SOUTH BRANCH TOWNSHIP
Zoning Ordinance Number 2 of 2023

A NOTICE TO AMEND THE SOUTH BRANCH TOWNSHIP ZONING ORDINANCE TO IMPLEMENT REGULATIONS REGARDING SOLAR ENERGY SYSTEMS

THE TOWNSHIP OF SOUTH BRANCH HEREBY ORDAINS:

Section 1. Amendment of Section 2.01.

Section 2.01 of the South Branch Township Zoning Ordinance is hereby amended to add the following definitions in their appropriate alphabetical locations, which definitions shall read in their entirety as follows:

Knox Box: A proprietary keyed access system that removes barriers to entry for first responders to an emergency call.

Photovoltaic (PV) Systems: A solar energy system that produces electricity by the use of semiconductor devices, called photovoltaic cells that generate electricity whenever light strikes them.

Solar Energy Systems (SES): Any equipment and accessory buildings and structures necessary to the process by which solar radiation is collected, converted into another form of energy, stored, protected from unnecessary dissipation and distributed. Solar energy systems consist primarily of solar thermal, photovoltaic and concentrated solar but may include other various experimental solar technologies.

> **Commercial SES:** Any solar energy system that is designed and built primarily to provide electrical energy for off-site use by any person, entity, organization, company or energy provider, other than the owner of the property or entity, or for the wholesale or retail sale of that electrical energy to the electric utility's power grid. A commercial SES is a principal use of property and may occupy the same property as another principal use.
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> **Commercial Ground-Mounted SES:** Any commercial SES that is directly installed in the ground and is not attached or affixed to an existing structure.
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> **Private SES:** Any solar energy system that is an accessory to a principal use located on the same lot or parcel and is designed and built primarily to produce electrical energy for on-site use. These systems shall not be utilized for any commercial sale of energy, except for the sale of surplus electrical energy back to the electrical grid.

Private Ground-Mounted SES: Any private SES that is directly installed in the ground and is not attached or affixed to an existing structure.

Roof-Mounted SES: Any SES in which solar panels are mounted on the roof of the structure either as a flush-mounted system or as modules fixed to frames which can be tilted toward the sun at an optimal angle.

Wall-Mounted SES: Any SES in which solar panels are mounted on the wall of a structure either as a flush-mounted system or as modules fixed to frames which can be tilted toward the sun at an optimal angle.

Solar Glare: The effect produced by light reflecting from a solar panel with an intensity sufficient to cause annoyance, discomfort, or loss in vision performance and visibility.

Solar Mirror: A device designed to reflect or redirect sunlight towards a specific collection point.

Solar-Thermal Systems: A solar energy system which directly heats water or other liquids using sunlight. The heated liquid is used for such purposes as space heating and cooling, domestic hot water, and heating pool water.

Section 2. Amendment of Section 2.01.

The definition of Essential Services within Section 2.01 of the South Branch Township Zoning Ordinance is hereby amended to read in its entirety as follows:

Essential Services: The phrase “essential services” means the erection, construction, alteration, or maintenance by public utilities or municipal department or commissions of underground, surface, or overhead gas, electrical, steam, or water transmission or distribution systems, collection, communication supply or disposal systems, including mains, drains, sewers, pipes, conduits, wires, cables, fire alarm boxes, traffic signals, hydrants, towers, poles, and other similar equipment, and accessories in connection therewith reasonably necessary for the furnishing of adequate service by such public utilities or municipal departments or commissions or for the public health or general welfare, but not including buildings other than such buildings as are primarily enclosures or shelters of the above essential service equipment. Telecommunication towers or facilities, alternative tower structures, commercial SES, wireless communication antenna, and wind turbine generators are not included within this definition. Rather, telecommunication towers, alternative tower structures, antennas, wind turbine generators, anemometer towers, and commercial SES shall be regulated and permitted pursuant to this Ordinance and shall not be regulated or permitted as essential services, public utilities or private utilities.

