



CASS COUNTY PLANNING COMMISSION

*Dan Stutsman • David Kring • Jayne Bailey • Richard Palmisano • Annie File
Roseann Marchetti • Edwin Johnson III • Char Hiemstra • Dianna McGrew*

Wednesday, August 23, 2023 at 4:00 PM

**Cass County Building
120 N. Broadway
2nd Floor Conference Room
Cassopolis, MI 49031**

1. Call to Order
2. Approval of Agenda
3. Approval of Minutes — August 8, 2023
4. New Business
 - a) **Milton Township** — Solar and Wind Ordinance
5. Other Business
6. Adjournment

CASS COUNTY PLANNING COMMISSION

August 8, 2023 Meeting Minutes

1. The Meeting of the Cass County Planning Commission was called to order in the Kincheloe Room of the Cass County Building by Dan Stutsman at 3:54pm.
2. **Members present:** Dan Stutsman, Roseann Marchetti, David Kring, Char Hiemstra, Dianna McGrew, Richard Palmisano. **Absent:** Jayne Bailey, Annie File, Edwin Johnson III. **Guests present:** Linda McGregor, Jim Griggs, Craig Schmidt, Jerry Marchetti, Frank Butts, Sandy Seanor and Dawn Bolock.
3. Marchetti moved, Kring seconded, CARRIED, to amend the agenda to remove approval of July 24 minutes, as there was no quorum, and to remove “rezone” and add PA116 application for Reed Farms.
4. McGrew moved, Marchetti seconded, CARRIED, to approve the minutes of the July 5, 2023 meeting.
5. **Ontwa Township:** Sandy Seanor proposed an ordinance allowing residents to own ducks, chickens and rabbit, which could enable youth the opportunity to show the animals for 4-H. Each residence is to have no more than 15 animals in total. John Hanson has made it possible to get digital copies for Ontwa Township.
 - a. Hiemstra moved, McGrew seconded, CARRIED, to approve the ordinance.
6. **Howard Township:** Howard Township Administrator Linda McGregor proposed changes to Chapter 18, Section 18.02: Specific Standards for Special Land Use Approval, adding a new subparagraph to cover “pop up retail.” The amendment applies only to R1 (low-density rural residential districts) and AR (agriculture residential districts).
 - a. Marchetti moved, McGrew seconded, CARRIED, the proposed amendment, which sets a minimum lot size for such use at one acre, designates number of days and hours of operation and sets rules for parking, food and beverage, and licenses.
7. **Marcellus Township:** Kring moved, Marchetti seconded, CARRIED, to approve Reed Family Farms’ application for PA116.
8. **Wayne Township:** Jim Griggs from Wayne Township presented the proposed ordinance to place some restrictions on short-term rentals. Palmisano suggested that they may want to make some additional changes to the ordinance after about a year. It was suggested that it may be too loose an ordinance.
 - a. Kring moved, Palmisano seconded, CARRIED to approve first draft.
9. A letter of opposition to the proposed gravel pit was received along with a Salt Lake Tribune article and an assessment of the Economic Impact of a proposed gravel pit in Richland Township, Michigan done by George A Erickcek, Senior Regional Analyst, W. E. Upjohn Institute for Employment Research. The planning commission has not received any ordinance change for Volinia Township.
10. Stutsmen adjourned the meeting at 4:54 p.m.

Respectfully submitted by

Char Hiemstra



Cass County Planning Commission

Checklist



Dear Local Government Official:

When you send the Cass County Planning Commission material for their review, please use the attached checklist and include it with the other documents that you submit. Thank you.

WE NEED A MEMBER OF YOUR PLANNING COMMISSION TO ATTEND THE COUNTY PLANNING COMMISSION MEETING TO FURTHER EXPLAIN THE REQUEST AND TO ANSWER QUESTIONS.

- ☒ Signed cover letter requesting review and summarizing the process which has already occurred.
- ☒ Copy of the public hearing minutes.
- ☒ Copy of section of Township Land Use Plan that applies to/supports action.
- ☒ Copy of section of zoning ordinance, including amendments or supplements, which apply to/support action.
- ☒ For an ~~initial~~ zoning ordinance: 8 copies on loan with map(s).
- ☒ For text changes (amendments or supplements): those portions affected or a comprehensive summary of the changes and, if affected, the map.
- ☒ For petitions for rezoning, a copy of the petition with the map(s) showing: zoning of adjoining properties within 300 ft. for which action was taken and the parcel(s) of consideration and roads need to be clearly identified and labeled. If not included on the petition, the cover letter should indicate acreage, existing zoning, requested zoning, existing use and proposed use.
- ☒ Does the action taken by the Township concur with the Township Ordinance, Zoning Map and/or Land Use Master Plan for that property? If not, is the request eligible for Zoning Board of Appeals action?
- ☒ If any provision of public services is or will be involved, include correspondence from the affected unit expressing its awareness.

Date: 8/15/2023
Signed: [Signature]



Milton Township

32097 Bertrand St., Niles, MI 49120 Phone (269)684-7262 Fax (269)684-1742
Email: milton@miltontwp.org Website: www.miltontwp.org

August 15, 2023

Cass County Planning Commission
120 N. Broadway, Suite 200
Cassopolis, MI 49031

Re: Text Amendments

Dear PC Members:

On August 1, 2023, the Milton Township Planning Commission held a Public Hearing for a text amendment to the Zoning Ordinance adding renewable energy (solar and updating wind).

We ask that you review this information at your next Planning Commission meeting and send us a letter giving your opinion on the subject matter.

Sincerely,

Eileen Glick
Zoning Administrator



Milton Township

32097 Bertrand St., Niles, MI 49120 Phone (269)684-7262 Fax (269)684-1742
Email: milton@miltontwp.org Website: www.miltontwp.org

Planning Commission Members

Karen Shirk, Jt McDonald, Linda Sokol, Virginia Kraft, Phil Egert, Greg Harrison, Jimmy Gilley

Official Minutes for Milton Township Planning Commission Meeting

Milton Township Hall – 32097 Bertrand St., Niles, MI

PLANNING COMMISSION MEETING

August 1st, 2023 7:00 P.M.

Call to Order/Pledge of Allegiance:

1. The meeting was called to order at 7:01pm by Chairperson Shirk
2. Pledge of Allegiance was recited
3. Members present: Shirk, McDonald, Sokol, Kraft, Egert, Harrison, Gilley

Approval of Agenda:

Kraft made a motion to approve the agenda

- a. McDonald seconded
- b. No discussion
- c. Motion carried

Approval of Previous Minutes :

McDonald made a motion to approve revised minutes correcting “tabling the application” to “tabling the decision” under Public Hearing notes

- a. Kraft seconded the motion
- b. No discussion
- c. Motion carried

Anyone Wishing to Speak to the Planning Commission: (limited to 3 minutes per person)

Tim Sokol, 32332 Bertrand St, Niles MI 49120 spoke in support of SLU applicant for gas station and convenience store at Bell and Hwy 12

Community Reports:

1. **Zoning Administrator** - Slow with few new permits. ZBA meeting at end of month
2. **Township Board Representative** - BOT discussing possible ordinance for events to include security. Discussed possible ordinance for Emotional Support Animals. Looking for cleaning service for township building.
3. **Zoning Board of Appeals Representative**- NONE

Public Hearing:

Chairperson Shirk opened the Public Hearing to adopt the Amendments to Milton Township Zoning Ordinance regarding Utility Scale Wind and Utility Scale Solar and read the procedural guidelines.
No persons speaking for or against.

Chairperson closes the Public Hearing.

Some discussion, McDonald motioned to accept the Ordinances as written

- a. Sokol seconded
- b. Votes:
 - Egert, yes
 - McDonald, yes
 - Kraft, yes
 - Sokol, yes
 - Harrison, yes
 - Gilley, yes
 - Shirk, yes
- c. No discussion
- d. Motion carried

Old Business:

1. **Special Land Use application** for gas station and convenience store at 33331 US 12, Niles MI 49120 (Parcel ID#14-070-150-015-100): Discussed MDOTS findings on number and severity of traffic accidents. Hours of operation also discussed.

McDonald motioned to approve SLU application with amendment for allowable hours of operation to 5am to 11pm.

- a. Egert seconded
- b. Votes:
 - Egert, yes
 - McDonald, yes
 - Kraft, abstained
 - Sokol, yes
 - Shirk, yes
 - Harrison, Yes
 - Gilley, yes
- c. No discussion
- d. Motion carried

2. **Future Land Use map:** Discussion on procedures for review of FLU.

Shirk motioned to have ZA get more data from Williams and Works about FLU and action steps on master plan

- a. Kraft seconded
- b. No discussion
- c. Motion carried

New Business:

1. Elections:

Sokol nominated McDonald for Vice Chair

- a. Kraft seconded
- b. No discussion
- c. Motion carried

Sokol nominated Shirk for Chair

- a. McDonald seconded
- b. No discussion
- c. Motion carried

Shirk nominated Sokol for Secretary

- a. Egert seconded
- b. No discussion
- c. Motion carried

2. Emotional Support Animals: After much discussion Shirk motioned to reach out to Catherine for further consult.

- a. Kraft seconded
- b. No discussion
- c. Motion carried

Board Member Comments:

NONE

Announcements:

NONE

Adjournment:

Egert motioned to adjourn

- a. Kraft seconded
- b. Motion carried
- c. Meeting adjourned at 8:47pm

NOTICE OF PUBLIC HEARING

MILTON TOWNSHIP, CASS COUNTY, MI
32097 Bertrand St
Niles, MI 49120

To: The residents and property owners of Milton Township, Cass County Michigan and any other interested parties.

