

HOPKINS TOWNSHIP, ALLEGAN COUNTY, MICHIGAN

AMENDMENT TO THE HOPKINS TOWNSHIP ZONING ORDINANCE - Ordinance No 2025-15

Adopted: 10/13/2025

Effective: 10/31/2025

AN ORDINANCE TO AMEND HOPKINS TOWNSHIP'S ZONING ORDINANCE, BY AMENDING CHAPTER 157.056 TO REGULATE THE INSTALLATION, USE AND RECLAMATION OF SOLAR ENERGY SYSTEMS AND BATTERY ENERGY STORAGE SYSTEMS AND TO REPEAL ANY ORDINANCES IN CONFLICT THEREOF; AND TO PROVIDE AN EFFECTIVE DATE HEREOF.

The Township of Hopkins Board of Trustees, Allegan County, State of Michigan, hereby ordains:

ARTICLE 1. AMEND THE HOPKINS TOWNSHIP ZONING ORDINANCE, SECTION 157.056 TO READ AS FOLLOWS:

SECTION 157.056 SOLAR ENERGY AND BATTERY STORAGE SYSTEMS

A. DEFINITIONS

1. **BATTERY ENERGY STORAGE SYSTEM (BESS)** One or more devices, assembled together, capable of storing energy in order to supply electrical energy at a future time, not to include a stand-alone 12-volt car battery, an electric motor vehicle, or small store-bought batteries designed and used purely for household electronic items.
2. **Battery Energy Storage System, On-Site:** a Battery Energy Storage System that is an accessory use and intended to primarily serve the needs of the consumer on-site.
3. **Battery Energy Storage System, Off-Site:** A Battery Energy Storage System (BESS) that is a principal use (or co-located with a second principal use) and designed and built to connect to the transmission grid.
4. **Dual Use:** A solar energy system that employs one or more of the following land management and conservation practices throughout the project site:
 - a. **Pollinator Habitat:** solar sites designed to meet a score of seventy-six (76) or more on the Michigan Pollinator Habitat Planning Scorecard for solar sites
 - b. **Conservation Cover:** Solar sites designed in consultation with conservation organizations that focus on restoring native plants, grasses and prairie with the aim of

protecting specific species (e.g. bird habitat) or providing specific ecosystem services (e.g. carbon sequestration or soil health).

- c. **Forage:** Solar sites that will incorporate rotational livestock grazing and forage production as part of an overall vegetative maintenance plan.
 - d. **Agrivoltaics:** Solar sites that combine raising crops for food, fiber or fuel, and generating electricity within the project area to maximize land use.
5. **Gigawatt:** A unit of power equal to one billion watts.
 6. **Grid:** The infrastructure of power lines, transformers and substation that delivers electric power to buildings. The utility grid is owned and managed by electric utility companies.
 7. **Installer:** A contractor that installs solar systems.
 8. **Interconnection:** A link between utility company power distribution and local power generation that enables power to move in either direction.
 9. **Inverter:** A device that converts DC power captured by the photovoltaic cells on solar panels into AC power.
 10. **Kilowatt:** A unit of power equal to one thousand watts.
 11. **Megawatt:** A unit of power equal to one million watts.
 12. **Nameplate capacity:** means the designed full-load sustained generating output of a solar energy system. Nameplate capacity shall be determined by reference to the sustained output of a solar energy system even if components of the system are located on different lots, whether contiguous or noncontiguous.
 13. **Net Metering:** A policy whereby utility customers with accessory renewable power sources, including solar, receive credit from their utility provider for electricity generated in excess of their needs (also known as "net excess generation").
 14. **On/Off Grid System:** A solar energy system that is interconnected with the utility grid is an on-grid or grid-tied system, while a system not interconnected is an off- grid system.

15. **Non-Participating Property:** Land that is not a participating property.
16. **Participating Property:** Land that is either owned by an applicant or is the subject of an agreement that provides for the payments by an applicant to a landowner of monetary compensation related to an SES regardless of whether any part of the SES is constructed on the property.
17. **Photovoltaic (PV):** A method of generating electrical power by converting solar radiation (sunlight) into direct current electricity using semiconductors.
18. **Professional Engineer (licensed):** A licensed professional engineer as defined and approved by the State of Michigan.
19. **Rooftop and Building-Mounted Solar System:** Any solar power system in which solar panels are mounted on top of the structure of a roof either as a flush-mounted system or as modules fixed to frames which can be tilted toward the sun at an optimal angle.
20. **Solar array:** A photovoltaic panel or collection of panels and/or collectors in a solar energy system that collects solar radiation.
21. **SOLAR ENERGY SYSTEM (SES):** A photovoltaic system for generating electricity, including all above and below ground equipment or components required for the system to operate properly and to be secured to a roof surface, the ground or building integrated. This includes any necessary operations and maintenance building(s), but does not include any temporary construction offices, substation(s) or other transmission facilities between the SES and the point of interconnection to the electric grid.
22. **Solar Energy System, Principal-Use:** A ground-mounted solar energy system that captures and converts solar energy into electricity, for the purpose of sale or for use in locations other than solely the solar energy system property. A principal-use solar energy system may be located on more than one (1) parcel of property, including noncontiguous parcels.
23. **Solar Energy System, Accessory-Use:** A solar energy collector primarily intended to provide energy for on-site uses and to provide power for use by owners, lessees, tenants, residents, or other occupants of the lot on which it is erected. It may be comprised of the following: building-integrated photovoltaic (BIPV) systems ("BIPV"), ground-mounted solar energy collectors, and/or building-mounted solar energy collectors.
24. **Time-of-Use (TOU) Rates:** A utility billing system in which the price of electricity depends upon the hour of day at which it is used. Rates are higher during the afternoon when electric demand is at its peak. Rates are lower during the night when electric demand is

