

Caledonia Township
Ordinance No. ____ of 2026

An ordinance to amend the Caledonia Township Zoning Ordinance to address renewable energy standards and inspections, uses in districts, site plan data and approval standards, and special use procedure.

Caledonia Township, Alcona County, Michigan, ordains:

Section 1: Amendment to Section 2.1 (Definitions)

Section 2.1 of the Caledonia Township Zoning Ordinance is hereby amended to include the following definitions:

Battery Energy Storage System. ~~One (1) or more devices, assembled together, capable of storing energy produced by solar energy facilities and/or wind energy facilities in order to supply electrical energy at a future time, not to include a stand-alone 12-volt car battery or an electric motor vehicle.~~ ***One (1) or more devices, assembled together, capable of storing and discharging electricity primarily intended to supply electricity to a building or to the electrical grid. This includes, but is not limited to, the following: battery cells; enclosures and dedicated-use buildings; thermal, battery, and energy management system components; inverters; access roads; distribution, collection, and feeder lines; wires and cables; conduit; footings; foundations; towers; poles; crossarms; guy lines and anchors; substations; interconnection or switching facilities; circuit breakers and transformers; overhead and underground control, communications and radio relay systems, and telecommunications equipment; utility lines and installations; and accessory equipment and structures.***

Battery Energy Storage System (BESS), Off-Site. Battery Energy Storage System (BESS) that is a principal use (or co-located with another principal use) and that is designed and built to connect into the transmission or distribution grid.

Battery Energy Storage System (BESS), On-Site. A Battery Energy Storage System (BESS) that is an accessory use that is intended to primarily serve the needs of the consumer on-site.

Roadside Stand. ~~An accessory, temporary farm structure operated for the purpose of selling agricultural products grown or produced on-premises or on other properties under the same ownership or management. The operation of only a roadside stand on premises otherwise classified as agricultural or residential shall not make it a commercial district or land nor shall its use be deemed a commercial activity.~~

Wind Energy Facility or System (Commercial/Utility-Scale). A power generating facility consisting of one (1) or more wind turbines under common ownership or operation control, and includes substations, MET towers, cables/wires, and other buildings accessory to such facility, whose main purpose is to supply electricity to off-site customers.

Section 2: Amendment to Section 4.5 (Single-Family Residential District (R-1))

Section 4.5 of the Caledonia Township Zoning Ordinance is hereby amended as follows (Only the uses which have amendments have been included. All other uses in the adopted table stay the same):

TABLE OF PERMITTED USES & SPECIAL LAND USES	
<i>P</i> = Permitted by right <i>S</i> = Permitted with a Special Land Use Permit <i>*supplemental development regulations</i>	R-1
Agriculture, Forest Products & Animal Services	
Roadside Stands (may be located in any yard)	P
Arts, Entertainment & Recreation	
Marinas (public/private)	S
Commercial, Services & Retail	
Personal & Household Goods Repair & Maintenance	P
Personal Services (ex - beauty shops, tailoring, massage therapy, tanning)	P
Human Care & Social Assistance	
Assisted Living Home/Nursing Home/Convalescent Home	S

Section 3: Amendment to Section 4.6 (Low- to Medium-Density Residential District (R-2))

Section 4.6 of the Caledonia Township Zoning Ordinance is hereby amended as follows (Only the uses which have amendments have been included. All other uses in the adopted table stay the same):

TABLE OF PERMITTED USES & SPECIAL LAND USES	
<i>P</i> = Permitted by right <i>S</i> = Permitted with a Special Land Use Permit <i>*supplemental development regulations</i>	R-2
Agriculture, Forest Products & Animal Services	
Roadside Stands (may be located in any yard)	P

Section 4: Amendment to Section 4.7 (Multiple-Family Residential District (R-3))

Section 4.7 of the Caledonia Township Zoning Ordinance is hereby amended as follows (Only the uses which have amendments have been included. All other uses in the adopted table stay the same):

TABLE OF PERMITTED USES & SPECIAL LAND USES	
<i>P</i> = Permitted by right <i>S</i> = Permitted with a Special Land Use Permit <i>*supplemental development regulations</i>	R-3
Agriculture, Forest Products & Animal Services	
Roadside Stands (may be located in any yard)	P

Section 5: Amendment to Section 4.8 (Multiple-Family Residential District (R-4))

Section 4.8 of the Caledonia Township Zoning Ordinance is hereby amended as follows (Only the uses which have amendments have been included. All other uses in the adopted table stay the same):

TABLE OF PERMITTED USES & SPECIAL LAND USES	
<i>P</i> = Permitted by right <i>S</i> = Permitted with a Special Land Use Permit <i>*supplemental development regulations</i>	R-4
Agriculture, Forest Products & Animal Services	
Roadside Stands (may be located in any yard)	P

Section 6: Amendment to Section 4.9 (Agricultural District (AG))

Section 4.9 of the Caledonia Township Zoning Ordinance is hereby amended as follows (Only the uses which have amendments have been included. All other uses in the adopted table stay the same):

TABLE OF PERMITTED USES & SPECIAL LAND USES	
<i>P</i> = Permitted by right <i>S</i> = Permitted with a Special Land Use Permit <i>*supplemental development regulations</i>	AG
Commercial, Services & Retail	
Personal & Household Goods Repair & Maintenance	P
Personal Services (ex - beauty shops, tailoring, massage therapy, tanning)	P
Florists	P
Roadside Stands (may be located in any yard)	P

Section 7: Amendment to Section 4.10 (Forest Recreational District (FR))

Section 4.10 of the Caledonia Township Zoning Ordinance is hereby amended as follows (Only the uses which have amendments have been included. All other uses in the adopted table stay the same):

TABLE OF PERMITTED USES & SPECIAL LAND USES	
<i>P</i> = Permitted by right <i>S</i> = Permitted with a Special Land Use Permit <i>*supplemental development regulations</i>	FR
Commercial, Services & Retail	
Personal & Household Goods Repair & Maintenance	P
Personal Services (ex - beauty shops, tailoring, massage therapy, tanning)	P
Florists	P
Roadside Stands (may be located in any yard)	P

Section 8: Amendment to Section 4.11 (Commercial District (C))

Section 4.11 of the Caledonia Township Zoning Ordinance is hereby amended as follows (Only the uses which have amendments have been included. All other uses in the adopted table stay the same):

TABLE OF PERMITTED USES & SPECIAL LAND USES	
<i>P</i> = Permitted by right <i>S</i> = Permitted with a Special Land Use Permit <i>*supplemental development regulations</i>	C
Agriculture, Forest Products & Animal Services	
Cider Mills	P
Farm Market/Roadside Stands (on property controlled by the affiliated farm)	P
Roadside Stands (may be located in any yard)	P
Wineries	P
Arts, Entertainment & Recreation	
Campgrounds & RV Parks §7.7	S*
Canoe/Kayak/Boat Liveries	P
Human Care & Social Assistance	
Adult Day Care Facility (6 or less adults) – IN PRIVATE HOME	P
Adult Day Care Facility (greater than 6 adults) – IN PRIVATE HOME	S
Assisted Living Home/Nursing Home/Convalescent Home	P
Manufacturing, Industrial & Waste Management	
Industrial Parks (planned)	S
Residential Uses	
Platted Subdivisions	S

Section 9: Amendment to Section 4.12 (Community Facilities District (CF))

Section 4.12 of the Caledonia Township Zoning Ordinance is hereby amended as follows (Only the uses which have amendments have been included. All other uses in the adopted table stay the same):

TABLE OF PERMITTED USES & SPECIAL LAND USES	
<i>P</i> = Permitted by right <i>S</i> = Permitted with a Special Land Use Permit <i>*supplemental development regulations</i>	CF
Agriculture, Forest Products & Animal Services	
Roadside Stands (may be located in any yard)	P

Section 10: Amendment to Section 4.13 (Industrial District (I))

Section 4.13 of the Caledonia Township Zoning Ordinance is hereby amended as follows (Only the uses which have amendments have been included. All other uses in the adopted table stay the same):

TABLE OF PERMITTED USES & SPECIAL LAND USES	
<i>P</i> = Permitted by right <i>S</i> = Permitted with a Special Land Use Permit <i>*supplemental development regulations</i>	I
Agriculture, Forest Products & Animal Services	
Roadside Stands (may be located in any yard)	P
Arts, Entertainment & Recreation	
Campgrounds & RV Parks §7.7	S*
Canoe/Kayak/Boat Liveries	P
Manufacturing, Industrial & Waste Management	
Industrial Parks (planned)	S
Residential Uses	
Platted Subdivisions	S

Section 11: Amendment to Section 4.14 (Full Table of Permitted Uses & Special Land Uses)

Section 4.14 of the Caledonia Township Zoning Ordinance is hereby amended as follows (Only the uses which have amendments have been included. All other uses in the adopted table stay the same):

Table of Permitted Uses & Special Land Uses									
<i>P</i> = Permitted <i>S</i> = Permitted with Special Land Use Permit <i>*supplemental development regulations</i>	R-1	R-2	R-3	R-4	AG	FR	C	CF	I
Agriculture, Forest Products & Animal Services									
Cider Mills					P	P	P		
Farm Market/Roadside Stands (on property controlled by the affiliated farm)					P	P	P		
Roadside Stands (may be located in any yard)	P	P	P	P	P	P	P	P	P
Wineries					P	P	P		

Table of Permitted Uses & Special Land Uses									
<i>P</i> = Permitted <i>S</i> = Permitted with Special Land Use Permit <i>*supplemental development regulations</i>	R-1	R-2	R-3	R-4	AG	FR	C	CF	I
Arts, Entertainment & Recreation									
Campgrounds & RV Parks §7.7					S*	S*	S*		S*
Canoe/Kayak/Boat Liveries					P	P	P		P
Marinas (public/private)	S						S		

Table of Permitted Uses & Special Land Uses									
P = Permitted S = Permitted with Special Land Use Permit *supplemental development regulations	R-1	R-2	R-3	R-4	AG	FR	C	CF	I
Commercial, Services & Retail									
Personal & Household Goods Repair & Maintenance	P				P	P	P		
Personal Services (ex - beauty shops, tailoring, massage therapy, tanning)	P				P	P	P		
Florists					P	P	P		

Table of Permitted Uses & Special Land Uses									
P = Permitted S = Permitted with Special Land Use Permit *supplemental development regulations	R-1	R-2	R-3	R-4	AG	FR	C	CF	I
Human Care & Social Assistance									
Adult Day Care Facility (6 or less adults) – IN PRIVATE HOME	P	P	P	P	P	P	P		
Adult Day Care Facility (greater than 6 adults) – IN PRIVATE HOME	S	S	S	S	S	S	S		
Assisted Living Home/Nursing Home/Convalescent Home	S	S	S				P		

Table of Permitted Uses & Special Land Uses									
P = Permitted S = Permitted with Special Land Use Permit *supplemental development regulations	R-1	R-2	R-3	R-4	AG	FR	C	CF	I
Manufacturing, Industrial & Waste Management									
Industrial Parks (planned)							S		S

Table of Permitted Uses & Special Land Uses									
P = Permitted S = Permitted with Special Land Use Permit *supplemental development regulations	R-1	R-2	R-3	R-4	AG	FR	C	CF	I
Residential Uses									
Platted Subdivisions	P						S		S

Section 12: Amendment to Section 5.3 (Site Plan Data Required)

Section 5.3 of the Caledonia Township Zoning Ordinance is hereby amended as follows:

Section 5.3 Site Plan Data Required

C. Development Features.

14. Drainage. The location, size, and slope of all surface and subsurface drainage facilities. Any commercial development over twenty (20) acres shall provide a stormwater management plan which shows that any excess runoff (over and above any agricultural runoff rate on agricultural land) will be contained on the site.