PLEASE TAKE NOTICE the Planning Commission of Milton Township, Cass County Michigan will hold a Public Hearing on Tuesday, August 1, 2023, commencing at 7:00 p.m., at the Milton Township Hall, 32097 Bertrand St, Niles MI 49120.

PLEASE TAKE FURTHER NOTICE the Planning Commission is considering amendments to Milton Township Zoning Ordinance, as follows:

Chapter 2 Definitions, Section 2.20 S. is amended by adding: Section 2.20 "S"

Solar Energy

Small-Scale Solar Energy Collector: A solar energy collector primarily intended to provide energy for on-site uses and to provide power for use by owners, lessees, tenants, residents, or other occupants of the lot on which it is erected. It may be comprised of the following: building-integrated photovoltaic systems ("BIPV"), ground-mounted solar energy collectors, and/or building-mounted solar energy collectors.

Solar Collector Surface: Any part of a solar energy system that absorbs solar energy for use in the system's transformation process. The collector surface does not include frames, supports, and mounting hardware. Solar Energy: Radiant energy received from the sun that can be collected in the form of heat or light by a solar energy system.

Ancillary Solar Equipment: Any accessory part or device of a solar energy system that does not require direct access to sunlight, such as batteries, electric meters, converters, or water heater tanks.

Building-Mounted Solar Energy Collector: A solar energy collector attached to the roof or wall of a building, or which serves as the roof, wall, or other element in whole or in part of a building. This also includes building-integrated photovoltaic systems ("BIPV").

Solar Energy System (SES): A photovoltaic system or solar thermal system for generating and/or storing electricity or heat, including all above and below ground equipment or components required for the system to operate properly and to be secured to a roof surface or the ground. This includes any necessary operations and maintenance building(s), but does not include any temporary construction offices, substation(s) or other transmission facilities between the SES and the point of interconnection to the electric grid.

Decibel: Means a unit used to measure the intensity of a sound or the power level of an electric signal by comparing it with a given level on a logarithmic scale.

Decommissioning: Deconstruction and removal of solar equipment, site office, and other ancillary infrastructure from the site.

Dual Use: A solar energy system that employs one or more of the following land management and conservation practices throughout the project site:

- Pollinator Habitat: Solar sites designed to meet a score of 76 or more on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.
- Conservation Cover: Solar sites designed in consultation with conservation organizations that focus on restoring native plants, grasses, and prairie with the aim of protecting specific species (e.g., bird habitat) or providing specific ecosystem services (e.g., carbon sequestration, soil health).
- Forage: Solar sites that incorporate rotational livestock grazing and forage production as part of an overall vegetative maintenance plan.
- Agrioltaics: Solar sites that combine raising crops for food, fiber, or fuel, and generating electricity within the project area to maximize land use.

Ground-Mounted Solar Energy Collector: A solar energy collector that is not attached to and is separate from any building on the lot on which the solar energy collector is located.

Laydown Area: Area cleared for the temporary storage of supplies and equipment during construction.

Maximum Tilt: The maximum angle of a solar array (i.e., most vertical position) for capturing solar radiation as compared to the horizon line.

Non-Participating Lot(s): One or more lots for which there is not a signed lease or easement for development of a principal-use SES or wind associated with the applicant project.

Participating Lot(s): One or more lots under a signed lease or easement for development of a principal-use SES associated with the applicant project.

Photovoltaic System: A collection of solar panels and related equipment and components used to convert light or heat into electrical power.

Repowering: Reconfiguring, renovating, or replacing an SES to maintain or increase the power rating of the SES within the existing project footprint.

Sound Pressure: Measured in decibels, indicator of sound intensity emanating from a wind or solar project.

Utility Scale Solar Energy System: A solar energy system that meets all of the following:

- A. It is primarily used for generating electricity for sale and/or distribution off site to an authorized public utility or other firm for use in the electrical grid;
- B. The total surface area of all solar collector surfaces exceeds 1,500 square feet; and/or
- C. It is not considered an accessory use or structure by the Township Zoning Administrator

Chapter 2 Definitions, Section 2.24 "W"

Wind Energy System (WES): A combination of:

1. A surface area, either variable or fixed, for utilizing the wind for electrical powers; and
2. A shaft, gearing, belt, or coupling utilized to convert the rotation of the surface area into a form suitable for driving a generator, alternator, or other electricity-producing device; and
3. The generator, alternator, or other device to convert the mechanical energy of the surface area into electrical energy; and
4. The tower, pylon, or other structure upon which any, all, or some combination of the above are mounted; and
5. Building or equipment accessory thereto.

Aircraft Detection Lighting System (ADLS): Radar-activated aircraft detection system on wind turbines that activates wind turbine obstruction lights only when an aircraft is within three nautical miles of a wind farm. Allows blinking lights on turbines to be turned off most of the time, while still complying with Federal Aviation Administration requirements.

Anemometer Tower: means a freestanding tower containing instrumentation such as anemometers that is designed to provide present moment wind data for use by the supervisory control and data acquisition (SCADA) system which is an accessory land use to a utility-scale wind energy system. Also includes the same equipment for evaluating wind characteristics in preparation of or evaluation of construction of on-site wind energy system and utility-scale WES.

Noncommercial Wind Energy System (NWES): A Noncommercial Wind Energy System is a wind driven machine(s) that converts wind energy into electrical power for primary purpose of on-site use and not for resale.

Survival wind speed: The maximum wind speed, as designated by the WES manufacturer, at which a WES, in unattended operation (not necessarily producing power) is designed to survive without damage to any structural equipment or loss of the ability to function normally.

Utility-scale Wind Energy System/Commercial (WES): Means a land use for generating power by use of wind at multiple tower locations in a community and includes accessory uses such as but not limited to a SCADA Tower, electric substation. A utility-scale WES is designed and built to provide electricity to the electric utility.

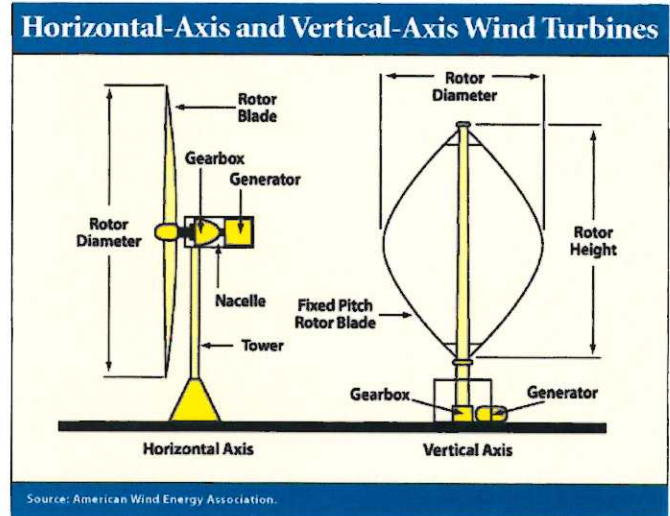
Wildlife-Friendly Fencing: A fencing system with openings that allow wildlife to traverse over or through a fenced area.

Wind farm: Clusters (2 or more) of WES towers placed upon land with the intent to sell or provide electricity to others. The towers may or may not be owned by the owner of the property upon which the towers are placed.

Wind Turbine: Means a group of component parts used to convert wind energy into electricity and includes the tower, base, rotor, nacelle, and blades.

WES tower height:

1. Horizontal axis wind turbine rotors: The distance between the ground and the highest point of the WES, as measured from the ground, plus the length by which the rotor blade on a horizontal mounted WES exceeds the structure which supports the rotor and blades;
2. Vertical axis wind turbine: The distance between the ground and the highest point of the WES.



Chapter 3 - General Provisions, Section 3.08 Accessory Buildings and Structures is amended by removing number 11. Freestanding solar panels shall be considered an accessory structure and shall meet all front, side and rear yard requirements specified for such structures. Roof panels shall not exceed the height of the building or structure to which it is attached.

3.33 Small-Scale Solar Energy Systems

Applicability. This section applies to any system of small-scale solar energy collector systems. This section does not apply to solar energy collectors mounted on fences, poles, or on the ground with collector surface areas less than five (5) square feet and mounted less than five (5) feet above the ground, nor does this section apply to the larger utility scale solar energy collector systems, which are regulated in Section 15.48. Nothing in this section shall be construed to prevent the sale of limited excess power through a net billing or net-metering arrangement.