off peak.

B. Allowable Districts. BESS and SES shall be permitted only as follows:

1. Battery Energy Storage System, On-Site: All districts, permitted by right
2. Battery Energy Storage System, Off-Site: Agricultural, Commercial and Industrial districts, permitted by special land use
3. Solar Energy System, Accessory-Use: All districts, permitted by right
4. Solar Energy System, Principal-Use: Agricultural, Commercial and Industrial, permitted by special land use

C. General Provisions

1. Accessory-Use Solar Energy Systems.

- a. Applicability. This section applies to any system of accessory-use solar energy collector systems. This section does not apply to solar energy collectors mounted on fences, poles, or on the ground with collector surface areas less than five (5) square feet and less than five (5) feet above the ground, nor does this section apply to principal-use solar energy systems, which are regulated in Section 17.72 of this ordinance.
- b. Permit Required. No accessory-use solar energy collector system shall be installed or operated except in compliance with this section. A zoning compliance permit shall be obtained from the Zoning Administrator prior to the installation of an accessory solar energy system. Accessory-use solar energy systems are permitted in all districts, subject to the requirements of this Section.
- c. Applications. In addition to all other required application contents required for a zoning compliance permit, equipment and unit renderings, elevation drawings, and site plans depicting the location and distances from lot lines and adjacent structures shall be submitted for review by the Zoning Administrator.
- d. Glare and Reflection. The exterior surfaces of solar energy collectors shall be generally neutral in color and substantially non-reflective of light. A unit may not be installed or located so that sunlight or glare is reflected into neighboring dwellings or onto adjacent roads.
- e. Installation.

1. An accessory solar energy collector shall be permanently and safely attached to the ground or structure. Solar energy collectors, and their installation and use, shall comply with building codes and other applicable Township and State requirements.
 2. Accessory solar energy collectors shall be installed, maintained, and used only in accordance with the manufacturer's specifications. Upon request, a copy of such specifications shall be submitted to the Township prior to installation.
- f. Power Lines. On-site power lines between solar panels and inverters shall be placed underground pursuant to applicable building and electrical codes.
- g. Abandonment and Removal. A solar energy collector system that ceases to produce energy on a continuous basis for twelve (12) months will be considered abandoned unless the party responsible with ownership interest in the system provides substantial evidence to the Township every six (6) months after the twelve (12) months of no energy production of the intent to maintain and reinstate the operation of that system. The responsible party shall remove all equipment and facilities and restore the lot to its condition prior to the development of the system within one (1) year of abandonment.
- h. Building-Mounted Solar Energy Collectors. These systems may be established as accessory uses in all zoning districts subject to the following conditions.
1. Maximum Height. The maximum height of the zoning district in which the building-mounted solar energy collectors are located shall not be exceeded by more than three (3) feet.
 2. Obstruction. Building-mounted solar energy collectors shall not obstruct solar access to adjacent properties.
- i. Ground-Mounted Accessory Solar Energy Collectors. These systems are permitted in all zoning districts subject to the following conditions:
1. The unit may be located subject to the setbacks for accessory structures.
 2. Obstruction. Ground-mounted solar energy collectors shall not obstruct solar access to adjacent properties.
 3. Maximum Number.
 - a. Residential uses. There shall be no more than one (1) ground-mounted solar energy collector per principal building on a lot.
 - b. Agricultural, Commercial, and Industrial uses. There shall be no limit to the number of ground-mounted solar energy collectors on a lot.
 4. Maximum Size. There shall be no more than ten thousand (10,000) square feet of collector panels on a non-residential ground-mounted accessory solar energy collector system unless a larger system is approved pursuant to Section 17.72 of this Ordinance.

5. **Maximum Height.** The maximum height shall be sixteen (16) feet, measured from the natural grade below the unit to the highest point at full tilt.
6. Applicants requesting ground-mounted solar energy collectors shall demonstrate the system's projected electricity generation capability, and the system shall not regularly exceed the power consumption demand of the principal and accessory land uses on the lot. However, larger systems may be approved if greater electricity need is demonstrated to power on-site buildings and uses.