Section 4 Amendment of Article 3.

Article 3 of the South Branch Township Zoning Ordinance is hereby amended to add a new Section 3.31, which shall read in its entirety as follows:

SECTION 3.31 Solar Energy Systems (SES)

1. Intent and Purpose.

   The intent and purpose of this section is to establish regulations for the placement, development, installation, and construction of commercial solar energy systems and for solar-thermal systems. The township recognizes that it is in the public interest to promote solar energy systems as a clean alternative energy source within the township. The township also recognizes the need to protect the scenic beauty of South Branch Township from unnecessary and unreasonable visual interference that solar energy systems may have upon adjoining and neighboring uses. The township recognizes the need to protect the scenic wilderness and remote areas of the township from unreasonable commercial activities being conducted in areas not designated for commercial activity. As such, this ordinance seeks to:

   A. Protect Low Density Residential District (LDR), Mixed Residential District (MR), Farm Forest (FF), Resource Conservation (RC) districts and stream corridor areas and uses from adverse impact of solar energy systems

   B. Encourage the location of commercial solar energy systems in the Commercial & Business District (CBI), and Industrial District (I).

   C. Prohibit the location, construction and operation of commercial solar energy systems in the Resource Conservation District (RC), Farm Forest District (FF), Low Density Residential District (LDR), Mixed Residential District (MR) or Stream Corridor Overlay District (SC)

   D. Consider the public health and safety of solar energy systems.

   E. All private SES shall be for personal energy use only. All private SES shall be designed, constructed, installed and operated to provide energy consumption for the principal use on the property only.

2. **Solar Mirrors.** All types of solar mirrors are prohibited in all districts in South Branch Township.

3. **Solar Thermal Systems.** A solar thermal system shall be an accessory use to any principle use within any zoning district, subject to the following regulations:

   A. A solar thermal system shall not utilize a solar collector or a solar mirror, as defined in this Ordinance.

   B. A solar thermal system shall the subject to plot plan approval by the Zoning Administrator under Section 6.02 of this Ordinance and shall comply with all applicable regulations for a private SES, depending on whether the solar thermal system is ground-mounted, roofmounted, or wall-mounted.

4. **Private SES.** A private SES shall be an accessory use to any principal use within any zoning district, shall be subject to plot plan approval by the Zoning Administrator under Section 6.02 of this Ordinance, and shall comply with Section 5.08 of this Ordinance and with all of the following applicable regulations.

   A. Private ground-mounted SES shall comply with all of the following regulations and shall be effectively screened from view from any public and private road or from adjacent property:

      1). A private ground-mounted SES and the required landscaping shall comply with all setback requirements of the zoning district in which it is located.

      2). The height of a private ground-mounted SES shall not exceed fifteen (15) feet from existing grade to the top of any solar panel or array) when the solar panels are oriented toward the sun at maximum tilt.

      3). All private ground-mounted SES shall be for personal energy use only. All SES systems shall be designed, constructed, installed and operated to provide energy consumption for the principal use on the property only.

      4). In all districts, a private ground-mounted SES installation shall not exceed 25% of the maximum rear yard lot coverage ratio (including area between solar components) or 2,500 square feet (including area between solar components) whichever is less.

      5). All private ground mounted SES shall be for personal energy use only. All SES systems shall be designed, constructed, installed and operated to provide energy consumption for the principal use on

the property only. The proposed system may be no larger than necessary to provide 120 percent of the electrical energy requirements of the structure to which it is accessory to as determined by a licensed electrical contractor approved by the State of Michigan to design and install SES.

6). The required landscaping shall consist of a berm, shrubbery, trees, or other noninvasive plant species and shall be maintained in a living and healthy condition. Existing natural land forms on the site which effectively screen the private ground-mounted SES shall be preserved to the maximum extent possible. Dead or dying installed landscape screening must be replaced within one year.

7). All power transmission or other lines, wires or conduits from a private ground-mounted SES to any building or other structure shall be located underground. If batteries are used as part of the private ground-mounted SES, those batteries shall be placed in a secured container or enclosure.