1 General requirements:

- a. Permit Required. No small-scale solar energy collector system shall be installed or operated except in compliance with this section. A zoning permit shall be obtained from the Zoning Administrator prior to the installation of a small-scale solar energy system.
- b. Glare and Reflection. The exterior surfaces of solar energy collectors shall be generally neutral in color and substantially non-reflective of light. Such collectors shall not be installed or located so that sunlight or glare is reflected into neighboring dwellings or onto adjacent roads.
- c. Installation.
 - 1) A small-scale solar energy collector shall be permanently and safely attached to the ground or a structure or building. Solar energy collectors, and their installation and use, shall comply with all building codes and all other applicable Township and state requirements.
 - 2) Small-scale solar energy collectors shall be installed, maintained, and used only in accordance with the manufacturer's specifications. Upon request, a copy of such specifications shall be submitted to the Township prior to installation.
- d. Power Lines. On-site power lines between solar panels and inverters shall be installed and maintained underground pursuant to applicable building and electrical codes.

- e. Abandonment and Removal. A solar energy collector system that ceases to produce energy on a continuous basis for twelve (12) months or more will be considered abandoned unless the responsible party with an ownership interest in the system provides substantial evidence to the Township every six (6) months (after the twelve (12) months of no energy production) of the intent to maintain and reinstate the operation of that system. The responsible party shall remove all equipment and facilities and restore the lot to its condition prior to the installation of the system within one (1) year of abandonment.
2. Building-Mounted Solar Energy Collectors. These systems may be established as accessory uses to principal uses in all zoning districts subject to the following conditions.
- a. Maximum Height. The maximum height of the zoning district in which the building mounted solar energy collectors are located shall not be exceeded by more than three (3) feet by such collectors.
 - b. Obstruction. Building-mounted solar energy collectors shall not obstruct or impede solar access to adjacent properties.
3. Ground-Mounted Solar Energy Collectors. These systems are permitted in all zoning districts subject to the following conditions.
- a. Rear and Side Yards. The equipment and collectors may be located in the rear yard or the side yard but shall be subject to setbacks for accessory structures.
 - b. Front Yard. The equipment and collectors may be located in the front yard only if located no less than one hundred fifty (150) feet from the front lot line.
 - c. Obstruction. Ground-mounted solar energy collectors shall not obstruct or impede solar access to adjacent properties.
 - d. Vegetation. All vegetation underneath solar energy infrastructure shall be properly maintained so as to not block access to solar collectors.
 - e. Maximum Number.
 - 1) Residential uses. There shall be no more than one (1) ground-mounted solar energy collector system per principal building on a lot.
 - 2) Agricultural, Commercial, and Industrial uses. There shall be no limit to the number of ground-mounted solar energy collectors on a lot.
 - f. Maximum Size.
 - 1) Residential uses. There shall be no more than one percent (1%) of the lot area, up to a maximum of one thousand five hundred (1,500) square feet of collector panels on a ground-mounted solar energy collector system unless a larger system is approved pursuant to Section 15.48 of this Ordinance.
 - 2) Agricultural, Commercial, and Industrial uses. There shall be no more than ten thousand (10,000) square feet of collector panels on a ground-mounted solar energy collector system unless a larger system is approved pursuant to Section 15.48 of this Ordinance.
 - g. Maximum Height.
 - 1) Residential uses. The maximum height shall be six (6) feet, measured from the natural grade below the equipment or collector to the highest point at full tilt.
 - 2) Agricultural, Commercial, and Industrial uses. The maximum height shall be sixteen (16) feet, measured from the natural grade below the equipment or collector to the highest point at full tilt.
 - h. Minimum Lot Area. One (1) acre shall be the minimum lot area to establish a ground-mounted solar energy collector system.
 - i. Screening. Screening shall be required in cases where a ground-mounted solar energy collector impacts views from adjacent residential properties. Screening methods may include the use of material, colors, textures, screening walls, and landscaping that will blend the unit into the natural setting and existing environment.

- j. Limits. Applicants requesting ground-mounted solar energy collectors shall demonstrate the system's projected electricity generation capability, and the system shall not regularly exceed the power consumption demand of the principal and accessory land uses on the lot. However, larger systems may be approved by the Planning Commission if greater electricity need is demonstrated to power on-site buildings and uses.

Chapter 5 – Agricultural Production District, Section 5.02 Uses Permitted by Right is amended by adding Small-Scale Solar Energy Collector

Chapter 5 – Agricultural Production District, Section 5.03 Special Land Uses is amended by removing Wind energy conversion system (commercial)

Chapter 6 – Rural Residential District, Section 6.02 Uses Permitted by Right is amended by adding Small-Scale Solar Energy Collector

Chapter 6 – Rural Residential District, Section 6.03 Special Land Uses is amended by removing Commercial Wind Energy Conversion System

Chapter 7 – Single Family Residential District, Section 7.02 Uses Permitted by Right is amended by adding Small-Scale Solar Energy Collector

Chapter 9 – Commercial District, Section 9.02 Uses Permitted by Right is amended by adding Small-Scale Solar Energy Collector

Chapter 9 – Commercial District, Section 9.03 Special Land Uses is amended by adding Utility Scale Solar Energy Systems and Wind Energy System, Utility Scale/Commercial

Chapter 11 – Industrial District, Section 11.02 Uses Permitted by Right is amended by adding Small-Scale Solar Energy Collector

Chapter 11 – Industrial District, Section 11.03 Special Land Uses is amended by adding Utility Scale Solar Energy Systems and Wind Energy System, Utility Scale/Commercial

Chapter 15 – Special Land Uses, is amended by adding Section 15.48 Utility Scale Solar Energy Systems

1. Site Plan Required. An application for special land use approval for a Utility Scale Solar Energy System shall include a site plan in accordance with Chapter 15. In addition to the information required for site plan approval in Section 15.03, all applications must also include all of the following:
 - a. Equipment and unit renderings.
 - b. Elevation drawings.
 - c. Setbacks from all property lines and adjacent structures.
 - d. Notarized written permission from the property owner authorizing the Utility Scale Solar Energy System.
 - e. All additional plans and requirements set forth in this Section and any other information required by the Township.
2. Special Land Use Approval; Utility scale solar energy systems require special land use approval. In addition, no utility scale solar energy system shall be constructed, installed, operated, maintained, or modified as provided in this section without first obtaining all applicable approvals and permits. The construction, installation, operation, maintenance, or modification of all utility scale solar systems shall be consistent with all applicable local, state, and federal requirements, and all buildings and structures that comprise a utility scale solar energy system shall be constructed, installed, operated, and maintained in strict accordance with the Michigan Building Code and the manufacturer's specifications.
 - a. Environment: The application will demonstrate mitigation measures to minimize potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, historical and cultural sites, and antiquities, as identified in the Environmental Analysis. The application shall demonstrate compliance with:

- 1) Michigan Natural Resources and Environmental Protection Act (Act 451 of 1994, MCL 324.101 et seq.) (including but not limited to: Part 31 Water Resources Protection (MCL 324.3101 et seq.),
- 2) Part 91 Soil Erosion and Sedimentation Control (MCL 324.9101 et seq.)
- 3) Part 301 Inland Lakes and Streams (MCL 324.30101 et seq.)
- 4) Part 303 Wetlands (MCL 324.30301 et seq.)
- 5) Part 323 Shoreland Protection and Management (MCL 324.32301 et seq.)
- 6) Part 325 Great Lakes Submerged Lands (MCL 324.32501 et seq.)
- 7) Part 353 Sand Dunes Protection and Management (MCL 324.35301 et seq.)
- b. Avian and Wildlife Impact: Site plan and other documents and drawings shall provide mitigation measures to minimize potential impacts on avians and wildlife, as identified in the Avian and Wildlife Impact analysis.
 - 1) The application shall demonstrate consultation with the U.S. Fish and Wildlife Service's Land-Based Wind Energy Guidelines.
 - 2) Applicants must comply with applicable sections of the Federal Endangered Species Act and Michigan's endangered species protection laws (NREPA, Act 451 of 1994, Part 365).
 - 3) The applicant or the applicant's impact assessment must show consultation with the U.S. Fish and Wildlife Service regarding federally listed species and the Michigan Department of Natural Resources for state listed species. Early coordination with state and federal agencies is recommended.
3. Lot Area. Utility scale solar energy systems shall be located on a lot at least twenty (20) acres in size.
4. Setbacks: Setback distance shall be measured from the property line or road right-of-way to the closest point of the solar array at minimum tilt or any SES components and as follows:
 - a. In accordance with the setbacks for principal buildings or structures for the zoning district of the project site 150 feet from the property line of a non-participating lot.
 - b. 250 feet from any existing dwelling unit on a non-participating lot.
5. Height. Utility scale solar energy systems shall not exceed sixteen (16) feet in height, measured from the natural grade below the collector or equipment to the highest point at full tilt.
6. Sound: The sound pressure level of a utility scale SES and all ancillary solar equipment shall not exceed 45 dBA (Leq (1-hour)) at the property line of an adjoining non-participating lot. The site plan shall include modeled sound isolines extending from the sound source to the property lines to demonstrate compliance with this standard.
7. Screening. The Planning Commission may require that a utility scale solar energy system be screened from adjoining residential properties or public rights-of-way. Screening methods may include the use of material, colors, textures, screening walls, fencing, berms, landscaping, and/or natural vegetation that will blend the facility into the natural setting and existing environment.
8. Glare and Reflection. The exterior surfaces of utility scale solar energy collectors shall be generally neutral in color and substantially non-reflective of light. A solar collector - surface shall not be installed or located so that sunlight or glare is reflected into neighboring residences or onto adjacent streets.
9. Location. Solar energy systems shall be located in the area least visibly obtrusive to adjacent residential properties and roads while remaining functional.
10. Ground Cover: A utility scale SES shall include the installation of ground cover vegetation maintained for the duration of operation until the site is decommissioned. The applicant shall include a ground cover vegetation establishment and management plan as part of the site plan. Vegetation establishment must include invasive plant species [and noxious weed, if local regulation applies] control. The following standards apply:
 - a. Sites bound by a Farmland Development Rights (PA 116) Agreement must follow the Michigan Department of Agriculture and Rural Development's Policy for Allowing Commercial Solar Panel Development on PA 116 Lands.