2. On-Site Battery Storage Systems.

- a. On-Site Battery Energy Storage Systems shall be allowed as a permitted use in all zoning districts, subject to the provisions of this Zoning Ordinance.
- b. A zoning permit and building permit shall be required for all on-site battery energy storage systems.
- c. On-Site battery energy storage with an aggregate energy capacity of more than 600kWh are subject to additional regulations in the applicable fire code, and required documentation shall be submitted along with the building/electrical permit applications.
- d. **Coverage.** Lot coverage shall not exceed the otherwise permissible percentage of lot coverage for buildings in the applicable district.
- e. **Setbacks.** All battery energy storage system structures and related structural apparatus not physically attached to a building shall satisfy the setback requirements in the applicable district or the specific section of the district, as applicable.

D. Special Land Use Standards

1. General Provisions for SES and BESS Special Uses

- a. **Escrow Fee Account:** An escrow account shall be deposited with the Township by the Applicant when the Applicant applies for a Special Land Use Permit for a Principal Use SES or BESS. The monetary amount deposited by the Applicant in escrow with the Township shall be the amount of \$10,000, to cover all reasonable costs and expenses associated with the Special Use review and approval process, which costs shall include, but are not limited to, reasonable fees of the Township Attorney, Township Planner and Township Engineer, as well as costs for any reports or studies that are reasonably related to the zoning review process for the application. Such escrow amount shall be in addition to any filing or application fees established by resolution. At any point during the Special Use review process, the Township may require that the Applicant place additional funds into escrow with the Township if the existing escrow amount deposited by the Applicant is deemed insufficient by the Township. If the escrow account needs replenishing and the

Applicant refuses to do so within thirty (30) days, the Special Use process shall cease unless and until the Applicant makes the required additional escrow deposit. Any applicable zoning escrow Resolutions or other Ordinances adopted by the Township must also be complied with by the Applicant. The Township shall provide a summary of all account activity to the Applicant within a timely manner upon request. Any funds remaining within the escrow after approval of the Special Land Use shall be returned in a timely manner to the Applicant.

- b. **Development Agreement.** Approval of the Special Land Use Permit for a Principal Use SES or BESS and approval of final Site Plan shall not be in effect until a Development Agreement is signed by the Township. The Applicant shall be required to execute a Development Agreement that is acceptable to the Hopkins Township Board of Trustees if the Principal Use SES or BESS application is approved. The Development Agreement with the Township is intended to incorporate the terms and conditions of final Site Plan approval, to ensure proper completion of the plan, which may include but not limited to the Township's oversight fees during construction, and record the same in the Office of the Register of Deeds for Allegan County.
- c. **Host Community Agreement.** The applicant for a Principal Use SES or BESS shall provide to the Township, upon commencement of the operation of the system, \$2000 per megawatt of nameplate capacity. The payment shall be used as determined by the Township for police, fire, public safety or other infrastructure or for other projects as agreed to by the Township and Applicant. These funds shall not be used for items already under the responsibility of the applicant, such as specific fire equipment and trainings as noted above in subsection 1.a.
- d. **Community Safety/Access.** A fire response plan and an emergency response plan shall be required and shall include the following items:
 - 1. Evidence of consultation or a good faith effort to consult with local fire department and emergency response representatives to ensure that the ERP and FRP are in alignment with acceptable operating procedures, capabilities, resources, etc. If consultation with local fire department representatives is not possible, provide evidence of consultation or a good faith effort to consult with the State Fire Marshal or other local emergency manager.
 - 2. A description of all on-site equipment and systems to be provided to prevent or handle fire, safety or security emergencies.
 - 3. A description of all contingency plans to be implemented in response to the occurrence of a fire, safety or security emergency.

4. A commitment to review and update the FRP and ERP with fire departments, first responders, and county emergency managers at least annually.
 5. An analysis of whether plans to be implemented in response to a fire or other emergency can be fulfilled by existing local emergency response capacity. The analysis should include identification of any specific equipment or training deficiencies in local emergency response capacity and recommendations for measures to mitigate deficiencies.
 6. Other information the applicant finds relevant.
 7. Emergency response measures by contingency;
 8. Evacuation control measures by contingency;
 9. Community notification procedures by contingency;
 10. An identification of potential approach and departure routes to and from the facility site for police, fire, ambulance, and other emergency vehicles;
 11. Prior to commencement of power generation, the operator shall contact the Fire Chief to schedule a tour and training session on site to allow emergency services to familiarize itself with the parcels, equipment and physically identify any areas of potential hazard or extra concern. The operator shall in addition schedule not less than one annual training opportunity for local emergency services on site. The operator shall be responsible for all costs, expenses and fees to the participating Fire and Emergency Rescue entities in relation to these activities, including but not limited to wages, fuel, and equipment.
- e. **Liability Insurance.** The owner or operator of Principal Use SES or BESS shall maintain a current insurance policy with a bond rating acceptable to the Township to cover installation and operation. The amount of the policy shall be established as a condition of special use permit approval.
- f. **Special Land Use Permit and Site Plan Application Requirements.** Applications for special land use permit approval and for site plan approval are required. An incomplete application will not be accepted. Each such application shall be subject to the general special land use and site plan review requirements in addition to the following submission requirements:
1. The complete name, address, and telephone number of the applicant.
 2. The planned date for the start of construction and the expected duration of construction.