Section 13: Amendment to Section 5.4 (Site Plan Approval Standards)

Section 5.4 of the Caledonia Township Zoning Ordinance is hereby amended as follows:

C. Drainage.

On-site drainage shall be required. Appropriate measures shall be taken to ensure that removal of surface waters will not adversely affect neighboring properties. Provisions shall be made to accommodate stormwater and to prevent erosion and the formation of dust. The use of detention/retention ponds may be required. Surface water on all paved areas shall be collected at intervals so that it will not obstruct the flow of vehicular or pedestrian traffic or create puddles in paved areas. Catch basins may be required to contain oil filters or traps to prevent contaminants from being discharged to the natural drainage system. Any commercial development over twenty (20) acres shall provide a stormwater management plan. Any excess runoff (over and above any agricultural runoff rate on agricultural land) will be contained on the site and discharged at an agricultural rate of runoff.

Section 14: Amendment to Section 6.1 (Special Land Use Procedures)

Section 6.1 of the Caledonia Township Zoning Ordinance is hereby amended as follows:

D. Planning Commission Action.

1. **Decision.** Within ninety (90) days of the site plan application being found complete, the Planning Commission shall act to approve, approve with modifications and/or conditions, or disapprove the Special Land Use according to the standards in **Section 6.2** and any other applicable standards in this Ordinance. The applicant may request that this decision be delayed beyond ninety (90) days. If the site plan is disapproved by the Planning Commission, notification of such disapproval shall be given to the applicant within ten (10) days after such Commission action by the Zoning Administrator.
 - a. **Referral of Decision.** The Planning Commission may refer a decision on a Special Land Use approval to the Township Board for decision. In these cases, the Planning Commission shall hold the public hearing and transmit public comments to the Township Board of Trustees. The Township Board has the option to hold an additional public hearing. The remainder of the approval process specified in this Article shall be completed by the Township Board.

Section 15: Amendment to Section 9.2 (Zoning Permit)

Section 9.2 of the Caledonia Township Zoning Ordinance is hereby amended as follows:

E. Inspections.

The Zoning Administrator or designated agents shall have the right to inspect lots, buildings, and/or structures to determine violations of or compliance with this Ordinance. The Zoning Administrator or designated agents may exercise this right to inspection by consent of the person having the right to possession of the lot, building, or structure or any part thereof, or by administrative search warrant issued by a court of competent jurisdiction.

1. **General.**

- a. **Staked Property.** The location of the property boundaries and all structures shall be staked on the ground for the Zoning Administrator's use prior to the issuance of the Zoning Permit. The Zoning Administrator has the right to waive this requirement if the staking out of boundary lines is not pertinent to the issuance of the Zoning Permit. The applicant shall notify the Zoning Administrator when the property has been staked and is available for inspection.
 - b. **Final Inspection.** The Zoning Administrator shall be given the opportunity to make a final inspection of all buildings and structures after completion, before occupancy begins, upon receiving notice from the owner, contractor, or their agent that said building is ready for final inspection. All buildings or alterations shall comply with the statements in the approved application, plot plan or site plan, and specifications.
2. **Compliance Inspections for Renewable Energy Projects (Utility-Scale Solar, Utility-Scale Wind, and Battery Energy Storage Systems).** Due to the complex nature of renewable energy projects, a more comprehensive inspection procedure may occur. After site plan approval and prior to the beginning of construction, the developer and the Zoning Administrator shall agree upon a proposed inspection procedure, including inspection of key locations, timing of inspections, notification of elements ready for inspection, and the method of inspection.
 - a. **Inspection of Key Locations.** The following key construction elements may require inspection during construction activities to ensure compliance with the approved site plan and with the Zoning Ordinance.
 - (1) Staging area staked locations, such as lay-down yards, etc.
 - (2) Solar panel staked locations, nearest to the fenceline, prior to installation of the solar panels.
 - (3) Wind turbine foundation staked locations prior to installation of the foundations.
 - (4) Inverter pad staked locations prior to the installation of the pads.
 - (5) Battery location/pad staked locations prior to the installation of the batteries/pads.
 - (6) Fence staked location prior to installation of the fence.
 - (7) After screening is installed, inspection shall occur to verify screening location and composition.
 - (8) Staked locations of emergency and fire safety infrastructure (such as, but not limited to, roads and fire hydrants). Emergency infrastructure shall be in place prior to the delivery of batteries to the site.
 - (9) Other key items, identified by the developer and/or the municipality, that require inspection prior to placement and that require inspection to determine compliance with the approved site plan and the Zoning Ordinance
 - (10) At the end of project construction, but prior to the commencement of project operations.

- b. **As-Built Site Plan.** After completion of the development project, the developer shall submit an as-built site plan to the municipality, which shall be kept on-file as a record of the location of improvements on the development site.

Section 16: Amendment to Section 7.26 (Wind Energy Systems)

Section 7.26 of the Caledonia Township Zoning Ordinance is hereby amended as follows:

This Section includes regulations for small on-site wind energy conversion systems (residential, commercial, and agricultural) and commercial wind energy systems. Anemometer towers may be constructed by commercial enterprises to evaluate wind conditions prior to the construction of commercial/utility-scale wind turbines or other devices.

The following site development standards shall apply to all wind energy system and anemometer tower (AT) installations in the Township.

- A. **Small On-Site Wind Energy Systems.** A wind energy conversion system which is intended to primarily serve the needs of the property upon which it is located shall be considered an accessory structure and shall be permitted by right.
 - 1. Small On-Site Wind Energy Systems must be professionally designed and installed.
 - 2. **Tower Height.** The tower height shall be limited to one-hundred fifty (150) feet. In the case of roof-mounted wind energy systems, the height of the tower shall be measured from the ground.
 - 3. **Blade Clearance.** There shall be a minimum vertical blade tip clearance from the ground of twenty (20) feet.
 - 4. **Guy Wires.** If the small wind energy system is supported by guy wires, such wires shall be visible to a height of at least six (6) feet above the ground.
 - 5. **Setbacks.** Each small wind energy system shall be set back from an adjoining lot line or a public or private road right-of-way a distance at least equal to the total height of the wind turbine generator. The Planning Commission may reduce the setback if the neighboring property is under the same ownership or based on other factors such as topography specific to the site. No part of the wind turbine generator, including guy wire anchors, may extend closer to the lot line than the required setback for the district in which the unit is located.
 - 6. **Waterfront Property.** Wind energy systems are not permitted within the waterfront setback and must meet the side setbacks at least equal to the total height of the wind turbine generator.
 - 7. **Visual Impact.** Wind turbine towers, rotating blades or mechanisms, and building surfaces shall be a non-reflective, non-obtrusive neutral color. The appearance of turbines, towers, and buildings shall be maintained throughout the life of the system.
 - 8. **Noise.** Small wind energy systems shall not cause a sound pressure level in excess of ~~fifty-five (55)~~ **forty-five (45)** dB(A) or in excess of five (5) dB(A) (Leq (1 hour)) above the background noise, whichever

is greater, as measured at the nearest non-participating lot line. This level may be exceeded during short-term events such as utility outages and severe windstorms.

9. **Vibration.** Small wind energy systems shall not cause vibrations through the ground which are perceptible beyond the participating lot line.
 10. **Reception Interference.** Small wind energy systems shall not cause interference with television, microwave, navigational, or radio reception to neighboring areas.
 11. **Shadow Flicker.** Small wind energy systems shall not cause shadow flicker upon any structure on a non-participating lot.
 12. **Potential Ice Throw.** The potential ice throw or ice shedding for the wind turbine generator shall not cross lot lines of non-participating lots nor impinge on any right-of-way or overhead utility line.
 13. **Safety.** A small on-site wind energy system shall have an automatic system to prevent uncontrolled rotation.
 14. **Other Regulations.** On-site use wind energy systems shall comply with all applicable state construction and electrical codes, **Federal Aviation Administration** requirements, **Michigan Aeronautics Commission** requirements, the **Michigan Tall Structures Act** (Public Act 259 of 1959, as amended), and the **Michigan Public Service Commission** and **Federal Energy Regulatory Commission** standards.
- B. **Commercial/Utility-Scale Wind Energy Facilities and Anemometer Towers.** Anemometer towers and wind energy facilities consisting of one (1) or more wind turbines whose main purpose is to supply electricity to off-site customers shall be allowed as a Special Land Use and shall adhere to the following requirements in addition to the requirements contained in **Article 5** and **Article 6**. Battery Energy Storage Systems that are proposed in conjunction with a Commercial/Utility-Scale Wind Energy Facility shall comply with **Section 7.35. Commercial/Utility-Scale Wind Energy Facilities shall be considered a commercial use.**
1. **Principal or Accessory Use.** A wind energy facility or anemometer tower may be considered either a principal or an accessory use. A different existing use or an existing structure on the same lot shall not preclude the installation of a wind energy facility or a part of such facility on such lot. Wind energy facilities that are constructed and installed in accordance with the provisions of this Section shall not be deemed to constitute the expansion of a nonconforming use or structure.
 2. **Minimum Site Area.** The minimum site area for a wind turbine generator or an anemometer tower erected prior to a wind turbine generator shall be as necessary to meet required wind energy setbacks and any other standards of this Article.
 3. **Setbacks.** Each proposed wind turbine generator or anemometer tower shall meet the following applicable setback requirements:
 - (a) **Non-Participating Property Lines.** Each wind turbine shall be set back from the nearest property line of a non-participating lot a minimum of 1.1 times its total height as measured from the base of the wind turbine.

- (b) **Occupied Buildings and Dwellings on Non-Participating Lots.** Each wind turbine shall be set back from the nearest dwelling or occupied community building that is located on non-participating lot(s) a minimum of 2.1 times its total height as measured from the base of the wind turbine.
 - (c) **Dwellings and Other Structures on Participating Lots.** Each wind turbine shall be set back from the nearest dwelling or other structure that is located on participating lot(s) a minimum of 1.1 times its total height as measured from the base of the wind turbine.
 - (d) **Setback from Road.** In addition to the above, a wind turbine generator shall, in all cases, be setback from a public or private road right-of-way a distance not less than 1.1 times the height of the wind turbine generator total height as defined in the Ordinance.
 - (e) **Setback from Communication and Power lines.** Each wind turbine shall be setback from the nearest above-ground public electric power line or telephone line a distance of not less than 1.1 times the total tower height, whichever is greater, determined from the existing power or communications lines.
 - (f) **Building Setbacks.** Setbacks for buildings accessory to a wind turbine generator shall conform to the setbacks of the zoning district.
5. **Maximum Height.** The maximum wind turbine generator height or the height of an anemometer tower erected prior to the wind turbine generator shall be determined on a case-by-case basis. The applicant shall demonstrate compliance with the **Michigan Tall Structures Act** (Public Act 259 of 1959, as amended), **FAA** guidelines, and **Michigan Aeronautics Commission** guidelines as part of the approval process.
 6. **Tower Separation.** Wind turbine separation distance shall be based on 1) industry standards, 2) manufacturer recommendation, and 3) the characteristics (prevailing wind, topography, etc.) of the particular site location. Documents shall be submitted by the developer/manufacturer confirming specifications for tower separation.
 7. **Minimum Ground Clearance.** The lowest point of the arc created by rotating wind vanes or blades on a wind turbine generator shall be no less than twenty (20) feet.
 8. **Maximum Noise Levels.** The sound pressure level generated by the wind energy system shall not exceed ~~fifty-five (55)~~ **forty-five (45)** dB(A) (Leq (1 hour)) measured at neighboring property lines. If the ambient sound pressure level exceeds ~~fifty-five (55)~~ **forty-five (45)** dB(A) (Leq (1 hour)), the standard shall be ambient plus five (5) dB(A).
 9. **Maximum Vibrations.** Any proposed wind turbine generator shall not produce vibrations through the ground humanly perceptible on non-participating lots.
 10. **Potential Ice Throw.** Applicant shall submit plans for mitigation when ice is present.
 11. **Signal Interference.** No wind turbine generator shall be installed in any location where its proximity with existing fixed broadcast, retransmission, or reception antennas for radio, television, navigation, wireless phone, or other personal communication systems would produce electromagnetic interference

with signal transmission or reception. No wind turbine generator shall be installed in any location along the major axis of an existing microwave communications link where its operation is likely to produce electromagnetic interference with the link's operation.