8). In the event that a private ground-mounted SES is not in operation for a period of one (1) year or more, the property owner shall notify the Zoning Administrator and shall remove the private ground--mounted SES from the property within six (6) months from the date the operation ceased.

B. A private roof-mounted SES shall comply with all of the following regulations:

1). A private roof-mounted SES shall not extend beyond any peak of a roof and shall not extend beyond the eaves of the roof.

2). A private roof-mounted SES shall not extend more than five (5) feet above the highest point of the roof, but in no event shall exceed the maximum height of a structure in the zoning district in which it is located.

3). All private roof-mounted SES shall be for personal energy use only. All SES systems shall be designed, constructed, installed and operated to provide energy consumption for the principal use on the property only. The proposed system may be no larger than necessary to provide 120 percent of the electrical energy requirements of the structure to which it is accessory to as

determined by a licensed electrical contractor approved by the State of Michigan to design and install SES.

4). All power transmission or other lines, wires or conduits from a private roof-mounted SES to any building or other structure shall be located underground. If batteries are used as part of the private roof-mounted SES, those batteries shall be placed in a secured container or enclosure.

5). In the event that a private roof-mounted SES is not in operation for a period of one (1) year or more, the property owner shall notify the Zoning Administrator and shall remove the private roof-mounted SES from the property within six (6) months from the date the operation ceased. Roof mounted SES components that are integral to the building's structure serving as the roof itself or weather and moisture protection systems are excluded from this requirement.

C. A private wall-mounted SES shall comply with all of the following regulations:

1). A private wall-mounted SES shall not extend beyond or above the wall on which it is mounted.

2). All private wall-mounted SES shall be for personal energy use only. All SES systems shall be designed, constructed, installed and operated to provide energy consumption for the principal use on the property only. The proposed system may be no larger than necessary to provide 120 percent of the electrical energy requirements of the structure to which it is accessory to as determined by a contractor licensed by the State of Michigan to design and install SES.

3). All power transmission or other lines, wires or conduits from a private wall-mounted SES to any building or other structure shall be located underground. If batteries are used as part of the private wall-mounted SES, those batteries shall be placed in a secured container or enclosure.

4). In the event that a private wall-mounted SES is not in operation for a period of one (1) year or more, the property owner shall notify the Zoning Administrator and shall remove the private wall-mounted

SES from the property within six (6) months from the date the operation ceased.

5. **Commercial Ground-Mounted SES**. A commercial SES shall be a use subject to special use permit approval in the Commercial & Business District (CBI), and Industrial District (I). A commercial ground-mounted SES shall be a prohibited use in the Resource Conservation District (RC), Farm Forest District (FF), Low Density Residential District (LDR), Mixed Residential District (MR) or Stream Corridor Overlay District (SC).

A. In addition to the data requirements of Section 6.03.5 for a site plan and the application requirements of Section 7.02.1 for a special use permit, the application for a commercial ground-mounted SES shall be required to furnish and include all of the following information:

1). Project description and rationale:

a). Identify the perimeter of the project development area, size, rated power output, performance, safety and noise characteristics of the individual components of the system including the transmission line/grid connection for the project.

b). Identify the project construction timeframe, project life, potential development phases and potential future expansions.

c). Provide written documentation either by letter or contract that an electric public utility company has agreed to accept electrical energy produced by the commercial ground-mounted SES into the electric public utility company's power grid.

2). Visual impacts: Graphically demonstrate the visual impact of the project using photos renditions of the project with consideration given to setbacks and proposed landscaping.

3). Waste: Identify any solid or hazardous waste utilized within and generated by the project and provide a disposal plan for such waste. Material Safety Data Sheets (MSDS) shall be supplied for all hazardous materials to be used and located on the project site.

4). Lighting: Provide a plan showing all lighting within the facility.

5). Signs: Provide a plan showing all signs to be erected on the site.