3. A description of the system, including a site plan as described in Section 224 of the Clean and Renewable Energy Waste Reduction Act, 2008 PA 295, MCL 460.1224. The following items must be shown on the site plan:
 - a. A map of all properties upon which any component of a facility or ancillary feature would be located, and all properties within one thousand (1,000) feet. This should indicate the location of all existing structures and shall identify such structures as occupied or vacant.
 - b. Lot lines and required setbacks shown and dimensioned including horizontal and vertical elevation drawings that show the location and height of the System on the land and dimensions of the System.
 - c. Size and location of existing and proposed water utilities, including any proposed connections to public, or private community sewer or water supply systems.
 - d. A map of any existing overhead and underground major facilities for electric, gas, telecommunications transmission within the facility and surrounding area
 - e. The location and size of all surface water drainage facilities, including source, volume expected, route, and course to final destination.
 - f. A map depicting the proposed facilities, adjacent properties, all structures within participating and adjacent properties, property lines, and the projected sound isolines along with the modeled sound isolines including the statutory limit.
4. A description of the expected use of the system.
5. Expected public benefits of the proposed system.
6. The expected direct impacts of the proposed system on the environment and natural resources and how the applicant intends to address and mitigate these impacts.
7. Information on the effects of the proposed system on public health and safety.
8. A description of the portion of the community where the system will be located.
9. A statement and reasonable evidence that the proposed system will not commence commercial operation until it complies with applicable state and federal environmental laws, including, but not limited to, the Natural Resources and Environmental Protection Act, 1994 PA 451, MCL 324.101 to 324.90106.
10. Evidence of consultation, before submission of the application, with the Department of Environment, Great Lakes, and Energy and other relevant state and federal agencies

before submitting the application, including, but not limited to, the Department of Natural Resources and the Department of Agriculture and Rural Development.

11. The Soil and Economic Survey Report under Section 60303 of the Natural Resources and Environmental Protection Act, 1994 PA 451, MCL 324.60303, for the county where the proposed system will be located.
12. Interconnection queue information for the applicable regional transmission organization.
13. If the proposed site of the system is undeveloped land, a description of feasible alternative developed locations, including, but not limited to, vacant industrial property and brownfields, and an explanation of why they were not chosen.
14. If the system is reasonably expected to have an impact on television signals, microwave signals, agricultural global position systems, military defense radar, radio reception, or weather and doppler radio, a plan to minimize and mitigate that impact. Information in the plan concerning military defense radar is exempt from disclosure under the Freedom of Information Act, 1976 PA 442, MCL 15.231 to 15.246, and shall not be disclosed by the commission or the electric provider or independent power producer except pursuant to court order.
15. A stormwater assessment and a plan to minimize, mitigate, and repair any drainage impacts at the expense of the applicant. The applicant shall make reasonable efforts to consult with the county drain commissioner before submitting the application and shall include evidence of those efforts in its application.
16. Complaint Resolution Plan: The purpose of this section is to provide the public with a mechanism to file a complaint with the System owner or operator and the Zoning Administrator and receive a timely response from the owner/operator regarding alleged violations. The applicant shall submit procedures that it intends to implement for receiving, acting upon, and resolving complaints or allegations that the System is not operated or maintained in compliance with this ordinance.
 - a. Complaint resolution procedures must be presented at the time of application and must satisfy the Planning Commission before approval of a special land use. Those procedures, at a minimum, shall:
 1. Require the system owner or operator to accept complaints regarding non-compliance with the ordinance from all property owners within a one (1) mile radius of a System.

2. Provide a telephone number and mailing address at which the owner or operator can be contacted for purposes of submitting complaints or allegations of non-compliance.
 3. Require that all such complaints or allegations be submitted in writing.
 4. As a condition of the system owner or operator acting on the complaint, require that a complainant allow the System owner or operator or designated staff, or other authorized personnel such as an engineer, on the property of the complainant for further investigation and testing.
 5. Set forth information that must be included in the complaint or allegation.
 6. Require that a complaint is acknowledged in writing by the System owner or operator to both the complainant and the Zoning Administrator within five (5) business days of receipt of said complaint.
 7. Set forth the number of days, not to exceed thirty (30), in which the operator shall investigate and resolve any and all complaints or allegations, either by way of correction or formal denial of non-compliance.
 8. Require the operator to advise the Zoning Administrator in writing of the resolution of any complaint or allegation of non-compliance within thirty (30) days of its receipt of the same.
- b. Any complaint not resolved within thirty (30) days shall result in a performance review by the Planning Commission. Resolution or mitigation of a complaint that involves construction, landscaping, testing or other significant alteration/operational condition that is dependent on seasonal or other conditions may exceed thirty (30) days if approved by the Planning Commission.
 - c. It shall be a violation of this Ordinance to modify the approved complaint resolution procedures without the prior approval of the Planning Commission.
 - d. The System owner or operator shall be provided a reasonable opportunity to cure any violations identified by the Township.
17. A report detailing the sound modeling results along with mitigation plans to ensure that sound emitted from the system will remain below the statutory limit throughout the operational life of the system.
- g. Any other information regarding compliance with the requirements herein.
 - h. Prior to construction, the following information shall be provided.
 1. Equipment specification sheets.
 2. Identification and contact information for the installer(s) of the proposed system.
 3. Augmentation Plan.

