]](https://ecode360.com/37467695#37467695)Application of chemical fertilization or herbicides/pesticides is limited to the agronomic needs to the crop(s).

[[c]](https://ecode360.com/37467696#37467696)Where the solar panels within a solar array are arranged in a fashion that:

[[i]](https://ecode360.com/37467697#37467697)Allows the passage of runoff between each solar panel, thereby minimizing the creation of concentrated runoff.

[[ii]](https://ecode360.com/37467698#37467698)Allows for the growth of vegetation beneath the panel and between

the solar arrays.

[[d]](https://ecode360.com/37467699#37467699)Where the length of the receiving, overland, vegetated area, downhill of each solar arrays is equal to or greater than the contributing, maximum, combined, horizontal length of the solar arrays. The grass area below each solar array shall not be considered in the length of the receiving, overland, vegetated area.

[[e]](https://ecode360.com/37467700#37467700)Where the contribution flow path or total combined horizontal length of a solar array is less than 75 feet.

[[f]](https://ecode360.com/37467701#37467701)Where less than 5% of the horizontal area of the solar panels themselves are disturbed and/or covered by the ground-mounted support structures or foundation.

[[g]](https://ecode360.com/37467702#37467702)Where the lowest vertical clearance along the drip edge or drip line of all solar panels within a solar array is 10 feet or less from the surface of the ground but an adequate height to promote vegetative growth below the solar array.

[[h]](https://ecode360.com/37467703#37467703)Where the drip edge or drip line of the solar panels is mounted level to promote sheet flow discharge unless no more than 500 square feet of contributing surface will discharge to any one point, in which case a spreading device is required for the concentrated discharges.

[[3]](https://ecode360.com/37467704#37467704)The horizontal area of any solar panel or solar array that cannot meet all the conditions to be considered DIA shall be treated as impervious area. These areas shall be included in the predevelopment to post-development runoff analysis as impervious area to determine the need for post-construction stormwater management ("PCSM") best management practices.

[[a]](https://ecode360.com/37467705#37467705)Use of gravel is permissible under a panel or in the receiving downhill flow path; however, the use of gravel would not allow the horizontal area of the solar panel or solar array to be considered as a DIA.

[[b]](https://ecode360.com/37467706#37467706)All impervious areas associated with the ASES such as roadways and support buildings cannot be considered a DIA and shall follow normal protocols when performing the PCSM stormwater analysis.

[(e)](https://ecode360.com/37467707#37467707)Ground-mounted SEF shall be screened and buffered in accordance with the following standards:

[[1]](https://ecode360.com/37467708#37467708)Vegetative buffering shall be installed around the entire perimeter of the SEF installation, except where the Zoning Officer determines that the retention of existing trees within the vegetative buffering area may constitute the required vegetative buffer. Existing natural buffers shall be retained in accordance with Chapter [175](https://ecode360.com/10759101#10759101), § [175-22](https://ecode360.com/10759664#10759664).

[[2]](https://ecode360.com/37467709#37467709)The vegetative buffering shall be installed along the exterior side of the fencing. All required vegetative buffering shall be located within 50 feet of the required fencing.

[[3]](https://ecode360.com/37467710#37467710)Vegetative buffering shall be designed to emulate the mix of species and appearance of existing tree lines, hedgerows, and wooded areas already in existence within the landscape where the SEF is proposed. The applicant shall assess the species mix and characteristics found in existing tree lines, hedgerows, and wooded areas surrounding the SEF and document that the vegetative buffering is designed to emulate these characteristics.

[[4]](https://ecode360.com/37467711#37467711)Vegetative buffering shall be selected to provide year-round buffering and shall be of sufficient height, density, and maturity to screen the facility from visibility, as set forth herein within 36 months of the installation of the SEF.

[[5]](https://ecode360.com/37467712#37467712)The primary use of evergreen trees shall not be permitted, and a monotonous straight row of the same species, particularly evergreen trees, is specifically prohibited.

[[6]](https://ecode360.com/37467713#37467713)A combination of natural topography and vegetation can serve as a buffer, provided that the SEF will not be visible from public roads, public parks, or existing residences on surrounding properties. Earthen berms may not be created to serve as a buffer.

[[7]](https://ecode360.com/37467714#37467714)Visibility of SEF shall be determined as visible in a photograph taken at a point with a digital camera with an APS -C Sensor and a 35 mm focal length lens. An SEF shall be considered to not be visible provided that no more than 5% of the SEF shall be visible in accordance with the measure of visibility set forth above.

[[8]](https://ecode360.com/37467715#37467715)The buffering requirements of this section shall supersede the provisions of Article [IV](https://ecode360.com/10759567#10759567) of § [175-22](https://ecode360.com/10759664#10759664) as they pertain to SEFs.

[(f)](https://ecode360.com/37467716#37467716)Ground-mounted SEFs shall not be placed within any legal easement or right-of-way location or be placed within any stormwater conveyance system.

[(g)](https://ecode360.com/37467717#37467717)Security.

[[1]](https://ecode360.com/37467718#37467718)All ground-mounted SEFs shall be completely enclosed by a minimum eight-foot-high fence with a self-locking gate.

[[2]](https://ecode360.com/37467719#37467719)A clearly visible warning sign shall be placed at the base of all pad-mounted transformers and substations and on the fence surrounding the SEF informing individuals of potential voltage hazards.

[(h)](https://ecode360.com/37467720#37467720)Access.

[[1]](https://ecode360.com/37467721#37467721)At a minimum, a twenty-five-foot-wide access road must be provided from a state or township roadway to the SEF site that is paved and maintained in a dust-free condition.

[[2]](https://ecode360.com/37467722#37467722)At a minimum, a twenty-foot-wide cartway shall be provided between the solar array rows to allow access for maintenance vehicles and emergency management vehicles, including fire apparatus and emergency vehicles. Cartway width is the distance between the bottom edge of a solar panel to the top edge of the solar panel directly across from it measured at its greatest parallel width.

[[3]](https://ecode360.com/37467723#37467723)Access to the SEF shall comply with the township access requirements in the Subdivision and Land Development Ordinance.[[4]](https://ecode360.com/37464452#ft37467723-4)

[(i)](https://ecode360.com/37467724#37467724)The ground-mounted SEF shall not be artificially lighted except to the extent required for safety or applicable federal, state, or local authority.

[(j)](https://ecode360.com/37467725#37467725)The applicant must provide written comments from the relevant electric company regarding the capacity of the existing transmission lines envisioned to receive the electricity generated from the utility-scale solar facility. Proof of application for interconnection to the existing electricity system is required.

 [(3)](https://ecode360.com/37467726#37467726)Roof and wall-mounted principal solar energy facility:

[(a)](https://ecode360.com/37467727#37467727)For roof and wall-mounted systems, the applicant shall provide evidence that the plans comply with the Uniform Construction Code and adopted building code of the Township, including that the roof or wall is capable of holding the load imposed on the structure.

[(b)](https://ecode360.com/37467728#37467728)The total height of a building with a roof- and wall-mounted system shall not exceed by more than three feet above the maximum building height specified for principal or accessory buildings within the applicable zoning district.