6). Transportation and Security Access Plan: Provide a proposed access plan to be utilized during construction and operational phases. The plan must show proposed project service road ingress and egress locations to adjacent roadways and the layout of the facility service road system. Due to infrequent access following construction, it is not required to provide for paved curbs and gutters on access drives unless required by the State Department of Transportation or County Road Commission. In addition, a security access plan shall be provided. Knox boxes and keys shall be provided for any locked entrances for emergency personnel access to any locked fenced portions of the development site.

7). Public Safety: Identify emergency and normal shutdown procedures, potential hazards to adjacent properties, public roadways and to the general public that may be created by the project.

8). Engineering and Installation: Detailed engineering drawings shall be provided to include standard drawings of the structural components of the commercial ground-mounted SES and any electrical storage system used in conjunction with the commercial ground-mounted SES, including base and footings along with engineering data and calculations to demonstrate compliance with the standards of this section. Drawings and engineering calculations shall be certified by a registered engineer licensed to practice in the State of Michigan.

9). Electromagnetic Interference: Identify any electromagnetic fields which are generated that will interfere with electronic communication devices located outside the perimeter of the development project.

10). Drainage and Soil Erosion

a). Show how panels shall be positioned to allow water runoff without channeling it in such a way as to cause erosion.

b). Show how the vegetative cover will be provided and maintained under and around the panels.

c). Show how the panel array will allow vegetative growth under and between panels.

11). Impervious Surface/Stormwater: If more than 2,000 square feet of new or additional impervious surface will be located on the site, the application shall include a drainage plan prepared by a registered civil engineer showing how stormwater runoff will be managed and demonstrating that any stormwater runoff from the site will not exceed the natural surface water runoff for the property. Detergents shall not be used due to the wells and streams utilizing the ground water. The application shall also include plans on how the panels will be cleaned, details on cleaning, frequency and how stormwater quality protection measures shall be met. Any necessary permits from outside agencies for off-site discharge shall be provided. Solar panels are considered an impervious surface.

12). Final Decommissioning and Reclamation Plan: A decommissioning and reclamation plan shall be provided describing actions to be taken at the end of the useful life of the commercial ground-mounted SES or in the event of the termination of the project. The information shall include a description of how the following conditions shall be met:

a). A description of which above-grade and below-grade improvements will be removed, retained, or restored for viable reuse of the property consistent with the zoning district,

b). Removal of all utility and non-utility owned equipment, including conduit and all buried equipment, structures, fencing, roads, and foundations. The owner of the property, however, may request and specify in writing that certain graveled areas, and developed access roads, fences, and vegetative screening remain in place.

c). Restoration of the property to its original condition prior to construction of the commercial ground-mounted SES. The owner of the property, however, may request the renewed ground surface not to be revegetated due to plans for agricultural planting.

d). Development of a schedule for completion of decommissioning activities shall not exceed 30 days.

Decommissioning activities of the Commercial SES site shall be complete within 6 months from the date the site no longer supplies power to a commercial utility.

e). The projected decommissioning costs for SES removal (net of salvage value in current dollars) and soil stabilization, less the amount of the surety bond posted with the State of Michigan for decommissioning of panels installed on PA 116 lands.

f). The method of ensuring that funds will be available for site decommissioning and stabilization (in the form of surety bond, irrevocable letter of credit, cash deposit).

g). Furnishing a description and copy of any memorandum of lease or any other agreement with the property owner regarding decommissioning.

h). Providing a list of names, addresses and telephone numbers of persons or parties responsible for designating the contractor(s) responsible for actual decommissioning work and to update this information.

I). Providing a plan and schedule for updating this decommissioning plan every 3 years for the life of the installation.

B. In addition to the standards for site plan approval contained in Section 6.03.5 and the general standards for special use permit approval contained in Section 7.02.4, an application for a commercial ground--mounted SES shall comply with all of the following standards.

1). An electric public utility company has agreed to accept electrical energy produced by the proposed commercial ground-mounted SES into the electric public utility company's power grid.