12. **Access Roads.** Emergency access roads shall be placed to give access to each wind turbine and shall be rated to withstand a seventy thousand (70,000) pound vehicle. Access roads shall be maintained to have access year-round.

13. **Visual Impact, Lighting, and Power Lines.**

- a. Wind turbines shall be mounted on tubular towers and colored a non-reflective, non-obtrusive neutral color. The appearance of turbines, towers, and buildings shall be maintained throughout the life of the wind energy facility pursuant to industry standards (i.e., condition of exterior paint, signs, landscaping). A certified registered engineer and authorized factory representative shall certify that the construction and installation of the wind energy facility meets or exceeds the manufacturer's construction and installation standards.
- b. The design of the wind energy facility's buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening, and landscaping that will blend facility components with the natural setting and the environment existing at the time of installation.
- c. Wind turbine generators shall not be artificially lighted, except to the extent required by the **FAA** or **MAC** or other applicable authority, or otherwise necessary for the reasonable safety and security thereof. Radar-activated obstruction lighting system shall be utilized, if available and if permitted by the FAA.
- d. If lighting is required, the lighting alternatives and design chosen:
 - (1) Shall be intensity required under state or federal regulations.
 - (2) Shall not be strobe lighting or other intermittent white lighting fixtures, unless expressly required by state or federal regulations. Such intermittent lighting shall be alternated with steady red lights at night if allowed by state or federal regulations.
 - (3) May be a red top light that does not pulsate or blink.
 - (4) All tower lighting required by state or federal regulations shall be shielded to the extent possible to reduce glare and visibility from the ground.
- e. Wind turbines shall not be used to display any advertising except the reasonable identification of the manufacturer or operator of the wind energy facility.
- f. The electrical collection system shall be placed underground within the interior of each lot at a depth designed to accommodate the existing agricultural land to the maximum extent practicable. The collection system may be placed overhead adjacent to state and county roadways, near substations or points of interconnection to the electric grid, or in other areas as necessary.

- g. Wind energy power transmission lines located within Wind Energy Resource Zones for which an Expedited Siting Certificate is issued by order of the **Michigan Public Service Commission** under **2008 PA 295** are exempt from local zoning regulations.

14. **Shadow Flicker.**

- a. The wind turbine generator shall be designed in such a manner as to prevent shadow flicker on any existing structures on non-participating lots. If necessary to prevent shadow flicker from crossing occupied structures, the wind turbine generator may be programmed to stop rotating during times when the wind turbine generator shadow crosses these structures. The wind turbine generator operator may obtain written agreements which allow shadow flicker to cross an occupied structure.
- b. The Planning Commission may require the applicant to conduct an analysis of potential shadow flicker at occupied structures if it deems such an analysis necessary. The analysis shall identify the locations of shadow flicker that may be caused by the project and the expected durations of the flicker at these locations from sunrise to sunset over the course of a year. The analysis shall identify problem areas where shadow flicker may affect the occupants of the structures and describe measures that shall be taken to eliminate or mitigate the problems.

15. **Safety.**

- a. All collection system wiring shall comply with all applicable safety and stray voltage standards.
- b. Wind turbines shall not be climbable up to fifteen (15) feet above the ground surface.
- c. All access doors to wind turbine towers and electrical equipment shall be lockable.
- d. Visible, reflective, colored objects, such as flags, reflectors, or tape shall be placed on the anchor points of guy wires and along the guy wires up to a height of ten (10) feet above the ground.
- e. Appropriate warning signs shall be placed on wind turbine towers, electrical equipment, and facility entrances.
- f. All wind turbine generators shall be equipped with controls to control the rotational speed of the blades within design limits for the specific wind turbine generator.

- 16. **State or Federal Requirements.** Any proposed wind turbine generator anemometer tower shall meet or exceed any standards and regulations of the **Federal Aviation Administration (FAA)** the **Michigan Aeronautics Commission (MAC)** the **Michigan Public Service Commission, National Electric Safety Code, Federal Energy Regulatory Commission**, and any other agency of the state or federal government with the authority to regulate wind turbine generators or other tall structures in effect at the time the Special Land Use permit is approved.

~~**Hazard Planning.** An application for a wind turbine generator shall be accompanied by a hazard prevention plan. Such plan shall contain:~~ *Moved*

- ~~a.—Certification that the electrical wiring between turbines and between turbines and the utility right-of-way does not pose any hazard.~~

- ~~b.—Location of landscaping to be designed to avoid the spread of fire from any source on the turbine; such preventative measures may address the types and locations of vegetation below the turbine and on the site.~~
- ~~c.—A listing of any hazardous fluids that may be used on-site shall be provided, including Material Data Safety Sheets (MDSS).~~
- ~~d.—Certification that the turbine has been designed to contain any hazardous fluids shall be provided.~~
- ~~e.—A statement certifying that the turbine shall be routinely inspected to ensure that no fluids are released from the turbine.~~

17. **Roads.** Any material damages to a public road located within the Township resulting from the construction, maintenance, or operation of a Wind Energy System shall be repaired at the Applicant's expense. In addition, the Applicant shall submit to the appropriate county agency a description of the routes to be used by construction and delivery vehicles and any road improvements that will be necessary to accommodate construction vehicles, equipment, or other deliveries. The Applicant shall abide by all county requirements regarding the use and/or repair of county roads.

18. **Approvals.** All required approvals from other local, regional, state, or federal agencies must be obtained prior to approval of a site plan. In the case where site plan approval is a requirement for other local, regional, state, or federal agency approval, evidence of such shall be submitted with the site plan.

19. Removal of Wind Turbine Generators/Decommissioning Plan.

- a. The applicant shall submit a decommissioning plan at the time of application. The plan shall include:
 - (1) The anticipated life of the project.
 - (2) The estimated decommissioning costs, in current dollars, for removal of the wind turbine(s) and soil stabilization. Such costs shall not include credit for salvageable value of any materials.
 - (3) The method of ensuring that funds will be available for decommissioning and restoration.
 - (4) The anticipated manner in which the project will be decommissioned and the site restored.
 - (5) As a condition of approval, the Planning Commission may require an owner to deposit funds for a performance guarantee to assure the removal of wireless facilities as prescribed in this Section. If required, such performance guarantee shall be in an amount equal to 1.25 times the estimated cost of removal of the wind turbine generator or anemometer tower and all associated equipment and accessory structures and restoration of the site to a reusable condition which shall include the removal of all underground structures to a depth of five (5) feet below the natural ground level at that location. The Township may require one (1) or more third-party entities to develop decommissioning cost estimates. If this is required, the Township will select the most appropriate cost estimate.

- b. A review of the amount of the performance guarantee based on inflation, salvage value, and current removal costs shall be completed every five (5) years, for the life of the project, and approved by the Township Board. The amount of the performance guarantee shall be increased based on an inflation rate equal to the average of the previous ten (10) years Consumer Price Index (CPI). A facility 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.

- c. **Abandonment.** Any wind turbine generator or anemometer tower that is inoperational for a continuous period of twelve (12) months shall be considered abandoned, and the owner of such wind turbine generator or anemometer tower shall remove the same within one hundred eighty (180) days of the notice of abandonment from the Township. If there are mitigating circumstances as to why the site has not been used, the applicant/permit holder may contact the township and request a six (6) month extension. If a site has been deemed abandoned and no request for an extension is received, the applicant/permit holder will again be notified to dismantle the site and return it to its original state. If the applicant/permit holder does not do this within the one hundred (180) day period, the township will have the removal and restoration done at the owner/applicant's expense.

In addition to removing the wind turbine generator, or anemometer tower, the owner shall restore the site of the wind turbine generator or anemometer tower to its original condition prior to location of the wind turbine generator or anemometer tower, subject to reasonable wear and tear. Any foundation associated with a wind generator or anemometer tower shall be removed to a minimum depth of five (5) feet below the final grade and site vegetation shall be restored.

- 20. **Equipment Replacement.** Major components of the wind turbine generator may be replaced without a modification of the Special Land Use permit provided all regulations contained herein are adhered to.

- C. **Wind Energy Facilities - Site Plan Required.** A Special Land Use application for a Commercial/Utility-Scale Wind Energy Facility shall include a site plan pursuant to **Section 5.3. The Township shall require a development agreement as a condition of approval.** The following items are required unless waived by the Planning Commission:

- 1. **Site Plan Drawing.** All applications for a Commercial/Utility-Scale Wind Energy Facility shall be accompanied by a detailed site plan map that is drawn to scale and dimensioned, displaying the following information:
 - a. Existing property features to include the following: lot lines, physical dimensions of the property, land use, zoning district, contours, setback lines, rights-of-way, public and utility easements, public roads, access roads (including width), sidewalks, non-motorized pathways, large trees, and all buildings. The site plan must also include the adjoining properties as well as the location and use of all structures and utilities within three hundred (300) feet of the lot lines including dwellings within five hundred (500) feet of the lot lines (participating and non-participating lots).

- b. Location and height of all proposed wind turbines, buildings, structures, ancillary equipment, underground utilities and their depth, towers, security fencing, access roads (including width, composition, and maintenance plans), electrical sub-stations, and other above-ground structures and utilities associated with the proposed Commercial/Utility-Scale Wind Energy Facility.
- c. Additional details and information as required by the Special Land Use requirements of the Zoning Ordinance or as requested by the Planning Commission.

2. **Site Plan Documentation.** The following documentation shall be included with the site plan:

- a. The contact information for the Owner(s) and Operator(s) of the Commercial/Utility-Scale Wind Energy Facility as well as contact information for all property owners on which the Commercial/Utility-Scale Wind Energy Facility is proposed to be located.
- b. A copy of the lease, or recorded document, with the landowner(s) if the applicant does not own the land for the proposed Commercial/Utility-Scale Wind Energy Facility. A statement from the landowner(s) of the leased site that he/she will abide by all applicable terms and conditions of the Special Land Use permit, if approved.
- c. Identification and location of the properties on which the proposed Commercial/Utility-Scale Wind Energy Facility will be located.
- d. The proposed number, representative types, and height of each wind turbine to be constructed; including their manufacturer and model, product specifications including maximum noise output (measured in decibels), total rated capacity, rotor diameter, and a description of ancillary facilities.
- e. Documents shall be submitted by the developer/manufacturer confirming specifications for wind turbine separation.
- f. Documented compliance with the noise, and shadow flicker requirements set forth in this Ordinance.
- g. Engineering data concerning construction of the wind turbine and its base or foundation, which may include, but not be limited to, soil boring data.
- h. A certified registered engineer shall certify that the Commercial/Utility-Scale Wind Energy Facility meets or exceeds the manufacturer's construction and installation standards.
- i. Anticipated construction schedule.
- j. The location of any battery energy storage system on site.
- k. A copy of the maintenance and operation plan, including anticipated regular and unscheduled maintenance. Additionally, a description of the procedures that will be used for lowering or removing wind turbines to conduct maintenance, if applicable.
- l. Documented compliance with applicable local, state and national regulations including, but not limited to, all applicable safety, construction, environmental, electrical, and communications.