4. Approved Decommissioning Plan and Decommissioning Agreement in recordable form and acceptable to the Township Attorney.
5. Life expectancy of the system components including the anticipated schedule for battery replacement to maintain megawatts over the system's lifetime.
6. Hazard Mitigation Analysis.
7. Operation and Maintenance Manual.
8. Identification and contact information for the installer of the system.
9. Electrical schematic plan for the system, including disconnect devices.
10. An approved FRP and ERP.
11. Proof of financial guarantee for decommissioning.

2. Principal-Use Solar Energy Systems

In addition to the standards of Section 157.349, the Planning Commission shall find that a proposed principal-use solar energy system shall meet the following specific Special Land Use standards.

- a. A principal-use SES is a special land use in the "C-2 Commercial", "IND, Industrial" and "AG, Agricultural" zoning districts specifically and is not permitted in any other zoning district. For the protection of agricultural uses in the Township, the aggregate amount of land to be used by all principal-use SES shall be no more than eight (8) percent of the total land area of Hopkins Township, measured using the total surface area of collector panels. An individual principal-use SES shall meet all the following requirements:
 1. Height: Total height for a principal-use SES shall not exceed the maximum height of 16 feet when measured from the ground to the top of the system when oriented at maximum tilt. However, other structures aside from the solar panel shall not exceed twenty-five (25) feet measured from the ground to the highest point of the structure.
 2. Setbacks: Setback distance shall be measured from the closest property line, building wall, natural feature, or road right-of-way or easement to the closest point of the solar array at minimum tilt or any other SES components as follows:
 - a. One hundred (100) feet from any property line of a non-participating lot.
 - b. One hundred (100) feet from any public or private right-of-way or easement.
 - c. Three hundred (300) feet from any existing non-participating dwelling unit.

- d. A principal-use SES is not subject to property line setbacks for common property lines of two or more participating lots, except that road right-of-way setbacks shall apply.
 - e. One hundred (100) feet from a stream, river, pond, lake, wetland, drain, or lands located within a 100-year floodplain as identified by the Federal Emergency Management Agency.
3. Fencing: A principal-use SES shall be secured with perimeter fencing to restrict unauthorized access. Perimeter fencing shall be eight (8) feet in height. All access doors to principal-use SES and related components and structures shall be locked to prevent entry by unauthorized persons. Fencing is not subject to setbacks as a component of the principal-use SES. The Planning Commission may require wildlife-friendly fencing with openings that allow wildlife to traverse over or through a fenced area.
4. Screening/Landscaping: The Planning Commission shall require reasonable measures to minimize visual impacts by preserving existing natural vegetation, requiring new vegetative screening or other appropriate measures. The Planning Commission shall determine such visual screening measures as may be required on a site-specific basis pursuant to the standards for special land use approval and/or the standards for site plan approval and/or as otherwise provided in the Zoning Ordinance, as most applicable to the circumstances. In making this determination the Planning Commission is specifically authorized to consider whether additional visual screening measures are appropriate where a system is proposed to be located on property adjacent to a residential use and/or a residential district zoning classification. All screening/landscaping shall be properly maintained throughout the life of the project including replacement of any dead landscaping within six months.
5. Ground Cover: A principal-use SES shall include the installation of ground cover vegetation maintained for the duration of operation until the site is decommissioned. The applicant shall include a ground cover vegetation establishment and management plan as part of the site plan. Vegetation establishment must include invasive plant species (and noxious weed if local regulation applies) control. Project sites that are included in a brownfield plan adopted under the Brownfield Redevelopment Financing Act, PA 381 of 1996, as amended, that contain impervious surface at the time of construction or soils that cannot be disturbed, are exempt from ground cover requirements.
6. Lot Coverage: A principal-use SES shall not count towards the maximum lot coverage or impervious surface standards for the district.
7. Land Clearing: Land disturbance or clearing shall be limited to what is minimally necessary for the installation and operation of the system and to ensure sufficient all-season access to the solar resource given the topography of the land. Topsoil disturbed during site preparation (grading) on the property shall be retained on site.