2). The minimum site area for a commercial ground-mounted SES shall be thirty (30) acres.

3). All service roads providing ingress and egress to the site shall be approved in writing from the Crawford County Road Commission and/or Michigan Department of Transportation which approval shall

include the design and construction thereof in the interest of safety, adequate drainage and other public requirements.

4). All photovoltaic solar panels within the commercial ground-mounted SES and their supporting structures, buildings, and equipment (excluding fencing, vegetative screening, and roads) shall maintain a setback of no less than fifty (50) feet from all lot lines.

5). If hazardous waste will be used or located on the site, documentation shall be provided that the hazardous waste will be stored and/or contained on the site in compliance with all applicable state and federal hazardous waste laws and regulations. In addition, documentation shall be provided for the lawful disposal of all hazardous waste in compliance with all applicable state and federal hazardous waste laws and regulations.

6). All stormwater runoff from the site shall not exceed the natural surface water runoff for the property. If the site is greater than five (5) acres in area, then applicable state and local permits shall be obtained for soil erosion. In addition, any applicable state and local permits shall be obtained related to all for off-site discharge of surface water.

7). All photovoltaic solar panels within the commercial ground-mounted SES with their support structures shall not exceed 15 feet in height when oriented at maximum tilt. All other structures and buildings shall comply with height specifications as provided in Section 5.08 of this Ordinance.

8). Noise emanating from the commercial ground-mounted SES development shall not exceed 60 dBA, during daytime hours and 35 dBA during nighttime hours, as measured at the property line of the lot on which it is located. This requirement, however, shall not apply during periods of initial construction, routine equipment maintenance, repair, or replacement nor at the time of final decommissioning and reclamation of the site.

9). The commercial ground-mounted SES shall be sited so that concentrated solar glare from the photovoltaic solar panels shall never be directed toward or onto nearby properties or roadways at any time of day.

10). An environmental study shall be performed to ensure no animals will be displaced by the solar system including panels and other components. The study will ensure the natural travel route for animals is not disrupted.

11). A Firewise audit shall be conducted prior to planning commission review to ensure ground mounted system will not pose a fire hazard to the forest or surrounding areas.

12). All signs erected on the site shall comply with the applicable sign regulations for the zoning district in which the property is located. In addition, one (1) sign, no more than four (4) square feet in area, shall be posted at the entrance to the commercial ground-mounted SES development containing the following information: emergency contact name, emergency telephone number, and emergency shutdown procedures.

13). All lighting shall be in compliance with the standards of Section 3.19 of this Ordinance.

14). All components of the commercial ground-mounted SES, including but not limited to, electrical interconnections or transmission lines to the utility's electrical grid, structures and buildings shall comply with all applicable state electrical and construction code requirements.

15). The electrical transmission lines connecting the commercial ground-mounted SES to the public utility electrical grid shall be located underground, unless it has been demonstrated to the Planning Commission and its engineering consultant that it is technologically infeasible and overhead transmission is the only option. If the Planning Commission and the township engineering consultant agrees with this assessment and allows overhead electrical transmission lines to connect the commercial ground-mounted SES to the public utility electrical grid, then those electrical transmission lines shall be placed at a height consistent with industry and utility provider distribution standards to ensure public safety.

16). The commercial ground-mounted SES, including all structures and buildings, shall be enclosed by security fencing not less than eight feet (8') in height, which shall be equipped with an appropriate anti-climbing device. Knox boxes and keys shall be provided at locked entrances for emergency personnel access. All fences shall

comply with the setback requirements of the zoning district in which it is located.