- m. Proof of applicant's liability insurance.
 - n. Evidence that the utility company has been informed of the customer's intent to install an interconnected, customer-owned turbine and that such connection has been approved. Off grid-systems shall be exempt from this requirement.
 - o. Other relevant information as may be requested by the Township to ensure compliance with the requirements of this Ordinance.
 - p. Following the completion of construction, the applicant shall certify that all construction is completed pursuant to the Special Land Use Permit.
 - q. A written description of the anticipated life of each Commercial/Utility-Scale Wind Energy Facility.
 - r. Value of newly installed equipment used in the facility for the purpose of developing decommissioning costs. Provide the Township with copies of all executed contracts for on-site work.
 - s. The Township reserves the right to review all maintenance plans and bonds under this Ordinance to ensure that all conditions of the permit are being followed.
 - t. Signature of Applicant.
 - u. In addition to the Site Plan Requirements listed previously, the Commercial/Utility-Scale Wind Energy Facility System shall be subject to the following:
 - (a) A site grading, erosion control, and storm water drainage plan will be submitted to the Zoning Administrator prior to issuing a Special Land Use permit for a Commercial/Utility-Scale Wind Energy Facility. At the Township's discretion, these plans may be reviewed by the Township's engineering firm. The cost of this review will be the responsibility of the applicant.
 - (b) A description of the routes to be used by construction and delivery vehicles and of any road improvements that will be necessary to accommodate construction vehicles, equipment or other deliveries, and an agreement or bond which guarantees the repair of damage to public roads and other areas caused by construction of the Commercial/Utility-Scale Wind Energy Facility.
 - (c) A statement indicating what hazardous materials will be used and stored on the site.
 - (d) A study assessing any potential impacts on the natural environment (including, but not limited to, assessing the potential impact on endangered species, eagles, birds and/or other wildlife, wetlands, and fragile ecosystems). The study shall conform to state and federal wildlife agency recommendations based on local conditions.
3. **Hazard Planning.** An application for a wind turbine generator shall be accompanied by a hazard prevention plan. Such plan shall contain:

- a. Certification that the electrical wiring between turbines and between turbines and the utility right-of-way does not pose any hazard.
 - b. Location of landscaping to be designed to avoid the spread of fire from any source on the turbine; such preventative measures may address the types and locations of vegetation below the turbine and on the site.
 - c. A listing of any hazardous fluids that may be used on-site shall be provided, including Material Data Safety Sheets (MDSS).
 - d. Certification that the turbine has been designed to contain any hazardous fluids shall be provided.
 - e. A statement certifying that the turbine shall be routinely inspected to ensure that no fluids are released from the turbine.
4. **Grading, Erosion, and Stormwater Drainage Plan.** A site grading, erosion control, and stormwater drainage plan will be submitted to the Zoning Administrator prior to issuing a Special Land Use permit for a Utility-Scale Wind Energy System. At the Township's discretion, these plans may be reviewed by the Township's engineering firm. The cost of this review will be the responsibility of the applicant. The development shall be required to contain, on the property, excess runoff over and above the rate of agricultural rate of runoff from the property.
5. **Road Analysis and Agreement/Bond.** A description of the routes to be used by construction and delivery vehicles and of any road improvements that will be necessary to accommodate construction vehicles, equipment, or other deliveries, and an agreement or bond which guarantees the repair of damage to public roads and other areas caused by construction of the Utility-Scale Wind Energy System.
6. **Environmental Impact Study.** A study assessing any potential impacts on the natural environment (including, but not limited to, assessing the potential impact on endangered species, eagles, birds and/or other wildlife, wetlands, and fragile ecosystems). The study shall conform to state and federal wildlife agency recommendations based on local conditions. Study shall include impacts to migratory birds.
7. **Emergency Response Plan.** A copy of the approved Emergency Response Plan shall be prepared by the system owner, approved by all fire departments identified by Caledonia Township (such as but not limited to Hubbard Lake and Alcona Township), and distributed to local fire code official, and emergency managers. Such plan shall document and verify that the system and its associated controls and safety systems are in compliance with the Fire Code. Copies of the Emergency Response Plan shall be maintained at an approved on-site (outside of the perimeter fence) and off-site location accessible to facility personnel, the local fire department, and emergency responders. The Emergency Response Plan shall include the following information:
- a. A description of all on-site equipment and systems to be provided to prevent or handle fire emergencies.
 - b. A description of all contingency plans to be implemented in response to the occurrence of a fire emergency, including evacuation control measures and community notification measures.

- c. Procedures for safe shutdown or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions.
 - d. Procedures for inspection and testing of associated alarms and controls.
 - e. Procedures to be followed for summoning service and repair personnel, and providing agreed-upon notification to fire department personnel for potentially hazardous conditions in the event of a system failure.
 - f. Emergency procedures to be followed in case of fire, explosion, damage to critical moving parts, or other potentially dangerous conditions. Procedures can include sounding the alarm, notifying the fire department, evacuating personnel, and controlling and extinguishing the fire.
 - g. Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required.
 - h. Other procedures as determined necessary by Caledonia Township and/or Hubbard Lake Fire Department to provide for the safety of occupants, neighboring properties, and emergency responders.
 - i. Procedures and schedules for conducting drills of these procedures and for training local first responders on the contents of the plan and appropriate response procedures.
 - j. An identification of potential approach and departure routes to and from the facility site for police, fire, ambulance, and other emergency vehicles.
 - k. An analysis of whether plans to be implemented in response to an emergency can be fulfilled by existing local emergency response capacity, and identification of any specific equipment or training deficiencies in local emergency response capacity and recommendations for measures to mitigate emergencies. The Township may require that the applicant provide training and/or funding for any specific equipment which is necessary to handle emergency situations at the facility.
 - l. A commitment to review and update the ERP with local emergency services at least once every three (3) years.
 - m. A commitment to offer to conduct, or provide funding to conduct, site-specific training drills with local emergency services before commencing operation, and at least once per year while the facility is in operation, at the expense of the project owner. Training should familiarize the local emergency services with the project, hazards, procedures, and current best practices.
 - n. Additional detail(s) and information as required by the Special Land Use requirements of the Zoning Ordinance, or as required by the Planning Commission.
8. **Pre-Development and Post Development Sound Modeling Study.** Include sound isolines extending from the sound source(s) to all lot lines and dwellings on non-participating properties within five hundred (500) feet of the lot boundary.

D. Post-Approval Documentation – Commercial/Utility-Scale Wind Energy Systems.

Any Zoning Permit or Special Land Use Permit for any Utility-Scale Wind Energy System shall be conditioned upon the submission of the following documents:

1. **Amended Emergency Response Plan (ERP) (if applicable).** Additional consultation with local emergency services is required for amended plans.
2. **Post-Construction Sound Survey.** Documentation of sound pressure level measurements shall be provided to the Zoning Administrator by a third-party qualified professional selected by the Planning Commission and at the expense of the Wind Energy System owner within six (6) months of the commencement of the operation of the project. The study will be designed to verify compliance with sound standards applicable to this ordinance. Any required modification shall be made to bring the site into compliance with this Ordinance.

Section 17: Amendment to Section 7.28 (Large Solar Energy Systems)

Section 7.28 of the Caledonia Township Zoning Ordinance is hereby amended as follows:

A. Purpose and Intent.

The purpose and intent of this Section are to establish standards for the siting, installation, operation, repair, decommissioning, and removal of Large Solar Energy Systems. Battery Energy Storage Systems that are proposed in conjunction with Large Solar Energy Systems shall comply with **Section 7.35. Large Scale Solar Energy Systems shall be considered a commercial use.**

B. Site Plan Drawing and Supporting Materials.

All applications for a Large Solar Energy Systems use must be accompanied by detailed site plans, drawn to scale and dimensioned and certified by a registered engineer licensed in the State of Michigan, displaying the following information:

1. All requirements for a site plan contained in **Section 5.3.**
2. All lot lines and dimensions, including a legal description of each lot or lot comprising the Large Solar Energy System.
3. Names of owners of each lot or lot within Caledonia Township that is proposed to be within the Large Solar Energy System.
4. Vicinity map showing the location of all surrounding land uses.
5. Location of any wetlands regulated by the State of Michigan and a description of any wetlands impacts expected from the project.

6. Location and height of all proposed Solar Array(s), buildings, structures, electrical tie lines and transmission lines, security fencing, and all above-ground structures and utilities associated with a Large Solar Energy System.
7. Horizontal and vertical (elevation) to scale drawings with dimensions that show the location of the proposed Solar Array(s), buildings, structures, electrical tie lines and transmission lines, security fencing, and all above-ground structures and utilities on the property.
8. Location of all existing and proposed overhead and underground electrical transmission or distribution lines within the Large Solar Energy System and within one hundred (100) feet of all nonparticipating lot lines of the Large Solar Energy System.
9. Location of battery energy storage structures.
10. Proposed setbacks from the Solar Array(s) to all existing and proposed structures within the Large Solar Energy System.
11. Land elevations for the Solar Array(s) location and the relationship to the land elevations of all existing and proposed structures within the Large Solar Energy System at a minimum of two (2) foot contours.
12. Access driveways within and to the Large Solar Energy System together with a detailed narrative regarding dimensions, composition, and maintenance of each proposed driveway. All access drives shall be subject to **Alcona County Road Commission** approval and shall be planned so as to minimize the use of lands for that purpose. All permits from the road commission/drain commission shall be provided to the township prior to construction. **Emergency access roads shall be placed every two hundred (200) feet and shall be rated to withstand a seventy thousand (70,000) pound vehicle. Access roads shall be maintained to have access year-round.**
13. A soil erosion permit from the Alcona County Building Department and a NPDES permit, if required, from EGLE shall be submitted to the township prior to construction.
14. Planned security measures to prevent unauthorized trespass and access during the construction, operation, removal, maintenance, or repair of the Large Solar Energy System.
15. A written description of the maintenance program to be used for the Solar Array and other components of the Large Solar Energy System, including decommissioning and removal. The description shall include maintenance schedules, types of maintenance to be performed, and decommissioning and removal procedures and schedules if the Large Solar Energy System is decommissioned.
16. Planned lightning protection measures.
17. **Value of newly installed equipment used in the facility for the purpose of developing decommissioning costs. Provide the Township with copies of all executed contracts for on-site work.**
18. Additional detail(s) and information as required by the Special Land Use requirements of the Caledonia Township Zoning Ordinance, or as required by the Planning Commission.