- b. Ground cover at sites not enrolled in PA 116 must meet one or more of the four types of Dual Use defined in this ordinance.
 - 1) Pollinator Habitat: Solar sites designed to meet a score of 76 or more on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.
 - 2) Conservation Cover: Solar sites designed in consultation with conservation organizations that focus on restoring native plants, grasses, and prairie with the aim of protecting specific species (e.g., bird habitat) or providing specific ecosystem services (e.g., carbon sequestration, soil health).
 - 3) Forage: Solar sites that incorporate rotational livestock grazing and forage production as part of an overall vegetative maintenance plan.
 - c. Project sites that are included in a brownfield plan adopted under the Brownfield Redevelopment Financing Act, PA 381 of 1996, as amended, that contain impervious surface at the time of construction or soils that cannot be disturbed, are exempt from ground cover requirements.
- 11. Lot Coverage: A utility scale SES shall not count towards the maximum lot coverage or impervious surface standards for the district.
 - 12. Land Clearing: Land disturbance or clearing shall be limited to what is minimally necessary for the installation and operation of the system and to ensure sufficient all-season access to the solar resource given the topography of the land. Topsoil distributed during site preparation (grading) on the property shall be retained on site.
 - 13. Access Drives: New access drives within the SES shall be designed to minimize the extent of soil disturbance, water runoff, and soil compaction on the premises. The use of geotextile fabrics and gravel placed on the surface of the existing soil for the construction of temporary drives during the construction of the SES is permitted, provided that the geotextile fabrics and gravel are removed once the SES is in operation.
 - 14. Wiring: SES wiring (including communication lines) shall be buried underground.
 - 15. Lighting: Utility scale SES lighting shall be limited to inverter and/or substation locations only. Light fixtures shall have downlit shielding and be placed to keep light on-site and glare away from adjacent properties, bodies of water, and adjacent roadways. Flashing or intermittent lights are prohibited.
 - 16. Signage: Signage shall be minimal, limited to high voltage warnings and emergency contact information, and posted and all entry/exit points.
 - 17. Repowering: In addition to repairing or replacing SES components to maintain the system, a utility scale SES may at any time be repowered, without the need to apply for a new special land use permit, by reconfiguring, renovating, or replacing the SES to increase the power rating within the existing project footprint.
 - a. A proposal to change the project footprint of an existing SES shall be considered a new application, subject to the ordinance standards at the time of the request. [Expenses for legal services and other studies resulting from an application to modify an SES will be reimbursed to the township by the SES owner in compliance with established escrow policy.]
 - 18. Obstruction: Solar energy systems shall not obstruct or impede solar access to adjacent and neighboring properties.
 - 19. Power lines: On site power lines between all structures and ancillary equipment and inverters shall be installed and maintained underground.
 - 20. Fencing: A utility scale SES shall be secured with perimeter fencing to restrict unauthorized access. If installed, perimeter fencing shall be a minimum of 7 feet and a maximum of 8 feet. Barbed wire and chain link fencing is prohibited. Fencing is not subject to setbacks.
 - 21. Complaint Resolution:
 - a. Complaint resolution plan shall be presented to the planning commission and approved prior to approval of a special land use permit.
 - b. The complaint resolution program will describe how the developer receives, responds, and resolves complaints that may arise from the operation of the SES.

- c. The complaint resolution plan shall include appropriate timelines for response and other detailed information (such as forms and contact information).
- 22. Operation and Maintenance Plan. The applicant shall submit a plan to the Township for the operation and maintenance of the utility scale solar energy system, which shall include measures for maintaining safe access to the installation and storm water controls, as well as general procedures of operational maintenance of the installation, as applicable.
- 23. Emergency Services. Upon request by Milton Township, the owner/operator of the utility scale solar energy system shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the solar energy system shall be clearly marked on the plan. The owner/operator shall identify a current responsible person for public inquiries throughout the life of the installation. An information sign shall be posted and maintained at the entrance(s) which lists the current name, phone number and email address of the operator.
- 24. Maintenance. The utility scale solar energy system owner/operator shall maintain the facility in good and safe condition at all times. Maintenance shall include, but not be limited to, structural repairs, safety-related upgrades, and integrity of security measures. Site access roads or drives shall be maintained to a level acceptable to local emergency services personnel. The owner/operator shall be responsible for the cost of fully maintaining the solar photovoltaic installation and any access road(s).
- 25. Decommissioning Plan: A decommissioning plan is required at the time of application.
 - a. The decommissioning plan shall include:
 - 1) The anticipated life of the project
 - 2) The anticipated manner in which the project will be decommissioned, including a description of which above-grade and below-grade improvements will be removed, retained (e.g. access drive, fencing), or restored for viable reuse of the property consistent with the zoning district,
 - 3) The projected decommissioning costs for removal of the SES (net of salvage value in current dollars) and soil stabilization, less the amount of the surety bond posted with the State of Michigan for decommissioning of panels installed on PA 116 lands. A review of the projected decommissioning costs shall be conducted every three years for the life of the project and approved by the planning commission board.
 - 4) The method of ensuring that funds will be available for site decommissioning and stabilization (in the form of surety bond, irrevocable letter of credit, or cash deposit), and:
 - b. An SES owner may at any time:
 - 1) Proceed with the decommissioning plan approved by the Planning Commission and remove the system as indicated in the most recently approved plan; or
 - 2) Amend the decommissioning plan with Planning Commission approval and proceed according to the revised plan.
- 26. Decommissioning.
 - a. Any utility-scale solar energy system which has 1) reached the end of its useful life, 2) has not operated continuously for one year or longer or 3) whose owners determine they shall cease operation of the SES, shall be considered ready for decommissioning. The owner/operator shall notify the Township directly or by certified mail of the proposed date of discontinued operations and plans for removal.
 - b. The owner/operator shall physically remove the installation no more than one hundred and fifty (150) days after the date of discontinued operations.
 - c. If the owner/operator fails to remove the installation in accordance with the requirements of this section within 150 days of discontinued operations or the proposed date of decommissioning, the Township may enter the property and physically remove all of the solar energy system and facilities and charge the cost back to the owner(s) of the lot.
 - d. Removal of the solar energy system and facilities shall consist of all of the following:

- 1) Physical removal of all aboveground or underground utility-scale solar energy systems, structures, equipment, security barriers, and transmission lines from the site.
 - 2) Disposal off-site of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
 - 3) Restoration and stabilization or re-vegetation of the site as necessary to minimize erosion.
- e. Decommissioning an SES must commence when the soil is dry to prevent soil compaction and must be complete within 18 months after abandonment. An SES that has not produced electrical energy for 12 consecutive months shall prompt an abandonment hearing.

27. Financial Guarantee.

- a. The applicant for a utility scale solar energy system shall provide to the Township a form of monetary surety or security, either through an escrow account, letter of credit, bond, or other instrument, acceptable to the Township Attorney.
- b. The purpose of the surety or security is to cover the cost of removal of the utility scale solar energy system in the event the owner/operator does not fully remove the solar energy system and facilities, or the Township must remove the same.
- c. The amount of the financial surety or security shall not exceed more than 125 percent of all costs of removal and compliance with the additional requirements set forth herein.
- d. The estimated costs of removal shall be submitted by the applicant to the Township and be prepared by a qualified engineer.
- e. The surety or security shall be subject to review and approval by the Planning Commission and the Township Attorney and shall be a condition of special land use approval.
- f. The amount of the surety or security shall increase by the Federal CPI every five years.

Chapter 15 Special Land Use, Section 15.51 Wind Energy System, Utility Scale/Commercial

1. Pre-Application Permits: Utility-scale/Commercial WES shall comply with applicable utility, Michigan Public Service Commission, Federal Energy Regulatory Commission interconnection standards, FAA requirements, and tall structures requirements, including but not limited to:
 - a. Aviation and Airport:
 - 1) Federal Aviation Administration (FAA) requirements. The minimum FAA lighting standards shall not be exceeded. The lighting plan submitted to the FAA shall include an Aircraft Detection Lighting System (ADLS) for the utility-scale WES. The tower shaft shall not be illuminated unless required by the FAA.
 - 2) Michigan Airport Zoning Act (Public Act 23 of 1950 as amended, MCL 259.431 et seq.).
 - 3) Michigan Tall Structures Act (Public Act 259 of 1959 as amended, MCL 259.481 et seq.).
 - b. Environment: The application will demonstrate mitigation measures to minimize potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, historical and cultural sites, and antiquities, as identified in the Environmental Analysis. The application shall demonstrate compliance with:
 - 1) Michigan Natural Resources and Environmental Protection Act (Act 451 of 1994, MCL 324.101 et seq.) (including but not limited to: Part 31 Water Resources Protection (MCL 324.3101 et seq.),
 - 2) Part 91 Soil Erosion and Sedimentation Control (MCL 324.9101 et seq.)
 - 3) Part 301 Inland Lakes and Streams (MCL 324.30101 et seq.)
 - 4) Part 303 Wetlands (MCL 324.30301 et seq.)
 - 5) Part 323 Shoreland Protection and Management (MCL 324.32301 et seq.)
 - 6) Part 325 Great Lakes Submerged Lands (MCL 324.32501 et seq.)