17). The commercial ground-mounted SES, including all structures and buildings, shall meet the following landscaping requirements.

a). All photovoltaic solar panels within the commercial ground-mounted SES and their supporting structures, buildings, and equipment shall be landscaped with a buffer of evergreen trees and earthen berms that effectively screens the view of the photovoltaic solar panels and their supporting structures, buildings, and equipment from adjacent property and from public and private roads.

b). The standard buffer shall consist of a maintained landscaped strip at least ten feet (10') wide outside the perimeter of the commercial SES development with a berm height to naturally block the viewing of the system.

c). Except as provided herein, the evergreen trees planted shall be a minimum of eight (8) feet tall at time of planting. The tree height may be reduced by one foot for each one foot in the height of the berm on which it is planted, i.e., the total combination of the berm and tree height must be a minimum of eight (8) feet in height. All evergreen trees planted shall be maintained in a living and healthy condition for the life of the commercial ground-mounted SES.

d). Existing natural landforms on the site which effectively screen the photovoltaic solar panels within the commercial ground-mounted SES and their supporting structures, buildings, and equipment from adjacent property and from public and private roads shall be preserved to the maximum extent possible.

18). Any commercial ground-mounted SES that is not operated for a continuous period of twelve (12) months shall be considered abandoned, and the owner of such commercial ground-mounted SES shall then comply with the following applicable requirements:

a). The owner shall remove the commercial ground-mounted SES and its supporting structures, buildings, and equipment, including all transmission lines, buried or elevated, within six

(6) months from the date of the notice from the Zoning Administrator of such abandonment.

b). The owner shall restore the site of the commercial ground-mounted SES to its original condition prior to location of the commercial ground-mounted SES. Provided, however, the owner of the property may request that the ground surface not be re-vegetated if agricultural planting is anticipated.

c). If the owner of the property on which the commercial ground-mounted SES is located obtains zoning approval for a private ground-mounted SES on the same property that incorporates a portion of the commercial ground-mounted SES, then that portion of the commercial ground-mounted SES that is incorporated into the approved private ground-mounted SES may remain on the property as part of the approved private ground-mounted SES.

C. Additional requirements.

1). If the owner fails to remove an abandoned commercial ground-mounted SES and its supporting structures, buildings, and equipment within the six (6) month from the date of the notice from the Zoning Administrator of such abandonment, such failure shall be grounds for the Township to remove the commercial ground-mounted SES and its supporting structures, buildings, and equipment at the owner's expense.

2). The Planning Commission shall require the applicant to file a bond equal to the reasonable cost of removing the commercial ground-mounted SES and its supporting structures, buildings, and equipment as a condition of a special use permit given pursuant to this section. This bond shall be updated and renewed every three (3) years to coincide with the required update of the decommissioning plan, schedule and costs.

Section 5. Amendment of Section 5.05.3

Section 5.05.3 of the South Branch Township Zoning Ordinance is hereby amended to add a new subsection M, which shall read in its entirety as follows:

M. Commercial ground-mounted SES, subject to the requirements of Section 3.31.5 of this Ordinance.

Section 6. Amendment of Section 5.06.3.

Section 5.06.3 of the South Branch Township Zoning Ordinance is hereby amended to add a new subsection L, which shall read in its entirety as follows:

L. Commercial ground-mounted SES subject to the requirements of Section3.31.5 of this Ordinance.

Section 7. Validity.

If any section, provision or clause of this Ordinance or the application thereof to any person or circumstance is held invalid, such invalidity shall not effect any remaining portions or application of this Ordinance which can be given effect without the invalid portion or application.

Section 8. Effective Date.

This Ordinance shall become effective eight (8) days after being published in a newspaper of general circulation within the Township.

A Zoning Ordinance Amendment Number 1 of 2023 was adopted on the _____ day of

_____, 2023, by the South Branch Township Board as follows:

Motion by: _____

Seconded by: _____

Yeas: _____

Nays: _____

Absent: _____

_____ _____

Brenda Nelson, Clerk Anna Sylvester, Supervisor

I certify that this is a true copy of the Zoning Ordinance Amendment 1of 2023 that was adopted at a regular meeting of the South Branch Township Board on _____, 2023 and published in the _____on _____, 2023.

Dated: _____ _____

Brenda Nelson, Clerk