19. **Emergency Response Plan (ERP).** A copy of the approved Emergency Response Plan shall be prepared by the system owner, approved by all fire departments identified by Caledonia Township (such as but not limited to Hubbard Lake and Alcona Township), and distributed to the local fire code official and emergency managers. Such plan shall document and verify that the system and its associated controls and safety systems are in compliance with the Fire Code. Copies of the Emergency Response Plan shall be maintained at an approved on-site (outside of the perimeter fence) and off-site location accessible to facility personnel, the local fire department, and emergency responders. The Emergency Response Plan shall include the following information:
- a. A description of all on-site equipment and systems to be provided to prevent or handle fire emergencies.
 - b. A description of all contingency plans to be implemented in response to the occurrence of a fire emergency, including evacuation control measures and community notification measures.
 - c. Procedures for safe shutdown or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions.
 - d. Procedures for inspection and testing of associated alarms and controls.
 - e. Procedures to be followed for summoning service and repair personnel, and providing agreed-upon notification to fire department personnel for potentially hazardous conditions in the event of a system failure.
 - f. Emergency procedures to be followed in case of fire, explosion, damage to critical moving parts, or other potentially dangerous conditions. Procedures can include sounding the alarm, notifying the fire department, evacuating personnel, and controlling and extinguishing the fire.
 - g. Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required.
 - h. Other procedures as determined necessary by the Township to provide for the safety of occupants, neighboring properties, and emergency responders.
 - i. Other procedures as determined necessary by Caledonia Township and/or Hubbard Lake Fire Department to provide for the safety of occupants, neighboring properties, and emergency responders.
 - j. An identification of potential approach and departure routes to and from the facility site for police, fire, ambulance, and other emergency vehicles.
 - k. An analysis of whether plans to be implemented in response to an emergency can be fulfilled by existing local emergency response capacity, and identification of any specific equipment or training deficiencies in local emergency response capacity and recommendations for measures to mitigate emergencies. The Township may require that the applicant provide training and/or funding for any specific equipment which is necessary to handle emergency situations at the facility.

- l. A commitment to review and update the ERP with local emergency services at least once every three (3) years.
 - m. A commitment to offer to conduct, or provide funding to conduct, site-specific training drills with local emergency services before commencing operation, and at least once per year while the facility is in operation, at the expense of the project owner. Training should familiarize the local emergency services with the project, hazards, procedures, and current best practices.
 - n. Additional detail(s) and information as required by the Special Land Use requirements of the Zoning Ordinance, or as required by the Planning Commission.
20. **Pre-Development and Post Development Sound Modeling Study.** Include sound isolines extending from the sound source(s) to all lot lines and dwellings on non-participating properties within five hundred (500) feet of the lot boundary.
21. **Additional Studies.** Additional studies may be required by the Planning Commission if reasonably related to the standards of this ordinance as applied to the application site, including but not limited to:
- a. **Visual Impact Assessment.** A technical analysis by a third-party qualified professional of the visual impacts of the proposed project, including a description of the project, the existing visual landscape, and important scenic resources, plus visual simulations that show what the project will look like (including proposed landscape and other screening measures) a description of potential project impacts, and mitigation measures that would help to reduce the visual impacts created by the project and documented on the site plan.
 - b. **Environmental Analysis.** An analysis by a third-party qualified professional to identify and assess any potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, wildlife, endangered and threatened species, historical and cultural sites, and antiquities. If required, the analysis shall identify all appropriate measures to minimize, eliminate, or mitigate adverse impacts identified and show those measures on the site plan, where applicable.
 - c. **Stormwater Study.** An analysis by a third-party qualified professional that takes into account the proposed layout of the Solar Energy Facility and how the spacing, row separation, and slope affects stormwater infiltration, including calculations for a one hundred (100) year rain event (storm). Percolation tests or site-specific soil information shall be provided to demonstrate infiltration on-site without the use of engineered solutions. The development shall be required to contain, on the property, excess runoff over and above the rate of agricultural rate of runoff from the property.
 - d. **Glare Study.** An analysis by a third-party qualified professional to determine if glare from the solar collection devices will be visible from nearby residents and roadways. If required, the analysis shall consider the changing position of the sun throughout the day and year, and its influence on the facility.
 - e. **Groundwater Study.** An analysis by a third-party qualified professional that takes into account the planned groundwater use of the Solar Energy Facility and the impacts on local water resources.

C. Application Escrow Account.

An escrow account shall be deposited with the Township by the Applicant when the Applicant applies for a Special Land Use for a Large Solar Energy System pursuant to **Section 9.7.C**.

D. Development Agreement.

The Township shall require a development agreement as a condition of approval.

E. Compliance with the County Building Code and the National Electric Safety Code.

Construction of a Large Solar Energy System shall comply with the National Electric Safety Code and the County Building Code (as shown by approval by the county) as a condition of any Special Land Use under this Section. In the event of a conflict between the County Building Code and National Electric Safety Code (NESC), the NESC shall prevail.

F. Certified Solar Array Components.

Components of a Solar Array shall be approved by the Institute of Electrical and Electronics Engineers ("IEEE"), Solar Rating and Certification Corporation ("SRCC"), Electronic Testing Laboratories ("ETI"), or other similar certification organization if the similar certification organization is approved by the Township, which approval shall not be unreasonably withheld.

G. Height.

Maximum height of a Solar Array, other collection device, or components, of the Large Solar Energy System, excluding substation and electrical transmission equipment, shall not exceed fifteen (15) feet at maximum tilt (as measured from the natural grade at the base of improvements) at any time or location on the property. Substation and electrical transmission equipment shall not exceed one hundred (100) feet. Buildings shall not exceed the maximum height of the district.

H. Lot Size.

Solar Energy Facilities (Utility-Scale or Commercial) shall only be located on lots which are at least twenty (20) acres in size in combination. Adjacent lots under the same ownership or which are leased by the owner of the Solar Energy Facility may be considered in combination to satisfy the minimum lot size.

I. Setbacks.

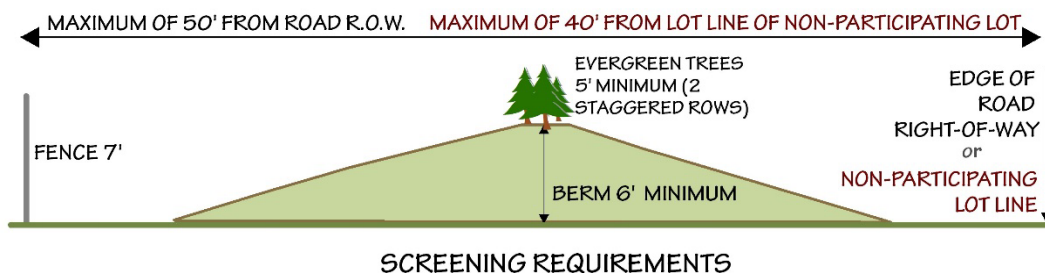
A minimum setback distance of fifty (50) feet from all lot lines of non-participating lots and existing public roads and railroad rights-of-way shall be required for all buildings and Solar Arrays, provided that a setback of one hundred (100) feet shall be required adjacent to any residential structure.

J. Screening/Security.

A Large Solar Energy System shall be completely enclosed by perimeter fencing to restrict unauthorized access. Electric fencing is not permitted. Solar panels shall be one hundred (100) percent obscured from the road right

of way and all nonparticipating property. The perimeter of Large Solar Energy Systems shall be screened year-round as follows:

1. **Screening Along Abutting Road Rights-of-Way.** A seven (7) foot high fence shall be installed a maximum of fifty (50) feet off the road right-of-way. A six (6) foot high berm shall be installed between the fence and the road right-of-way line. Two (2) staggered rows of evergreen trees shall be planted on top of the berm. At the time of planting, the evergreen trees shall be a minimum of five (5) feet tall with twenty (20) feet of spaces between each tree.
2. **Screening Along Abutting Non-Participating Properties.** A seven (7) foot high fence shall be installed a maximum of forty (40) feet from the lot line of an abutting non-participating property. A six (6) foot high berm shall be installed between the fence and the abutting lot line. Two (2) staggered rows of evergreen trees shall be planted on top of the berm. At the time of planting, the evergreen trees shall be a minimum of five (5) feet tall with twenty (20) feet of spaces between each tree.



3. Natural vegetation may be counted toward screening requirements in subsection I.1 and I.2. Screening shall be maintained throughout the life of the facility including replacing dead vegetation within six (6) months or at the earliest feasible time of year dependent on the weather.
4. The Planning Commission may reduce, waive, or alter screening requirements provided that any such adjustment is in keeping with the intent of the Ordinance.
5. All plant materials shall be installed between March 15th and November 15th. If the Applicant requests a Final Certificate of Occupancy from the Township and the Applicant is unable to plant during the installation period, the Applicant will provide the Township with a letter of credit, surety, or corporate guarantee for an amount equal to one and one-half (1.5) times the cost of any planting deficiencies that the Township shall hold until the next planting season. After all plantings have occurred, the Township shall return the financial guarantee.
6. Failure to install or continuously maintain any required vegetative buffer shall constitute a violation of this Ordinance and any Special Land Use may be subject to revocation.

K. Signage.

No advertising or non-project related graphics shall be on any part of the Solar Arrays or other components of the Large Solar Energy System. This exclusion does not apply to entrance gate signage or notifications containing points of contact or any and all other information that may be required by authorities having jurisdiction for electrical operations and the safety and welfare of the public.

L. Noise.

No component of any Large Solar Energy System shall emit noise exceeding ~~fifty-five (55)~~ **forty-five (45)** dBA (Leq (1 hour)) as measured at all non-participating property lines and the existing ROW line. **If the ambient sound pressure level exceeds forty-five (45) dB(A) (Leq (1 hour)), the standard shall be ambient plus five (5) dB(A).** Applicants may submit equipment and component manufacturers noise ratings to demonstrate compliance. The applicant may be required to provide Operating Sound Pressure Level measurements from a reasonable number of sampled locations at the perimeter of the battery energy storage system to demonstrate compliance with this standard. Inverters shall be placed as far interior of the project as possible so as to increase distance from non-participating property lines.

M. Lighting.

All lighting for parking lots, driveways, external illumination of buildings, or the illumination of signs shall be directed away from and be shielded from adjacent properties and shall be so arranged as to not adversely affect driver visibility on adjacent public roads.

N. Distribution, Transmission and Interconnection.

All collection lines and interconnections from the Solar Array(s) to any electrical substations shall be located and maintained underground inside the Large Solar Energy System, except in areas where technical or physical constraints make it preferable to install equipment above ground. This requirement excludes transmission equipment meant to connect the project substation to the local transmission system.

O. Abandonment and Decommissioning.

1. **Decommissioning.** Following the operational life of the project, the Applicant shall perform decommissioning and removal of the Large Solar Energy System and all its components.
 - a. The Applicant shall prepare a Decommissioning Plan and submit it to the Planning Commission for review and approval prior to issuance of the Special Land Use. The Township may require one (1) or more third-party entities to develop decommissioning cost estimates. If this is required, the Township will select the most appropriate cost estimate.
 - b. Under this plan, all structures, concrete, piping, facilities, and other project related materials above grade and any structures up to forty-two (42) inches below-grade shall be removed offsite for disposal. Any Solar Array or combination of Photovoltaic Devices that is not operated for a continuous period of six (6) months shall be considered abandoned and shall be removed under the Decommissioning Plan. The ground must be restored to its original topography within three hundred sixty-five (365) days of abandonment or decommissioning. Restoration shall also include bringing soil to its pre-development composition to ensure agricultural use upon restoration. Soil tests by an environmental engineer shall be required as a part of the Decommissioning Plan both before development and prior to decommissioning. Soil shall be brought back to pre-development state within three hundred sixty-five (365) days of abandonment or decommissioning.

2. Performance Guarantee.

- a. The applicant shall be required to post a Performance Guarantee (cash bond or letter of credit from a financial institution as approved by the Township), pursuant to **Section 9.8**, for reclamation in an amount to be determined by Township Engineering Consultant as a condition of site plan approval.
- b. A review of the amount of the performance guarantee based on inflation, salvage value, and current removal costs shall be completed every five (5) years, for the life of the project, and approved by the Township Board. The amount of the performance guarantee shall be increased based on an inflation rate equal to the average of the previous ten (10) years Consumer Price Index.
- c. The Engineer will be able to review the size of the facility and the number of solar panels that will be installed. The amount of the surety bond may fluctuate depending on the size of the facility. The Engineer shall set the surety bond amount.
- d. The Performance Guarantee is to remain in place for the length of the leases/contracts and through the completion of the decommissioning plan, whichever is later.