8. Environmental Impact: The Planning Commission shall review potential impacts on wildlife, water, and other environmental factors present on the site and may impose additional requirements to preserve and protect endangered species or prevent negative impacts to adjacent parcels, including but not limited to requirements of EGLE and/or US Fish and Wildlife Service. All surface water runoff shall be effectively managed on-site.
9. Access Drives: New access drives within the SES shall be designed to minimize the extent of soil disturbance, water runoff, and soil compaction on the premises. The use of geotextile fabrics and gravel placed on the surface of the existing soil for the construction of temporary drives during the construction of the SES is permitted, provided that the geotextile fabrics and gravel are removed once the SES is in operation or completion of construction whichever occurs first.
10. Wiring: SES wiring (including communication lines) shall be buried underground where practicable. Any above-ground wiring within the footprint of the SES shall be installed in accordance with all applicable codes and regulations.
11. Lighting: Principal-use SES lighting shall be limited to inverter locations only. Light fixtures shall have downlit shielding and be placed to keep light on-site and glare away from adjacent properties, bodies of water, and adjacent roadways. Flashing or intermittent lights are prohibited.
12. Glare: All solar energy system location/tilt components shall be designed, maintained and operated to avoid glare and reflection of sunlight and other artificial lighting which may affect adjacent properties, navigation by air, water, and roadway. Solar energy system designs shall comply with all Federal Aviation Administration siting requirements.
13. Public Safety: The ERP and FRP shall provide reasonable protection of the public health, welfare and safety including but not limited to an emergency shutdown procedure in place and safety plans to include electrical, fire, smoke, and hazardous materials release, emergency response protocols and identification of typical hazards related to, electrical, fire, smoke and hazardous materials pertinent to the facility. Upon request, all principal-use SES facilities shall provide first responder training at the site.
14. Signage: An area up to 120 square feet may be used for signage at the project site. Any signage shall meet the setback, illumination, and materials/ construction requirements of the zoning district for the project site. Signage shall be posted at all entrances with the plant name, address, and 24 hour emergency operations number.
15. Sound: The sound pressure level of a principal-use SES and all ancillary solar equipment shall not exceed 55 dBA (Leq (1-hour)) at the property line of an adjoining non-participating lot. The site plan shall include modeled sound isolines extending from the sound source to the property lines to demonstrate compliance with this standard.

16. Repowering: In addition to repairing or replacing SES components to maintain the system, a principal-use SES may at any time be repowered, without the need to apply for a new special land use permit, by reconfiguring, renovating, or replacing the SES to increase the power rating within the existing project footprint. A proposal to change the project footprint of an existing SES shall be considered a new application, subject to the site plan application requirements and review procedure contained in the Township Zoning Ordinance and in effect at the time of the request. Legal services and other studies resulting from an application to modify an SES will be reimbursed to the Township by the SES owner in compliance with established escrow policy to alter the footprint of the SES.
17. Decommissioning: A decommissioning plan is required at the time of application. An approved decommissioning plan shall be put into a recordable decommissioning agreement acceptable to the township attorney. The decommission plan shall include:
 - a. The anticipated manner in which the project will be decommissioned, including a description of which above-grade and below-grade improvements will be removed, retained (e.g., access drive, fencing), or restored for viable reuse of the property consistent with the zoning district. Pursuant to this requirement, the decommissioning plan shall be required to include that any structures including all below-grade materials shall be removed for proper disposal.
 - b. The projected decommissioning costs shall reflect the actual cost of decommissioning the project. Salvage value shall not be included in the cost to decommission the project.
 - c. The method of ensuring that funds will be available for site decommissioning and stabilization (in the form of surety bond or cash deposit). The amount of the surety bond shall equal one-hundred twenty-five (125) percent of all costs of removal and compliance with requirements set forth herein. It shall be submitted by the applicant and be prepared by a qualified engineer.
 - d. A review of the amount of the surety bond, based on inflation and current removal costs, shall be completed every three (3) years for the life of the project and approved by the Planning Commission. The Planning Commission may, in the review of the required surety bond, obtain the services of a qualified engineer at the expense of the applicant.
 - e. A SES owner may at any time:
 1. Proceed with the decommissioning plan approved by the Planning Commission, and remove the system as indicated in the most recent approved plan; or
 2. Amend the decommissioning plan with Planning Commission approval and proceed according to the revised plan.

- f. Decommissioning of a SES must commence when the soil is dry to prevent soil compaction and must be complete within 18 months after abandonment. A SES that has not produced electrical energy for 12 consecutive months shall prompt an abandonment hearing.
 - g. Restoration shall include bringing soil and topography of the land to their pre-development composition to ensure permitted uses upon restoration. Soil tests shall be required as part of the decommissioning plan both before development and prior to the decommissioning.
 - h. Transfers. The Township shall be notified of all transfers in ownership within thirty (30) days of closing. The special land use and site plan approval and attached conditions transfer to the new owner and/or operator.
- b. Principal Use SES proposed for location within the AG Agricultural Zoning district shall additionally be subject to the following:
- 1. The proposed SES must serve as a Dual Purpose as defined herein.
 - 2. The proposed SES must be located on lands that are composed of less than 50% Prime Farmland as designated by the current Hopkins Township Prime Farmland Map.
- c. Waiver. Because of the ever-changing technical capabilities of solar energy systems infrastructure and of new technology in general, the Township Planning Commission shall have the authority to review and consider alternatives in the requirements contained in this section as part of the special land use review process and other requirements.