7) Part 353 Sand Dunes Protection and Management (MCL 324.35301 et seq.)

- c. Avian and Wildlife Impact: Site plan and other documents and drawings shall provide mitigation measures to minimize potential impacts on avians and wildlife, as identified in the Avian and Wildlife Impact analysis.
 - 1) The application shall demonstrate consultation with the U.S. Fish and Wildlife Service's Land-Based Wind Energy Guidelines.
 - 2) Applicants must comply with applicable sections of the Federal Endangered Species Act and Michigan's endangered species protection laws (NREPA, Act 451 of 1994, Part 365).
 - 3) The applicant or the applicant's impact assessment must show consultation with the U.S. Fish and Wildlife Service regarding federally listed species and the Michigan Department of Natural Resources for state listed species. Early coordination with state and federal agencies is recommended.
- d. Ground Cover: A utility scale WES shall include the installation of ground cover vegetation maintained for the duration of operation until the site is decommissioned. The applicant shall include a ground cover vegetation establishment and management plan as part of the site plan. Vegetation establishment must include invasive plant species [and noxious weed, if local regulation applies] control. The following standards apply:
 - 1) Ground cover at sites not enrolled in PA 116 must meet one or more of the four types of Dual Use defined in this ordinance.
 - i. Pollinator Habitat: Solar sites designed to meet a score of 76 or more on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.
 - ii. Conservation Cover: Solar sites designed in consultation with conservation organizations that focus on restoring native plants, grasses, and prairie with the aim of protecting specific species (e.g., bird habitat) or providing specific ecosystem services (e.g., carbon sequestration, soil health).
 - iii. Forage: Solar sites that incorporate rotational livestock grazing and forage production as part of an overall vegetative maintenance plan.
 - 2) Project sites that are included in a brownfield plan adopted under the Brownfield Redevelopment Financing Act, PA 381 of 1996, as amended, that contain impervious surface at the time of construction or soils that cannot be disturbed, are exempt from ground cover requirements.

2. Utility Scale Commercial Wind Energy Systems (WES) shall be subject to the following requirements:

- a. These facilities may be a principal use or an accessory use on a parcel.
- b. Minimum lot size for a utility scale/commercial WES shall be twenty (20) acres, but a minimum of five (5) acres of site area is required for each WES proposed within an eligible property.
- c. In addition to the requirements for site plan application and review outlined in Chapter 13, the following information shall be included with any application of a Special Land Use for a WES:
 - 1) Location of overhead electrical transmission or distribution lines.
 - 2) Location and height of all buildings, structures, towers, guy wires, guy wire anchors, security fencing, and other above ground structures associated with the WES.
 - 3) Locations and height of all adjacent buildings, structures, and above ground utilities located within three hundred (300) feet of the exterior boundaries of the site housing the WES. The boundaries to include the outermost locations upon which towers, structures, fencing, facilities, and other items associated with a WES are placed. Specific distances to other on-site buildings, structures, and utilities shall be provided.
 - 4) A proper buffer or greenbelt to screen the use from any adjacent Residential District or use and the public road.
 - 5) Existing and proposed setbacks of all structures located on the property in question.
 - 6) Sketch elevation of the premises accurately depicting the proposed WES and its relationship to all structures within three hundred (300) feet. For wind farms in which case numerous towers of similar height

are planned, sketches are necessary only at borders of proposed project and when adjacent to other established structures within three hundred (300) feet.

- 7) Access road to the WES facility with detail on dimensions, composition, and maintenance.
- 8) Planned security measures to prevent unauthorized trespass and access.
- 9) WES maintenance programs shall be provided that describes the maintenance program used to maintain the WES, including removal when determined to be obsolete.
- d. A copy of the manufacturer's installation instruction shall be provided. Included as part of or as an attachment to the installation instructions shall be standard drawings of the structural components of the wind energy system and support structures, including base and footings provided along with engineering data and calculations to demonstrate compliance with the structural design provisions of the Building Code; drawings and engineering calculations shall be certified by a registered engineer licensed to practice in the State of Michigan.
- e. Each WES shall be grounded to protect against natural lightning strikes in conformance with the National Electrical Code. Additionally, WES electrical equipment and connections shall be designed and installed in adherence to the National Electrical Code as adopted by the Community.
3. Accessory Uses: An Operations and Maintenance Office building, a substation, or ancillary equipment shall comply with property setback requirements of the respective zoning district. Overhead transmission lines and power poles shall comply with the setback and placement requirements applicable to public utilities.
4. Construction Codes, Towers, and Interconnection Standards: Utility-scale WES shall comply with all applicable state construction and electrical codes and local building permit requirements.
 - a. A minimum of a six (6) foot tall fence shall be provided around the perimeter of the WES, or in the case of several WES, around the perimeter of the site.
 - b. An Anemometer Tower shall be set back a distance equal to 2 times height from a property line or road right-of-way.
 - c. A wind turbine setback shall be measured from grade to the height of the blade in the vertical position or the highest point of the WES, whichever is greater and shall not exceed:
 - 1) Road right of way: A horizontal distance equal to 1.5 times the hub height of the tower;
 - 2) Non-participating parcels: A horizontal distance equal to 3 times the hub height of the tower from the property line;
 - d. WES shall not be located within thirty (30) feet of an above ground utility line.
 - e. The height of a WES shall be measured from grade to the height of the blade in the vertical position or the highest point of the WES, whichever is greater. Maximum height for a utility scale/commercial WES shall be two hundred (200) feet for a utility scale/commercial WES.
 - f. WES shall be of monopole design and shall not have guy wires.
 - g. The on-site electrical transmission lines connecting the WES to the public utility electricity distribution system shall be located underground.
 - h. No WES shall be interconnected with a local electrical utility company until the utility company has reviewed and commented upon it. The interconnection of the WES with the utility company shall adhere to the National Electrical Code as adopted by the Community.
 - i. Milton Township hereby reserves the right upon issuing any WES special land use permit to inspect the premises on which the WES is located. If a WES is not maintained in operational condition and poses a potential safety hazard, the owner shall take expeditious action to correct the situation. If the conditions are not corrected within 30 days, the Township may invoke enforcement proceedings as described in Chapter 15.05 and Chapter 18 of the Milton Township Zoning Ordinance.

- j. Any WES which are not used for six (6) successive months shall be deemed abandoned and shall be dismantled and removed from the property at the expense of the property owner.

5. Visual Impact:

- a. A project shall be constructed using WES components (tower, nacelle, blade) of similar design, size, operation, and appearance throughout the project.
- b. The applicant shall avoid state or federal scenic areas and significant visual resources listed in the local unit of government's Master Plan. Utility-scale WES projects shall use tubular towers and all utility-scale WES in a project shall be finished in a single, non-reflective, matte finish, color approved by the Planning Commission.
- c. Colors and surface treatment of the WES and supporting structures shall minimize disruption of the natural characteristics of the site. No part of the structure shall be used for signs or advertising.

6. Safety:

- a. Utility-scale WES shall be designed to prevent unauthorized access to electrical and mechanical components and shall have access doors that are kept securely locked at all times when service personnel are not present.
- b. All spent lubricants and cooling fluids shall be properly and safely removed in a timely manner from the site of the WES.
- c. Each WES shall have two (2) signs, not to exceed two (2) square feet in area.
 - 1) One sign posted at the base of the tower containing the following information:
 - i. Warning high voltage.
 - ii. Manufacturer's name.
 - iii. Emergency phone number.
 - iv. Emergency shutdown procedures
 - 2) A sign shall be placed at the road access to a wind turbine to warn visitors about the shall be posted near the tower or Operations and Maintenance Office building that will potential danger of falling ice.
- d. Blade-arcs created by the WES shall have a minimum of thirty (30) feet of clearance over any structure, land or tree within a two hundred (200) foot radius of the tower.
- e. To prevent unauthorized climbing, WES towers must comply with one of the following provisions:
 - 1) Tower climbing apparatus shall not be located within twelve (12) feet of the ground.
 - 2) A locked anti-climb device shall be installed on the tower.
 - 3) Tower capable of being climbed shall be enclosed by a locked, protective fence at least six (6) feet high.