P. General Standards.

The Planning Commission shall not approve any Large Solar Energy System Conditional Use unless it finds that all of the general standards for Conditional Land Uses contained in this Ordinance are met.

Q. Approval Time Limit and Extension.

Special Land Use and Site Plan approvals, under this Section, shall be valid for one (1) year beginning on the date of Planning Commission approval. Once commenced, should construction cease for a period of twelve (12) consecutive months, the Special Land Use and Site Plan approvals shall be considered null and void. If construction begins prior to the expiration date established by Planning Commission approval, the Special Land Use and Site Plan approvals shall remain in force as long as construction continues toward a reasonable date of completion. However, if requested by the Applicant prior to the expiration date established by Planning Commission approval, the Planning Commission may consider an additional one-year period upon showing of good cause for the extension.

R. Conditions and Modifications.

Any conditions and modifications approved by the Planning Commission shall be recorded in the Planning Commissions' meeting minutes. The Planning Commission may, in addition to other reasonable conditions, require landscaping, walls, fences and other improvements that are reasonable in relation to and consistent with the nature of the applicable or adjacent zoning districts. After approval, at least two (2) copies of the final approved Site Plan shall be signed and dated by the Chairperson of the Planning Commission and authorized representative of the Applicant. One (1) copy shall be kept on file by the Township Clerk, and one (1) copy shall be returned to the Applicant's authorized representative.

S. Inspection.

The Township shall have the right at any reasonable time, to provide a twenty-four (24) hour notice prior to the desired inspection to the Applicant to inspect the premises on which any Large Solar Energy System is located. The Township may hire one or more consultants to assist with inspections at the Applicant's or project owner's expense. Applicant shall submit inspection escrow with the township in advance of start of construction. Inspections must be coordinated with, and escorted by, the Applicant's operations staff at the Large Solar Energy Facility to ensure compliance with the **Occupational Safety and Health Administration** (OSHA), **NESC**, and all other applicable safety guidelines. Fees may be required pursuant to **Section 9.7.C**.

T. Maintenance and Repair.

Each Large Solar Energy System must be kept and maintained in good repair and condition at all times. If the Township Zoning Administrator determines that a Large Solar Energy System fails to meet the requirements of this Ordinance and the Special Land Use, or that it poses a safety hazard, the Zoning Administrator, or his or her designee, shall provide notice to the Applicant of the safety hazard. If, after a reasonable cure period (not to exceed 7 days), the safety hazards are not corrected, the Applicant is entitled to a hearing before the Township Board. If the Township Board determines that the safety hazard requires that the Large Solar Energy System must be shut down, Applicant shall immediately shut down the Large Solar Energy System and not operate, start, or restart the Large Solar Energy System until the issues have been resolved. Applicant shall keep a maintenance log on the Solar Array(s), which shall be available for the Township's review within forty-eight (48) hours of such request. Applicant shall keep all sites within the Large Solar Energy System neat, clean, and free of refuse, waste, or unsightly, hazardous or unsanitary conditions.

U. Roads.

Any material damages to a public road located within the Township resulting from the construction, maintenance, or operation of a Large Solar Energy System shall be repaired at the Applicant's expense. In addition, the Applicant shall submit to the appropriate county agency a description of the routes to be used by construction and delivery vehicles and any road improvements that will be necessary to accommodate construction vehicles, equipment, or other deliveries. The Applicant shall abide by all county requirements regarding the use and/or repair of county roads.

V. Continuing Security.

If any Large Solar Energy System is approved for construction under this Section, Applicant shall post decommissioning security prior to the start of construction (in a mutually agreed upon form) for an amount necessary to accomplish the work specified in the decommissioning plan as agreed upon by the Township and Applicant. The amount shall be reasonably sufficient to restore the property to its previous condition prior to construction and operation of the Large Solar Energy System. Such financial security shall be kept in full force and effect during the entire time that the Large Solar Energy System exists or is in place, and such financial security shall be irrevocable and non-cancelable.

1. **Continuing Obligations.** Failure to keep any required financial security in full force and effect at all times while a Large Solar Energy System exists or is in place shall constitute a material and significant violation of the Special Land Use and this Ordinance and will subject the Large Solar Energy System Applicant, owner, and operator to all remedies available to the Township,

including any enforcement action, civil action, request for injunctive relief, and revocation of the Special Land Use.

2. These securities will be reviewed and updated every five (5) years in order to ensure that adequate financial resources are available for a decommissioning process.

W. Other Requirements.

1. Each Large Solar Energy System shall also comply with all applicable federal, state, and county requirements, in addition to other applicable Township Ordinances.

X. Post-Approval Documentation.

Any Zoning Permit or Special Land Use Permit for any Utility-Scale Solar Energy System shall be conditioned upon the submission of the following documents:

1. **Amended Emergency Response Plan (ERP) (if applicable).** Additional consultation with local emergency services is required for amended plans.
2. **Post-Construction Sound Survey.** Documentation of sound pressure level measurements shall be provided to the Zoning Administrator by a third-party qualified professional selected by the Planning Commission and at the expense of the Solar Energy System owner within six (6) months of the commencement of the operation of the project. The study will be designed to verify compliance with sound standards applicable to this ordinance. Any required modification shall be made to bring the site into compliance with this Ordinance.

Section 18: Amendment to Section 7.35 (Battery Energy Storage Systems (Off-Site))

Section 7.35 of the Caledonia Township Zoning Ordinance is hereby amended as follows:

A. Purpose.

This Section applies to Off-Site Battery Energy Storage Systems that are stand-alone facilities or are in conjunction with another use such as Large Solar Energy Systems or Wind Energy Systems. Off-Site Battery Energy Storage Systems shall comply with this Section and the approval standards in **Section 5.4** and **Section 6.2. Battery Energy Storage Systems are considered a commercial use.**

B. Site Plan Data and Supporting Materials.

All applications for a Battery Energy Storage System use must be accompanied by detailed site plans, drawn to scale and dimensioned and certified by a registered engineer licensed in the State of Michigan, displaying the following information:

1. All requirements for a site plan contained in **Section 5.3.**
2. All lot lines and dimensions, including a legal description of each lot or lot comprising the Battery Energy Storage System.

3. Names of owners of each lot within Caledonia Township that is proposed to be within the Battery Energy Storage System.
4. Vicinity map showing the location of all surrounding land uses.
5. Location of any wetlands regulated by the State of Michigan and a description of any wetlands impacts expected from the project.
6. Location and height of all proposed battery structures, buildings which house batteries, other buildings or structures, electrical tie lines and transmission lines, security fencing, and all above-ground structures and utilities associated with a Battery Energy Storage System.
7. Horizontal and vertical (elevation) to scale drawings with dimensions that show the location of the proposed Battery Energy Storage System, buildings, structures, electrical tie lines and transmission lines, security fencing, and all above-ground structures and utilities on the property.
8. Location of all existing and proposed overhead and underground electrical transmission or distribution lines within the Battery Energy Storage System project and within one hundred (100) feet of all participating lot lines of the Battery Energy Storage System.
9. Proposed setbacks from the Battery Energy Storage System to all existing and proposed structures on participating and non-participating lots.
10. Land elevations for the Battery Energy Storage System location and the relationship to the land elevations of all existing and proposed structures within the Battery Energy Storage System at a minimum of two (2) foot contours.
11. Access driveways within and to the Battery Energy Storage System together with a detailed narrative regarding dimensions, composition, and maintenance of each proposed driveway. All access drives shall be subject to **Alcona County Road Commission** approval and shall be planned so as to minimize the use of lands for that purpose. All permits from the road commission/drain commission shall be provided to the township prior to construction.
12. A soil erosion permit from the Alcona County Building Department and a NPDES permit, if required, from EGLE shall be submitted to the township prior to construction.
13. Planned security measures to prevent unauthorized trespass and access during the construction, operation, removal, maintenance, or repair of the Battery Energy Storage System.
14. A written description of the maintenance program to be used for the Battery Energy Storage System, including decommissioning and removal. The description shall include maintenance schedules, types of maintenance to be performed, and decommissioning and removal procedures and schedules if the Battery Energy Storage System is decommissioned.
15. Planned lightning protection measures.

16. A preliminary equipment specification sheet that documents the proposed battery energy storage system components and associated electrical equipment that are to be installed. A final equipment specification sheet shall be submitted prior to the issuance of zoning permit.
17. Name, address, and contact information of proposed or potential system installer and the owner and/or operator of the battery energy storage system. Such information of the final system installer shall be submitted prior to the issuance of zoning permit.
18. Fire Safety Compliance Plan. Such plan shall document and verify that the system and its associated controls and safety systems are in compliance with the Fire Code.
19. **Emergency Response Plan (ERP).** A copy of the approved Emergency Response Plan shall be prepared by the system owner, approved by all fire departments identified by Caledonia Township (such as but not limited to Hubbard Lake and Alcona Township), and distributed to the local fire code official and emergency managers. Such plan shall document and verify that the system and its associated controls and safety systems are in compliance with the Fire Code. Copies of the Emergency Response Plan shall be maintained at an approved on-site (outside of the perimeter fence) and off-site location accessible to facility personnel, the local fire department, and emergency responders. The Emergency Response Plan shall include the following information:
 - a. A description of security systems in place to prevent unauthorized parties from accessing the site.
 - b. A description of all on-site equipment and systems to be provided to prevent or handle fire emergencies.
 - c. Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions.
 - d. Procedures for inspection and testing of associated alarms, interlocks, and controls.
 - e. Procedures to be followed for summoning service and repair personnel, and providing agreed upon notification to fire department personnel for potentially hazardous conditions in the event of a system failure.
 - f. Emergency procedures to be followed in case of fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions. Procedures can include sounding the alarm, notifying the fire department, evacuating personnel, de-energizing equipment, and controlling and extinguishing the fire.
 - g. Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required.
 - h. Procedures for dealing with battery energy storage system equipment damaged in a fire or other emergency event, including maintaining contact information for personnel qualified to safely remove damaged battery energy storage system equipment from the facility.

- i. Procedures and schedules for conducting drills of these procedures and for training local first responders on the contents of the plan and appropriate response procedures.
 - j. An identification of potential approach and departure routes to and from the facility site for police, fire, ambulance, and other emergency vehicles.
 - k. A description of all contingency plans to be implemented in response to the occurrence of an emergency, including evacuation control measures and community notification measures.
 - l. The results of a toxic and flammable gas plume dispersion analysis for the anticipated BESS equipment in a severe fire emergency scenario to assess potential impacts on surrounding communities.
 - m. An analysis of whether plans to be implemented in response to an emergency can be fulfilled by existing local emergency response capacity, and identification of any additional personnel and specific equipment or training deficiencies in local emergency response capacity and recommendations for measures to mitigate emergencies. The Township may require that the applicant provide training and/or funding for any specific equipment which is necessary to handle emergency situations at the facility.
 - n. Other procedures as determined necessary by Caledonia Township and/or Hubbard Lake Fire Department to provide for the safety of occupants, neighboring properties, and emergency responders.
 - o. A commitment to offer to conduct, or provide funding to conduct, site-specific training drills with local emergency services before commencing operation, and at least once per year while the facility is in operation, at the expense of the project owner. Training should familiarize the local emergency services with the project, hazards, procedures, and current best practices.
 - p. A commitment to review and update the Emergency Response Plan with local emergency services at least once every three (3) years.
 - q. Additional detail(s) and information as required by the Special Land Use requirements of the Zoning Ordinance, or as required by the Planning Commission.
20. **Land Clearing and/or Grading Plan.** A plan showing proposed clearing and/or grading as required for the installation and operation of the system.
21. **Stormwater Management Plan.** Computations and design of a stormwater management system. For a BESS in a well-head protection zone and/or if the Emergency Response Plan requires liquid agents for firefighting, additional calculations and design of the emergency runoff retention system in the area within ten (10) feet of the BESS shall be submitted. The development shall be required to contain, on the property, excess runoff over and above the rate of agricultural runoff from the property.
22. **Pre-Development and Post Development Sound Modeling Study** including sound isolines extending from the sound source(s) to all lot lines and dwellings on non-participating properties within one thousand (1,000) feet of the lot boundary.