3. Off-Site Battery Energy Storage Systems

In addition to the standards of Section 157.349, the Planning Commission shall find that a proposed off-site battery energy storage system shall meet the following specific Special Land Use standards.

- a. Prior to construction, the following information shall be provided.
 - 1. Equipment specification sheets.
 - 2. Identification and contact information for the installer(s) of the proposed system.
 - 3. Augmentation Plan.
 - 4. Approved Decommissioning Plan and Decommissioning Agreement in recordable form and acceptable to the Township Attorney.
 - 5. Life expectancy of the system components including the anticipated schedule for battery replacement to maintain megawatts over the system's lifetime.
 - 6. Hazard Mitigation Analysis.
 - 7. Operation and Maintenance Manual.

Identification and contact information for the installer of the system. Electrical schematic plan for the system, including disconnect devices.

8. An approved FRP and ERP.
9. Proof of financial guarantee for decommissioning.
- b. The following minimum setbacks shall be required. Setbacks are measured from the nearest facility structure to the nearest point on the associated item:
 1. One-hundred (100) feet from any property line of a non-participating property
 2. Three-hundred (300) feet from the nearest point on the outer wall of a dwelling on nonparticipating property
 3. Fifty (50) feet measured from the nearest edge of a public road right-of-way or private road easement.
- c. Height. The height of battery energy storage system structures, except for electric distribution and transmission poles, shall not exceed a height of twenty (20) feet as measured from the natural grade of the property beneath the structure. Stacking of battery storage system components is prohibited.
- d. Fencing. The system shall be completely enclosed with fencing in compliance with the latest version of the National Electrical Safety Code or any applicable successor standard approved by the Michigan Public Service Commission.
- e. Sound. The system may not generate a maximum sound in excess of 55 average hourly decibels as measured at the property line of an adjacent non-participating property. Decibel modeling shall use the A- weighted scale designed by the American National Standards Institute. The Planning Commission may require the applicant to provide a sounds study as part of the special land use review process
- f. Lighting. The system must implement dark sky-friendly lighting solutions.
- g. Impacts of Battery Energy Storage System
 1. The following requirements shall apply to the entire system, or to designated components of the system, as indicated:
 - a. Safety Signage. The system shall post signs in compliance with NFPA 70/70E or any applicable successor code in place at the time of application for approval. Additionally, signage shall be provided per NFPA 855 7.4.4, or any applicable successor code in place at the time of application for approval, including

- information on the system type and technology, special hazards, fire suppression system and 24-hour emergency contact information, including reach-back phone number. A clearly visible warning sign concerning voltage shall be placed at the base of all pad-mounted transformers and substations.
- b. Other Signage: Additional signage may be permitted or required by the Planning Commission as is necessary to ensure the safe operation of the system.
 - c. The facility shall comply with NFPA 855 “Standard for the Installation of Stationary Energy Storage Systems” or any applicable successor standard adopted by the Michigan Public Service Commission.
2. The Planning Commission shall require reasonable measures to minimize visual impacts by preserving existing natural vegetation, requiring new vegetative screening or other appropriate measures. The Planning Commission shall determine such visual screening measures as may be required a site- specific basis pursuant to the standards for special land use approval and/or the standards for site plan approval and/or as otherwise provided in the Zoning Ordinance, as most applicable to the circumstances. In making this determination the Planning Commission is specifically authorized to consider whether additional visual screening measures are appropriate where a system is proposed to be located on property adjacent to a residential use and/or a residential district zoning classification. All screening/landscaping shall be properly maintained throughout the life of the project including replacement of any dead landscaping within six months.
 3. If the system includes an access drive(s) for maintenance purposes, the surface of the access drive(s) shall be permeable (unless on brownfield land or on an already paved surface at the time of application for approval, such as a parking lot or former building foundation.)
 4. Except as otherwise depicted on and subject to approval of the Planning Commission, the area within which the system is located shall not be paved with asphalt/concrete or any other surface material that is impermeable to water other than for slab foundations for structures and equipment. This shall not apply to a system located on brownfield land or on an existing paved area such as a former building slab or in an unused parking area when adequate parking remains for all other uses on the site.
 5. All surface water runoff created by construction and operation of the project shall be effectively managed on-site.
- h. Installation and Operational Safety. The system shall comply with all of the following requirements:
1. The system shall be designed and constructed for interconnection to a Michigan Public Service Commission or Midcontinent Independent System Operator

regulated utility electrical power grid and shall be operated with such interconnection.