7. Signal Interference: No utility-scale WES shall be installed in any location where its proximity to existing fixed broadcast, retransmission, or reception antennae for radio, television, or wireless phone or other personal communication systems would produce interference with signal transmission or reception unless the applicant provides a replacement signal to the affected party that will restore reception to at least the level present before operation of the WES. No utility-scale WES shall be installed in any location within the line of sight of an existing microwave communications link where operation of the WES is likely to produce electromagnetic interference in the link's operation.

8. Sound Pressure Level: The sound pressure level shall not exceed the following:

- a. Non-participating property: Sound from a WES shall not exceed 65 dBA Leq measured at the property line [dwelling] or [property line] of a non-participating property. If the average background sound pressure level exceeds 65 dBA Leq the standard shall be background sound dBA plus 10 [for example: 5 or 10] dBA.
- b. Participating property: Sound from a WES shall not exceed 65 dBA Leq measured at the property line [dwelling] or [property line] of a participating property. If the average background sound pressure level exceeds 65 dBA Leq the standard shall be background sound dBA plus 5 [for example: 5 or 10] dBA.

- c. Sound measurement methodology: Sound pressure level measurements shall be performed by a third party, qualified professional selected by the developer and approved by the Planning Commission. Testing shall be performed according to the procedures in the most current version of ANSI S12.18 and ANSI S12.9 Part 3. All sound pressure levels shall be measured with a sound meter that meets or exceeds the most current version of ANSI S1.4 specifications for a Type II sound meter.
 - d. Post-construction sound survey: A post-construction sound survey shall commence within the first year of operation to document levels of sound emitted from wind turbines. The study will be designed to verify compliance with sound standards applicable to this ordinance. The WES owner shall provide SCADA data during the testing period to the sound consultant completing the study.
 - e. Any proposed WES shall not produce vibrations humanly perceptible beyond the property on which it is located.
9. Shadow Flicker: Shadow flicker shall not exceed 30 hours per year and/or 30 minutes per day measured to the exterior wall of a dwelling or other occupied building on a non-participating parcel. Mitigation measures to minimize or eliminate potential impacts from shadow flicker, as identified in the Shadow Flicker Impact Analysis for human-occupied structures, shall include, but not be limited to:
- a. Change the proposed location of the wind energy tower; or
 - b. The utility-scale WES shall be turned off by manufacturer approved automated system during the period of time an inhabited structure receives shadow flicker; or
 - c. The utility-scale WES shall be turned off during flicker events after 30 hours/year of shadow flicker on an inhabited structure; or
 - d. There is screening (forest, other building(s), topography, window treatments/blinds) which shields the inhabited structure from a direct line of sight to the rotors causing shadow flicker.
 - e. WES shall not have affixed or attached any lights, reflectors, flashers or any other illumination, except for illumination devices required by FAA regulations.
10. Complaint Resolution:
- a. Complaint resolution plan shall be presented to the planning commission and approved prior to approval of a special land use permit.
 - b. The complaint resolution program will describe how the developer receives, responds, and resolves complaints that may arise from the operation of the WES.
 - c. The complaint resolution plan shall include appropriate timelines for response and other detailed information (such as forms and contact information).
11. Annual Maintenance Review: The WES shall be maintained and kept in a safe working condition. The WES owner shall certify on an annual basis that all turbines are operating under normal conditions. Non-operational turbines at the time of the annual review, shall be identified and provided with an expected date to resolve the maintenance issue. A wind turbine generator that has not been operational for over 12 months shall be considered abandoned and a violation of the special land use permit.
12. Decommissioning Plan: A decommissioning plan is required at the time of application. The decommission plan shall include:
- a. The anticipated life of the project;
 - b. The anticipated manner in which the project will be decommissioned, including a description of which above-grade and below-grade improvements will be removed, retained (e.g. access drive, fencing), or restored for viable reuse of the property consistent with the zoning district;
 - c. The projected decommissioning costs for removal of the WES (net of salvage value in current dollars) and soil stabilization, less the amount of the surety bond posted with the State of Michigan for decommissioning of panels installed on PA 116 lands. A review of the projected decommissioning costs shall be conducted every three years for the life of the project and approved by the planning commission board;

- d. The method of ensuring that funds will be available for site decommissioning and stabilization (in the form of surety bond, irrevocable letter of credit, or cash deposit), and:
- e. The planning commission reserves the right to approve, deny, or modify an application to modify an existing WES at the end of useful life, in whole or in part, based on ordinance standards at the time of the request. Expenses for legal services and other studies resulting from application to modify or repower a WES will be reimbursed to the township by the WES owner in compliance with established escrow policy.

13. Reasons Prompting Decommissioning: Any utility-scale WES which has:

- a. Reached the end of its useful life;
- b. Has not operated continuously for one (1) year;
- c. Whose owner determines they no longer will operate the WES.
- d. A WES that has not produced electrical energy for 12 consecutive months shall prompt an abandonment hearing for decommissioning.

14. Decommissioning:

- a. WES shall be fully removed according to the decommissioning plan approved by the Planning Commission under Section 15.51 11. Decommissioning Plan, or according to any amended decommissioning plan approved by the Planning Commission.
- b. The owner/operator shall notify the Township directly or by certified mail of the proposed date of discontinued operations and plans for removal.
- c. The parcel owners shall be required to restore the site to its prior state and according to the approved decommissioning plan.
- d. The owner/operator shall physically remove the installation no more than one hundred and fifty (150) days after the date of discontinued operations or determination of abandonment.
- e. Removal of the WES and facilities shall consist of all of the following:
 - 1) Physical removal of all aboveground or underground utility-scale WES, structures, equipment, security barriers, and transmission lines from the site;
 - 2) Disposal off-site of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations;
 - 3) Restoration and stabilization or re-vegetation of the site as necessary to minimize erosion;
 - 4) If the owner/operator fails to initiate removal of the installation in accordance with the requirements of this section and the approved decommissioning plan within 150 days of abandonment or the proposed date of decommissioning, the Township may enter the property and physically remove all of the WES and facilities and charge the cost back to the owner(s) of the lot;
 - 5) Decommissioning a WES must commence when the soil is dry to prevent soil compaction and must be complete within 12 months after abandonment.

15. Financial Guarantee.

- a. The applicant for a utility scale wind energy system shall provide to the Township a form of monetary surety or security, either through an escrow account, letter of credit, bond, or other instrument, acceptable to the Township Attorney. The purpose of the surety or security is to cover the cost of removal of the utility scale WES in the event the owner/operator does not fully remove the WES and facilities, or the Township must remove the same.
- b. The amount of the financial surety or security shall not exceed more than 125 percent of all costs of removal and compliance with the additional requirements set forth herein.
- c. The estimated costs of removal shall be submitted by the applicant to the Township and be prepared by a qualified engineer.

- d. The surety or security shall be subject to review and approval by the Planning Commission and the Township Attorney and shall be a condition of special land use approval.
- e. The amount of surety or security shall increase by the Federal CPI every five years.
- f. Surety shall be provided for the applicant to make repairs to public roads damaged by the construction of the WES.
- g. In lieu of a performance security agreement with Milton Township, the applicant may enter into a road use agreement with the Cass County Road Commission to cover the costs of all road damage resulting from the construction of the WES.

PLEASE TAKE FURTHER NOTICE that written comments will be taken from any interested persons concerning the foregoing proposed amendment, at the Milton Township Hall, at the address set forth above, at any time during regular business hours up to 4:00 o'clock p.m. on the date of said hearing and will further be received by the Planning Commission at the time of said hearing.

PLEASE TAKE FURTHER NOTICE that all people interested in the foregoing are invited to be present at the aforesaid Public Hearing time and place to participate in the discussion. More information can be obtained by calling Milton Township at 269-591-7982. Individuals with disabilities requiring auxiliary aids or services, and wish to attend the hearing, should contact the office of the Township Clerk, by writing or calling the Clerk, at least five (5) days prior to the hearing to ensure needed accommodations.

Tony Floyd, Clerk
Milton Township Planning Commission

Section 2.20 “S”

SOLAR ENERGY

Small-Scale Solar Energy Collector: A solar energy collector primarily intended to provide energy for on-site uses and to provide power for use by owners, lessees, tenants, residents, or other occupants of the lot on which it is erected. It may be comprised of the following: building-integrated photovoltaic systems (“BIPV”), ground-mounted solar energy collectors, and/or building-mounted solar energy collectors.

Solar Collector Surface: Any part of a solar energy system that absorbs solar energy for use in the system's transformation process. The collector surface does not include frames, supports, and mounting hardware.

Solar Energy: Radiant energy received from the sun that can be collected in the form of heat or light by a solar energy system.

Ancillary Solar Equipment: Any accessory part or device of a solar energy system that does not require direct access to sunlight, such as batteries, electric meters, converters, or water heater tanks.

Building-Mounted Solar Energy Collector: A solar energy collector attached to the roof or wall of a building, or which serves as the roof, wall, or other element in whole or in part of a building. This also includes building-integrated photovoltaic systems (“BIPV”).

Solar Energy System (SES): A photovoltaic system or solar thermal system for generating and/or storing electricity or heat, including all above and below ground equipment or components required for the system to operate properly and to be secured to a roof surface or the ground. This includes any necessary operations and maintenance building(s), but does not include any temporary construction offices, substation(s) or other transmission facilities between the SES and the point of interconnection to the electric grid.