23. **Preliminary Equipment Specification Sheet.** Such sheet documents the proposed battery energy storage system components, inverters, and associated electrical equipment that are to be installed. A Final Equipment Specification Sheet shall be submitted as part of Post-Construction Reporting.
24. **System Maintenance Plan.** A detailed maintenance schedule covering all affected equipment and the activities performed as outlined in the NFPA 855 Standard for the Installation of Stationary Energy Storage Systems.
25. **Contact Information.** Name, address, and contact information of proposed or potential system installer and the owner and/or operator of the battery energy storage system. Information on the final system installer shall be submitted as part of Post-Construction Reporting.
26. **NFPA 855 Compliance.** Confirmation that the facility complies with the latest edition of NFPA 855 “Standard for the Installation of Stationary Energy Storage Systems.”
27. Value of newly installed equipment used in the facility for the purpose of developing decommissioning costs. Provide the Township with copies of all executed contracts for on-site work.
28. Additional detail(s) and information as required by the Special Land Use requirements of the Caledonia Township Zoning Ordinance, or as required by the Planning Commission.
29. **Additional Studies.** Additional studies may be required by the Planning Commission if reasonably related to the standards of this Ordinance as applied to the application site, including but not limited to:
 - a. **Visual Impact Assessment.** A technical analysis by a third-party qualified professional of the visual impacts of the proposed project, including a description of the project, the existing visual landscape, and important scenic resources, plus visual simulations that show what the project will look like (including proposed landscape and other screening measures) a description of potential project impacts, and mitigation measures that would help to reduce the visual impacts created by the project and documented on the site plan.
 - b. **Environmental Analysis.** An analysis by a third-party qualified professional to identify and assess any potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, wildlife, endangered and threatened species, historical and cultural sites, and antiquities. If required, the analysis shall identify all appropriate measures to minimize, eliminate or mitigate adverse impacts identified and show those measures on the site plan, where applicable.
 - c. **Groundwater Study.** An analysis by a third-party qualified professional that takes into account the planned groundwater use of the Battery Energy Storage System and the impacts on local water resources.

C. Application Escrow Account.

An escrow account of at least \$15,000 shall be deposited with the Township by the Applicant when the Applicant applies for a Special Land Use for a Battery Energy Storage System pursuant to [Section 9.7.C](#). Fifteen (15) percent of the amount deposited is designated for administrative costs to the Township. The remainder shall be available to be used by the Township for consultant and fees pertaining to the Special Land Use review. Additional fees may be requested above the \$15,000.

D. Development Agreement.

The Township shall require a development agreement as a condition of approval.

E. Height.

Maximum height of a Battery Energy Storage System or building containing a Battery Energy Storage System shall not exceed the maximum building height in the district.

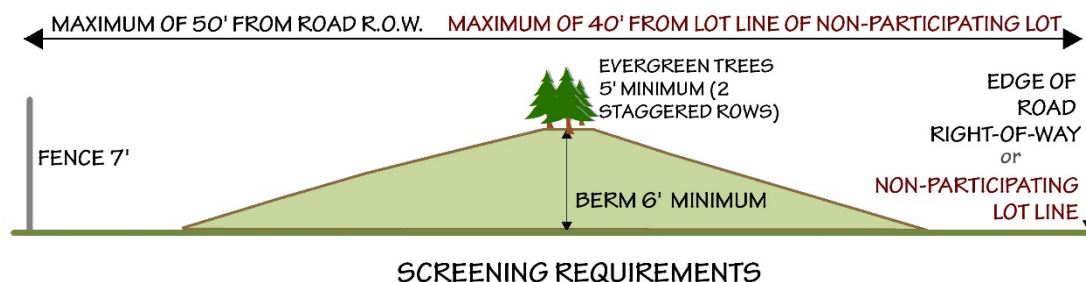
F. Setbacks.

A minimum setback distance of one hundred (100) feet from all lot lines of non-participating lots and existing public roads rights-of-way shall be required for all buildings and components of a Battery Energy Storage System, provided that a setback of five hundred (500) feet shall be required adjacent to any residential structure.

G. Screening and Security.

A Battery Energy Storage System shall be completely enclosed by perimeter security fencing to restrict unauthorized access. Batteries shall be one hundred (100) percent obscured from the road right of way and all nonparticipating property. The perimeter of Battery Energy Storage Systems shall be screened year-round as follows:

1. **Screening Along Abutting Road Rights-of-Way.** A seven (7) foot high fence shall be installed a maximum of fifty (50) feet off the road right-of-way. A six (6) foot high berm shall be installed between the fence and the road right-of-way line. Two (2) staggered rows of evergreen trees shall be planted on top of the berm. At the time of planting, the evergreen trees shall be a minimum of five (5) feet tall with twenty (20) feet of spaces between each tree.
2. **Screening Along Abutting Non-Participating Properties.** A seven (7) foot high fence shall be installed a maximum of forty (40) feet from the lot line of an abutting non-participating property. A six (6) foot high berm shall be installed between the fence and the abutting lot line. Two (2) staggered rows of evergreen trees shall be planted on top of the berm. At the time of planting, the evergreen trees shall be a minimum of five (5) feet tall with twenty (20) feet of spaces between each tree.



3. Natural vegetation may be counted toward screening requirements in **subsection F.1** and **F.2**. Screening shall be maintained throughout the life of the facility including replacing dead vegetation within six (6) months or at the earliest feasible time of year dependent on the weather.
4. The Planning Commission may reduce, waive, or alter screening requirements provided that any such adjustment is in keeping with the intent of the Ordinance.
5. Areas within ten (10) feet on each side of a Battery Energy Storage System shall be cleared of combustible vegetation and other combustible growth. Single specimens of trees, shrubbery, or cultivated ground cover such as green grass, ivy, succulents, or similar plants used as ground covers shall be permitted to be exempt provided that they do not form a means of readily transmitting fire. Removal of trees should be minimized to the extent possible.
6. All plant materials shall be installed between March 15th and November 15th. If the Applicant requests a Final Certificate of Occupancy from the Township and the Applicant is unable to plant during the installation period, the Applicant will provide the Township with a letter of credit, surety, or corporate guarantee for an amount equal to one and one-half (1.5) times the cost of any planting deficiencies that the Township shall hold until the next planting season. After all plantings have occurred, the Township shall return the financial guarantee.
7. Failure to install or continuously maintain any required vegetative buffer shall constitute a violation of this Ordinance and any Special Land Use may be subject to revocation.

H. Utility Lines and Electrical Circuitry.

All on-site utility lines shall be placed underground to the extent feasible and as permitted by the serving utility, with the exception of the main service connection at the utility company right-of-way and any new interconnection equipment, including without limitation any poles, with new easements and right-of-way.

I. Signage.

1. No advertising or non-project related graphics shall be on any part of the Battery Energy Storage System or other components of the Battery Energy Storage System.
2. The signage shall be in compliance with ANSI Z535 and shall include the type of technology associated with the battery energy storage systems, any special hazards associated, the type of suppression system installed in the area of battery energy storage systems, and 24-hour emergency contact information, including reach-back phone number.
3. As required by the NEC, disconnect and other emergency shutoff information shall be clearly displayed on a light reflective surface. A clearly visible warning sign concerning voltage shall be placed at the base of all pad-mounted transformers and substations.

J. Lighting.

Lighting of the Battery Energy Storage System shall be limited to that minimally required for safety and operational purposes and shall be reasonably shielded and downcast from abutting properties.

K. Noise.

No component of any Battery Energy Storage System shall emit noise exceeding ~~fifty-five (55)~~ **forty-five (45)** dBA (Leq (1 hour)) as measured at all non-participating property lines and the existing right-of-way line. **If the ambient sound pressure level exceeds forty-five (45) dB(A) (Leq (1 hour)), the standard shall be ambient plus five (5) dB(A).** Applicants may submit equipment and component manufacturers noise ratings to demonstrate compliance. The applicant may be required to provide Operating Sound Pressure Level measurements from a reasonable number of sampled locations at the perimeter of the battery energy storage system to demonstrate compliance with this standard.

L. Access Roads.

Emergency access roads shall be placed every two hundred (200) feet and shall be rated to withstand a seventy thousand (70,000) pound vehicle. Access roads shall be maintained to have access year-round.

M. Ownership Changes.

If the owner of the battery energy storage system changes or the owner of the property changes, the Special Land Use permit shall remain in effect, provided that the successor owner or operator assumes in writing all of the obligations of the Special Land Use permit, site plan approval, and decommissioning plan. A new owner or operator of the battery energy storage system shall notify the Zoning Administrator of such change in ownership or operator within thirty (30) days of the ownership change. A new owner or operator must provide such notification to the Zoning Administrator in writing. The Special Land Use permit and all other local approvals for the battery energy storage system would be void if a new owner or operator fails to provide written notification to the Zoning Administrator in the required timeframe. Reinstatement of a void Special Land Use permit will be subject to the same review and approval processes for new applications under this Ordinance.

N. Safety and Compliance.

1. Construction of a Battery Energy Storage System shall comply with the National Electric Safety Code and the Building Code. In the event of a conflict between the County Building Code and National Electric Safety Code (NESC), the NESC shall prevail.
2. **System Certification.** **All Battery Energy Storage Systems shall be in compliance with the latest edition of NFPA 855 Standard for the Installation of Stationary Energy Storage Systems at the time of application. Compliance includes that all system components and equipment shall be listed by a Nationally Recognized Testing Laboratory to UL 9540 (Standard for Energy Storage Systems and Equipment) and that Battery Energy Storage Systems are subject to UL 9540A (Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems), as applicable. Battery Energy Storage Systems, components, and associated ancillary equipment shall have required working space clearances, and electrical circuitry shall be within weatherproof enclosures marked with the environmental rating suitable for the type of exposure in compliance with NFPA 70.**

~~Battery energy storage systems and equipment shall be listed by a Nationally Recognized Testing Laboratory to UL 9540 (Standard for Battery Energy Storage Systems and Equipment) or approved equivalent, with subcomponents meeting each of the following standards as applicable:~~

- a.—UL 1973 (Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail Applications);
 - b.—UL 1642 (Standard for Lithium Batteries);
 - c.—UL 1741 or UL 62109 (Inverters and Power Converters);
 - d.—Certified under the applicable electrical, building, and fire prevention codes as required.
 - e.—Alternatively, field evaluation by an approved testing laboratory for compliance with UL 9540 (or approved equivalent) and applicable codes, regulations and safety standards may be used to meet system certification requirements.
- 3.—**Site Access.** Battery energy storage systems shall be maintained in good working order and in accordance with industry standards. Site access shall be maintained, including snow removal at a level acceptable to the local fire department.
 - 4.—Battery Energy Storage Systems, components, and associated ancillary equipment shall have required working space clearances, and electrical circuitry shall be within weatherproof enclosures marked with the environmental rating suitable for the type of exposure in compliance with NFPA 70.