2. The system and all foundation elements shall comply with all applicable building and electrical code requirements, and any applicable federal/state regulations. The manufacturer's engineer or another qualified engineer shall provide written certification that the design, installation (including foundations), and interconnection is compliant with the manufacturer and industry standards, all applicable local construction and electrical codes, and any applicable federal/state regulations.
3. Other than transmission or distribution lines for interconnection to the electric power grid, all electrical wiring shall be buried underground; except where the manufacturer's engineer or a qualified engineer employed by the utility that owns/operates the electrical power grid to which the system shall be interconnected certifies an underground wiring installation is not permitted by an applicable code and/or applicable federal/state regulation, with attached complete documentation supporting any such certification.
4. The system shall be designed, located, and maintained so as to comply with all applicable codes and regulations.
 - i. Public Safety. The Emergency Response Plan and Fire Response Plan shall provide reasonable protection of the public health, welfare and safety including but not limited to an emergency shutdown procedure in place and shall provide the local fire department site safety plans to include electrical, fire, smoke, and hazardous materials release, emergency response protocols and identification of typical hazards related to, electrical, fire, smoke and hazardous materials pertinent to the facility. Upon request, all systems shall provide first responder training at the site.
 - j. Repair and Augmentation. In addition to repairing or replacing facility components to maintain the system, the facility may at any time be augmented without the need to submit a new site plan so long as the augmentation is within the same footprint (e.g., same dedicated use building or on footings/foundations in the same location) as the original permit. If there is a change in the battery chemistry, an updated Hazard Mitigation Analysis and Emergency Operation Plan shall be provided. When a facility is anticipated to be augmented over its lifetime by adding additional components, the applicant should apply for the final/augmented site arrangement. A proposal to increase the size the project footprint may be considered a new application, subject to the ordinance standards at the time of the request.
 - k. Decommissioning and Removal. A decommissioning plan is required at the time of application.

1. The decommission plan shall include:
 - a. The anticipated manner in which the project will be decommissioned, including a description of which above-grade and below-grade improvements will be removed, retained (e.g., access drive, fencing), or restored for viable reuse of the property consistent with the zoning district. Pursuant to this requirement, the decommissioning plan shall be required to include that any structures up to forty-eight (48) inches below-grade shall be removed for disposal.
 - b. The projected decommissioning costs shall reflect the actual cost of decommissioning the project. Salvage value shall not be included in the cost to decommission the project.
 - c. The method of ensuring that funds will be available for site decommissioning and stabilization (in the form of surety bond or cash deposit). The amount of the surety bond shall equal one-hundred twenty-five (125) percent of all costs of removal and compliance with requirements set forth herein. It shall be submitted by the applicant and be prepared by a qualified engineer.
2. A review of the amount of the surety bond, based on inflation, and current removal costs shall be completed every 3 years, for the life of the project, and approved by the Planning Commission. The Planning Commission may, in the review of the required surety bond, obtain the services of a qualified engineer at the expense of the applicant. A Battery Energy Storage System owner may at any time:
 - a. Proceed with the decommissioning plan approved by the Planning Commission, and remove the system as indicated in the most recent approved plan; or
 - b. Amend the decommissioning plan with Planning Commission approval and proceed according to the revised plan.
 - c. Decommissioning of a Battery Energy Storage System must commence when the soil is dry to prevent soil compaction and must be complete within 18 months after abandonment. A Battery Energy Storage System that has not operated for 12 consecutive months shall prompt an abandonment hearing.
3. Restoration shall include bringing soil and topography of the land to their pre-development composition to ensure permitted uses upon restoration. Soil tests shall be required as part of the decommissioning plan both before development and prior to the decommissioning.

- l. Waiver. Because of the ever-changing technical capabilities of battery storage infrastructure and of new technology in general, the Township Planning Commission shall have the authority to review and consider alternatives in both the dimensional and physical requirements contained in this ordinance as part of the special land use review process, and other requirements.

- m. Transfers. The Township shall be notified of all transfers in ownership within thirty (30) days of closing to verify that the new owner agrees to carry out the terms of the special land use and site plan approval.

ARTICLE II. SEVERABILITY:

THE VARIOUS PARTS, SECTIONS AND CLAUSES OF THIS ORDINANCE ARE HEREBY DECLARED TO BE SEVERABLE. IF ANY PART, SENTENCE, PARAGRAPH, SECTION OR CLAUSE OF THIS ORDINANCE IS ADJUDGED UNCONSTITUTIONAL OR INVALID BY A COURT OF COMPETENT JURISDICTION, THE REMAINDER OF THE ORDINANCE SHALL NOT BE AFFECTED THEREBY AND SHALL REMAIN VALID AND IN EFFECT.

ARTICLE III. REPEAL AND EFFECTIVE DATE:

THIS ORDINANCE IS ORDERED TO TAKE EFFECT THE EIGHTH DAY FOLLOWING PUBLICATION OF NOTICE OF ITS ADOPTION IN ACCORDANCE WITH THE MICHIGAN PUBLIC ACT 110 OF 2006 AS AMENDED. ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH ARE HEREBY REPEALED.

_____ DATE: _____
STACEY TIMMER, HOPKINS TOWNSHIP CLERK

PUBLICATION DATE: _____

EFFECTIVE DATE: _____