Decibel: Means a unit used to measure the intensity of a sound or the power level of an electric signal by comparing it with a given level on a logarithmic scale.

Decommissioning: Deconstruction and removal of solar equipment, site office, and other ancillary infrastructure from the site.

Dual Use: A solar energy system that employs one or more of the following land management and conservation practices throughout the project site:

- Pollinator Habitat: Solar sites designed to meet a score of 76 or more on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.
- Conservation Cover: Solar sites designed in consultation with conservation organizations that focus on restoring native plants, grasses, and prairie with the aim of protecting specific species (e.g., bird habitat) or providing specific ecosystem services (e.g., carbon sequestration, soil health).
- Forage: Solar sites that incorporate rotational livestock grazing and forage production as part of an overall vegetative maintenance plan.
- Agrivoltaics: Solar sites that combine raising crops for food, fiber, or fuel, and generating electricity within the project area to maximize land use.

Ground-Mounted Solar Energy Collector: A solar energy collector that is not attached to and is separate from any building on the lot on which the solar energy collector is located.

Laydown Area: Area cleared for the temporary storage of supplies and equipment during construction.

Maximum Tilt: The maximum angle of a solar array (i.e., most vertical position) for capturing solar radiation as compared to the horizon line.

Non-Participating Lot(s): One or more lots for which there is not a signed lease or easement for development of a principal-use SES or wind associated with the applicant project.

Participating Lot(s): One or more lots under a signed lease or easement for development of a principal-use SES associated with the applicant project.

Photovoltaic System: A collection of solar panels and related equipment and components used to convert light or heat into electrical power.

Repowering: Reconfiguring, renovating, or replacing an SES to maintain or increase the power rating of the SES within the existing project footprint.

Sound Pressure: Measured in decibels, indicator of sound intensity emanating from a wind or solar project.

Utility Scale Solar Energy System: A solar energy system that meets all of the following:

- A. It is primarily used for generating electricity for sale and/or distribution off site to an authorized public utility or other firm for use in the electrical grid;
- B. The total surface area of all solar collector surfaces exceeds 1,500 square feet; and/or
- C. It is not considered an accessory use or structure by the Township Zoning Administrator

Section 2.24 "W"

Wind Energy System (WES): A combination of:

1. A surface area, either variable or fixed, for utilizing the wind for electrical powers; and
2. A shaft, gearing, belt, or coupling utilized to convert the rotation of the surface area into a form suitable for driving a generator, alternator, or other electricity-producing device; and
3. The generator, alternator, or other device to convert the mechanical energy of the surface area into electrical energy; and
4. The tower, pylon, or other structure upon which any, all, or some combination of the above are mounted; and
5. Building or equipment accessory thereto.

Aircraft Detection Lighting System (ADLS): Radar-activated aircraft detection system on wind turbines that activates wind turbine obstruction lights only when an aircraft is within three nautical miles of a wind farm. Allows blinking lights on turbines to be turned off most of the time, while still complying with Federal Aviation Administration requirements.

Anemometer Tower: means a freestanding tower containing instrumentation such as anemometers that is designed to provide present moment wind data for use by the supervisory control and data acquisition (SCADA) system which is an accessory land use to a utility-scale wind energy system. Also includes the same equipment for evaluating wind characteristics in preparation of or evaluation of construction of on-site wind energy system and utility-scale WES.

Noncommercial Wind Energy System (NWES): A Noncommercial Wind Energy System is a wind driven machine(s) that converts wind energy into electrical power for primary purpose of on-site use and not for resale.

Survival wind speed: The maximum wind speed, as designated by the WES manufacturer, at which a WES, in unattended operation (not necessarily producing power) is designed to survive without damage to any structural equipment or loss of the ability to function normally.

Utility-scale Wind Energy System/Commercial (WES): Means a land use for generating power by use of wind at multiple tower locations in a community and includes accessory uses such as but not limited to a SCADA Tower, electric substation. A utility-scale WES is designed and built to provide electricity to the electric utility.

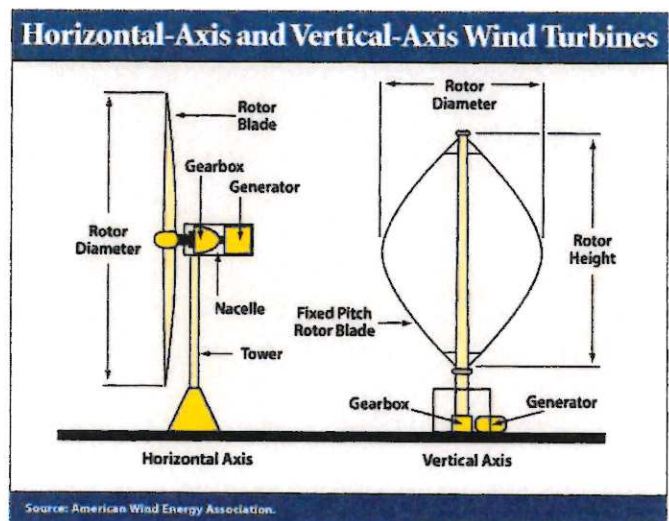
Wildlife-Friendly Fencing: A fencing system with openings that allow wildlife to traverse over or through a fenced area.

Wind farm: Clusters (2 or more) of WES towers placed upon land with the intent to sell or provide electricity to others. The towers may or may not be owned by the owner of the property upon which the towers are placed.

Wind Turbine: Means a group of component parts used to convert wind energy into electricity and includes the tower, base, rotor, nacelle, and blades.

WES tower height:

1. Horizontal axis wind turbine rotors: The distance between the ground and the highest



point of the WES, as measured from the ground, plus the length by which the rotor blade on a horizontal mounted WES exceeds the structure which supports the rotor and blades;

2. Vertical axis wind turbine: The distance between the ground and the highest point of the WES.

Section 3.33 Small-Scale Energy Systems

Applicability. This section applies to any system of small-scale solar energy collector systems. This section does not apply to solar energy collectors mounted on fences, poles, or on the ground with collector surface areas less than five (5) square feet and mounted less than five (5) feet above the ground, nor does this section apply to the larger utility scale solar energy collector systems, which are regulated in Section 15.48. Nothing in this section shall be construed to prevent the sale of limited excess power through a net billing or net-metering arrangement.

1 General requirements:

- a. Permit Required. No small-scale solar energy collector system shall be installed or operated except in compliance with this section. A zoning permit shall be obtained from the Zoning Administrator prior to the installation of a small-scale solar energy system.
- b. Glare and Reflection. The exterior surfaces of solar energy collectors shall be generally neutral in color and substantially non-reflective of light. Such collectors shall not be installed or located so that sunlight or glare is reflected into neighboring dwellings or onto adjacent roads.
- c.. Installation.
 - 1) A small-scale solar energy collector shall be permanently and safely attached to the ground or a structure or building. Solar energy collectors, and their installation and use, shall comply with all building codes and all other applicable Township and state requirements.
 - 2) Small-scale solar energy collectors shall be installed, maintained, and used only in accordance with the manufacturer's specifications. Upon request, a copy of such specifications shall be submitted to the Township prior to installation.
- d. Power Lines. On-site power lines between solar panels and inverters shall be installed and maintained underground pursuant to applicable building and electrical codes.
- e. Abandonment and Removal. A solar energy collector system that ceases to produce energy on a continuous basis for twelve (12) months or more will be considered abandoned unless the responsible party with an ownership interest in the system provides substantial evidence to the Township every six (6) months (after the twelve (12) months of no energy production) of the intent to maintain and reinstate the operation of that system. The responsible party shall remove all equipment and facilities and restore the lot to its condition prior to the installation of the system within one (1) year of abandonment.

2. Building-Mounted Solar Energy Collectors. These systems may be established as accessory uses to principal uses in all zoning districts subject to the following conditions.

- a. Maximum Height. The maximum height of the zoning district in which the building mounted solar energy collectors are located shall not be exceeded by more than three (3) feet by such collectors.
- b. Obstruction. Building-mounted solar energy collectors shall not obstruct or impede solar access to adjacent properties.

3. Ground-Mounted Solar Energy Collectors. These systems are permitted in all zoning districts subject to the following conditions.

- a. Rear and Side Yards. The equipment and collectors may be located in the rear yard or the side yard but shall be subject to setbacks for accessory structures.
- b. Front Yard. The equipment and collectors may be located in the front yard only if located no less than one hundred fifty (150) feet from the front lot line.