O. Abandonment and Decommissioning.

- 1. **Decommissioning.** Following the operational life of the project, the Applicant shall perform decommissioning and removal of the Battery Energy Storage System and all its components.
 - a. The Applicant shall prepare a Decommissioning Plan and submit it to the Planning Commission for review and approval prior to issuance of the Special Land Use. The Township may require one (1) or more third-party entities to develop decommissioning cost estimates. If this is required, the Township will select the most appropriate cost estimate.
 - b. Under this plan, all structures, concrete, piping, facilities, and other project related materials above grade and any structures up to forty-two (42) inches below-grade shall be removed offsite for disposal. Any Battery Energy Storage System that is not operated for a continuous period of six (6) months shall be considered abandoned and shall be removed under the Decommissioning Plan. The ground must be restored to its original topography within three hundred sixty-five (365) days of abandonment or decommissioning. Restoration shall also include bringing soil to its pre-development composition to ensure agricultural use upon restoration. Soil tests by an environmental engineer shall be required as a part of the Decommissioning Plan both before development and prior to decommissioning. Soil shall be brought back to pre-development state within three hundred sixty-five (365) days of abandonment or decommissioning.
- 2. **Performance Guarantee.**

- (1) The applicant shall be required to post a Performance Guarantee, pursuant to [Section 9.8](#), for reclamation in an amount to be determined by Township Engineering Consultant as a condition of site plan approval.
- (2) A review of the amount of the performance guarantee based on inflation, salvage value, and current removal costs shall be completed every five (5) years, for the life of the project, and approved by the Township Board. The amount of the performance guarantee shall be increased based on an inflation rate equal to the average of the previous ten (10) years Consumer Price Index.
- (3) The Engineer will be able to review the size of the facility and the number of batteries that will be installed. The amount of the surety bond may fluctuate depending on the size of the facility. The Engineer shall set the surety bond amount.
- (4) The Performance Guarantee is to remain in place for the length of the leases/contracts and through the completion of the decommissioning plan, whichever is later.

P. Inspection.

The Township shall have the right at any reasonable time, to provide a twenty-four (24) hour notice prior to the desired inspection to the Applicant to inspect the premises on which any Battery Energy Storage System is located. The Township may hire one or more consultants, with approval from the Applicant (which shall not be unreasonably withheld), to assist with inspections at the Applicant's or project owner's expense. Inspections must be coordinated with, and escorted by, the Applicant's operations staff at the Battery Energy Storage System to ensure compliance with the [Occupational Safety and Health Administration](#) (OSHA), [NESC](#), and all other applicable safety guidelines. Fees may be required pursuant to [Section 9.7.C](#).

Q. Roads.

Any material damages to a public road located within the Township resulting from the construction, maintenance, or operation of a Battery Energy Storage System shall be repaired at the Applicant's expense. In addition, the Applicant shall submit to the appropriate county agency a description of the routes to be used by construction and delivery vehicles and any road improvements that will be necessary to accommodate construction vehicles, equipment, or other deliveries. The Applicant shall abide by all county requirements regarding the use and/or repair of county roads.

R. Continuing Financial Security.

If any Battery Energy Storage System is approved for construction under this Section, Applicant shall post decommissioning security prior to the start of construction (in a mutually agreed upon form) for an amount necessary to accomplish the work specified in the decommissioning plan as agreed upon by the Township and Applicant. The amount shall be reasonably sufficient to restore the property to its previous condition prior to construction and operation of the Battery Energy Storage System. Such financial security shall be kept in full force and effect during the entire time that the Battery Energy Storage System exists or is in place, and such financial security shall be irrevocable and non-cancelable.

1. **Continuing Obligations.** Failure to keep any required financial security in full force and effect at all times while a Battery Energy Storage System exists or is in place shall constitute a material and significant

violation of the Special Land Use and this Ordinance and will subject the Battery Energy Storage System Applicant, owner, and operator to all remedies available to the Township, including any enforcement action, civil action, request for injunctive relief, and revocation of the Special Land Use.

2. **Review.** These securities will be reviewed and updated every five (5) years in order to ensure that adequate financial resources are available for a decommissioning process.

S. Post-Approval Documentation.

Any Zoning Permit or Special Land Use Permit for any Off-Site BESS shall be conditioned upon the submission of the following documents:

1. **Pre-Construction Documents.** Prior to the commencement of construction activities, the following documents shall be prepared and/or updated in compliance with NFPA 855 and developed in consultation with the local fire department. These shall be submitted to the local fire department and the Zoning Administrator. Copies of all Pre-Construction Documents shall be maintained at an approved on-site location accessible to facility personnel, the local fire department, and emergency responders.
 - a. **Final Equipment Specification Sheet.** Documenting the final battery energy storage system components, inverters, and associated electrical equipment.
 - b. **Contact Information.** Name, address, and contact information of the system installer and the owner and/or operator of the battery energy storage system.
 - c. **Amended Emergency Response Plan (ERP) (if applicable).** Changes to the design, type, manufacturer, etc. of BESS facilities or equipment after site plan approval must be analyzed to determine if changes are necessary to the ERP. Additional consultation with local emergency services is required for amended plans.
 - d. **Commissioning Plan.** A Commissioning Plan as outlined in NFPA 855.
 - e. **Hazard Mitigation Analysis (HMA).** A Hazard Mitigation Analysis as outlined in NFPA 855.
2. **Post-Construction Reporting.** Prior to the commencement of commercial operations, the following documents shall be prepared and/or updated in compliance with NFPA 855 and developed in consultation with the local fire department. These shall be submitted to the local fire department and the Zoning Administrator prior to final inspection and approval by the fire inspector. Copies of all Post-Construction Reporting shall be maintained at an approved on-site location accessible to facility personnel, the local fire department, and emergency responders.
 - a. **Amendments or updates to any Pre-Construction Documents.**
 - b. **Commissioning Report.** A Commissioning Report as outlined in NFPA 855.72.
 - c. **Emergency Operations Plan.** An Emergency Operations Plan as outlined in NFPA 855.73.
3. **Post-Construction Sound Survey.** Documentation of sound pressure level measurements shall be provided

to the Zoning Administrator by a third-party qualified professional selected by the Planning Commission and at the expense of the BESS system owner within six (6) months of the commencement of the operation of the project. The study will be designed to verify compliance with sound standards applicable to this Ordinance. Any required modification shall be made to bring the site into compliance with this Ordinance.

Section 19: Amendment to Section 7.36 (Data Centers)

Section 7.36 of the Caledonia Township Zoning Ordinance is hereby added as follows:

A. Setbacks.

All principal buildings, accessory structures, and data center electric utility substations must be set back at least one hundred (100) feet from all lot lines.

B. Noise/Vibration.

The sound pressure level of a data center and all ancillary equipment shall not exceed fifty-five (55) dBA (Leq (1 hour)) at the lot line of an adjacent non-participating lot. The site plan shall include modeled sound isolines extending from the sound source to the dwelling. The applicant may be required to provide operating sound pressure level measurements from a reasonable number of sampled locations to demonstrate compliance with this standard.

C. Negative Impacts.

Any use or activity producing air, dust, smoke, glare, exhaust, heat, or humidity in any form shall be carried on in such a manner that it is not perceptible at or beyond the lot line.

D. Operations

Prior to approval of the certificate of completion or occupancy, the applicant shall provide written verification from the applicable service provider stating the following:

- (1) Utility supply equipment and related electrical infrastructure are sufficiently sized and can safely accommodate the proposed use.
- (2) Any system designed for cooling and operation of the facility (electricity, water, or other means) will be adequate and will not negatively impact the surrounding area and that such capacity is available in the community. Indicate on the application the amount of water necessary to operate the facility.
- (3) The use will not cause electrical interference or fluctuations in line voltage on and off the operating premises.
- (4) Prior to approval of the certification of completion or occupancy, the applicant shall provide the municipality with written verification that the electrical work has passed a third-party final inspection.

E. Data Center Electric Utility Substations.

1. Data center electric utility substations must include year-round opaque landscaping or a screening fence or wall to minimize visual impact.
2. Electric utility substations on the same property as the data center they serve must be located on the side or rear of a data center principal building so they are screened from public view. On-site substations do not require a buffer or screening between the data center principal building and the substation.
3. The data center electric utility substation shall be subject to applicable zoning district setback requirements. Setbacks shall be measured from the edge of the compound containing the substation to the property boundary of the lot it occupies.

F. Emergency Contact Information.

Each Data Center operation shall provide 24-hour emergency contact signage visible at the access entrance. Signs shall include the company name (if applicable), the owner/representative's name, the telephone number, and the corresponding local power company's name and telephone number.

G. Environmental and Community Impact Analysis.

Prior to the commencement of the public hearing, the applicant shall provide an environmental and community impact analysis. The environmental and community impact analysis shall include:

1. A narrative description of the nature of the on-site activities and operations, including the market area served by the facility, the hours of operation of the facility, the total number of employees on each shift, the times, frequencies, and types of vehicle trips generated, the types of materials stored, and the duration period of storage of materials.
2. A site plan of the property indicating the location of proposed improvements, flood plains, wetlands, waters, and cultural and historic resources on the property and within five hundred (500) feet of the boundaries of the property.
3. Evidence that the disposal of materials will be accomplished in a manner that complies with state and federal regulations.
4. An evaluation of the potential impacts of the proposed use, both positive and negative, upon:
 - a. Emergency services and fire protection,
 - b. Water supply,
 - c. Sewage disposal,
 - d. Solid waste disposal,
 - e. Electricity rates,
 - f. School facilities, and
 - g. Municipal revenues and expenses.

5. Any environmental impacts that are likely to be generated (e.g., odor, noise, smoke, dust, litter, glare, heat islands, vibration, electrical disturbance, wastewater, stormwater, solid waste, etc.) and specific measures employed to mitigate or eliminate any negative impacts.
6. Additional studies may be required by the Planning Commission if reasonably related to the standards of this Ordinance as applied to the application site. The Planning Commission may require that additional studies be performed by a third-party qualified professional and shall be paid for by the applicant.

Section 20: Severability

If any clause, sentence, paragraph or part of this Ordinance shall for any reason be finally adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder of this Ordinance but shall be confined in its operation to the clause, sentence, paragraph or part thereof directly involved in the controversy in which such judgment is rendered.

Section 21: Saving Clause

The Caledonia Township Zoning Ordinance, except as herein or heretofore amended, shall remain in full force and effect. The amendments provided herein shall not abrogate or affect any offense or act committed or done, or any penalty or forfeiture incurred, or any pending fee, assessments, litigation, or prosecution of any right established, occurring prior to the effective date hereof.

Section 22: Effective Date

The ordinance changes shall take effect upon the expiration of seven days after the publication of the notice of adoption.

Caledonia Township Supervisor

Caledonia Township Clerk

I, _____, Clerk for Caledonia Township, hereby certify that the foregoing is a true and correct copy of Ordinance No. ____ of 2026 of Caledonia Township, adopted by at a meeting of the Township Board of Trustees held on _____, 2026.

A copy of the complete ordinance text may be inspected or purchased at the Caledonia Township Hall at 6421 Gillard Rd, Spruce, MI 48762.

Adopted: Published: Effective: subject to PA 110 of 2006 as amended.