- c. Obstruction. Ground-mounted solar energy collectors shall not obstruct or impede solar access to adjacent properties.
- d. Vegetation. All vegetation underneath solar energy infrastructure shall be properly maintained so as to not block access to solar collectors.
- e. Maximum Number.
 - 1) Residential uses. There shall be no more than one (1) ground-mounted solar energy collector system per principal building on a lot.
 - 2) Agricultural, Commercial, and Industrial uses. There shall be no limit to the number of ground-mounted solar energy collectors on a lot.
- f. Maximum Size.
 - 1) Residential uses. There shall be no more than one percent (1%) of the lot area, up to a maximum of one thousand five hundred (1,500) square feet of collector panels on a ground-mounted solar energy collector system unless a larger system is approved pursuant to Section 15.48 of this Ordinance.
 - 2) Agricultural, Commercial, and Industrial uses. There shall be no more than ten thousand (10,000) square feet of collector panels on a ground-mounted solar energy collector system unless a larger system is approved pursuant to Section 15.48 of this Ordinance.
- g. Maximum Height.
 - 1) Residential uses. The maximum height shall be six (6) feet, measured from the natural grade below the equipment or collector to the highest point at full tilt.
 - 2) Agricultural, Commercial, and Industrial uses. The maximum height shall be sixteen (16) feet, measured from the natural grade below the equipment or collector to the highest point at full tilt.
- h. Minimum Lot Area. One (1) acre shall be the minimum lot area to establish a ground-mounted solar energy collector system.
- i. Screening. Screening shall be required in cases where a ground-mounted solar energy collector impacts views from adjacent residential properties. Screening methods may include the use of material, colors, textures, screening walls, and landscaping that will blend the unit into the natural setting and existing environment.
- j. Limits. Applicants requesting ground-mounted solar energy collectors shall demonstrate the system's projected electricity generation capability, and the system shall not regularly exceed the power consumption demand of the principal and accessory land uses on the lot. However, larger systems may be approved by the Planning Commission if greater electricity need is demonstrated to power on-site buildings and uses.

Chapter 5 – A Agricultural Production District

Section 5.01 Purpose and Intent

The regulations of the “A” Agricultural Production District are intended to ensure that land areas within the Township, which are well suited for production of food and fiber are retained for such production, unimpeded by the establishment of incompatible uses which would hinder farm operations and irretrievably deplete agricultural lands. Further, the intent of this chapter is to preserve open space and the rural character of these areas. Subdivisions or site condominium developments, which prematurely transition agricultural and open space lands in this district are not appropriate. Isolated open space cluster developments are permitted on portions of land not well suited for agricultural production. The District also accommodates very low-density residential development and other specialized rural uses requiring large tracts of land. As an agricultural district, certain impacts such as odors, noise, application of chemicals, and other external impacts typically associated with farming operations, shall be recognized and reasonably tolerated provided they do not pose a threat to the general health, safety, and welfare of Township residents.

Section 5.02 Uses Permitted by Right

- Accessory Dwelling Units
- Adult Day Care Family Home
- Adult Foster Care Family Home
- Buildings and Uses Accessory to Uses Permitted by Right
- Child Care Family Home
- Church
- Farms and Farm Operations
- Government Building
- Greenhouse
- Home Occupations
- Park
- Riding Stables
- Roadside Stands
- Single-family dwellings
- Small-Scale Solar Energy Systems

Section 5.03 Special Land Uses

- Agricultural labor housing
- Agricultural service establishment
- Assisted living facility
- Bed and breakfast establishment
- Campground
- Golf course or country club
- Child care group home
- Home-based business
- Kennel
- Mining operation
- Rifle range/archery Range
- Veterinary clinic
- Wireless communication antenna

Chapter 6 – RR Rural Residential District

Section 6.01 Purpose and Intent

The regulations of the RR District recognize lands that retain a relatively high proportion of open space use but, due to population growth, natural limitations, like soil characteristics and related factors, experience ongoing transition to non-farm low density residential development. It is the intent that areas developed are done so to buffer the uses from agricultural or extraction activities from other residential districts. Public services are not intended for this district for an indefinite period. Due to its rural character, the RR Rural Residential District permits many of the uses provided for in the Agricultural Production District.

Section 6.02 Uses Permitted by Right

- Accessory Dwelling Units
- Adult day care family home
- Adult foster care family home
- Buildings and uses accessory to uses permitted by right.
- Childcare family home
- Church
- Farms and farm operations
- Government building
- Home occupation
- Park
- Roadside stand
- Single-family dwelling
- Small-Scale Solar Energy Systems

Section 6.03 Special Land Uses

- Adult day care group home
- Adult foster care small group home
- Adult foster care medium group home
- Agricultural service establishment
- Agricultural labor housing
- Assisted living facility
- Bed and breakfast establishment
- Campground
- Cemetery
- Childcare group home
- Educational facility
- Golf course / country club
- Greenhouse
- Home based business
- Kennel
- Riding stable
- Wireless communication antenna

Chapter 7 – SFR Single Family Residential District

Section 7.01 Purpose and Intent

The regulations of the SFR District are intended to encourage a suitable environment for a variety of rural, low density developments, and compatible supportive recreational, institutional, and educational uses. The intent of the District is to protect residential areas from the encroachment of uses that are not appropriate to a residential environment.

Section 7.02 Uses Permitted by Right

- Adult day care family home
- Adult foster care family home
- Child care family home
- Church
- Home occupation
- Park
- Single-family dwelling
- Small-Scale Solar Energy Systems
- Buildings and uses accessory to uses permitted by right

Section 7.03 Special Land Uses

- Adult day care group home
- Adult foster care small group home
- Adult foster care medium group home
- Assisted living facility
- Bed and breakfast establishment
- Campground
- Child care group home
- Golf Course / Country club
- Institutional use

Section 7.04 Dimensional Requirements

Minimum Lot Area	1 acre
Minimum Lot Width	150 ft.
Minimum Front Setback	35 ft.
Minimum Side Yard Setback	15 ft.
Minimum Rear Setback	25 ft.
Maximum lot coverage	30%
Maximum Building Height	The lesser of 35 ft. or (2 ½) stories
Maximum Lot Width to Depth Ratio	1:4
Minimum Dwelling Unit Floor Area	576 sq. ft

Chapter 9 – C Commercial District

Section 9.01 Purpose and Intent

The C, Commercial District is intended to provide appropriate locations to accommodate land uses meeting the convenience and service business needs of the residents of Milton Township. The District is not intended to provide regional shopping opportunities but rather to be limited in design, scope and size for community-based businesses. Managing access to individual properties will receive strong consideration during the review of individual sites. The use of combined drives, service drives, and well planned access points will be stressed.

Section 9.02 Uses Permitted by Right

- Art studio
- Child care center
- Church
- Financial institution
- Government building
- Hotel or motel
- Institutional uses
- Medical clinic
- Nursing home
- Personal service establishment
- Professional office
- Restaurant
- Retail store
- Shopping Center
- Small-Scale Solar Energy Systems
- Theater
- Veterinary clinic
- Buildings and uses accessory to uses permitted by right

Section 9.03 Special Land Uses

- Automobile sales facility
- Automobile repair facility
- Funeral home
- Car wash
- Contractor's yard
- Club or lodge
- Dwelling, two-family
- Gas station
- Indoor recreation facility
- Kennel
- Mini/self-storage
- Open air business
- Utility Scale Solar Energy Systems
- Waste disposal facility
- Wind Energy System, Utility Scale/Commercial

Chapter 11 – I Industrial District

Section 11.01 Purpose and Intent

The regulations of this District are intended primarily for industrial uses which do not generate hazardous materials. The district is established to encourage operations which manufacture, compound, process, package, treat and assemble products from previously prepared materials.

Section 11.02 Uses Permitted by Right

- Automobile sales facility
- Car wash
- Contractor's yard
- Church
- Gas station
- Indoor recreation facility
- Laboratory
- Lumberyard
- Manufacturing and processing
- Mini/self-storage
- Professional office
- Small-Scale Solar Energy Systems
- Towing service
- Wholesale or distribution facility
- Buildings and Uses Accessory to Uses Permitted by Right

Section 11.03 Special Land Uses

- Automobile repair facility
- Adult Uses
- Utility Scale Solar Energy Systems
- Waste disposal facility
- Wind Energy System, Utility Scale/Commercial

Section 15.48 Utility Scale Solar Energy Systems

1. Site Plan Required. An application for special land use approval for a Utility Scale Solar Energy System shall include a site plan in accordance with Chapter 15. In addition to the information required for site plan approval in Section 15.03, all applications must also include all of the following:
 - a. Equipment and unit renderings.
 - b. Elevation drawings.
 - c. Setbacks from all property lines and adjacent structures.
 - d. Notarized written permission from the property owner authorizing the Utility Scale Solar Energy System.
 - e. All additional plans and requirements set forth in this Section and any other information required by the Township.
2. Special Land Use Approval; Utility scale solar energy systems require special land use approval. In addition, no utility scale solar energy system shall be constructed, installed, operated, maintained, or modified as provided in this section without first obtaining all applicable approvals and permits. The construction, installation, operation, maintenance, or modification of all utility scale solar systems shall be consistent with all applicable local, state, and federal requirements, and all buildings and structures that comprise a utility scale solar energy system shall be constructed, installed, operated, and maintained in strict accordance with the Michigan Building Code and the manufacturer's specifications.
 - a. Environment: The application will demonstrate mitigation measures to minimize potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, historical and cultural sites, and antiquities, as identified in the Environmental Analysis. The application shall demonstrate compliance with:
 - 1) Michigan Natural Resources and Environmental Protection Act (Act 451 of 1994, MCL 324.101 et seq.) (including but not limited to: Part 31 Water Resources Protection (MCL 324.3101 et seq.),
 - 2) Part 91 Soil Erosion and Sedimentation Control (MCL 324.9101 et seq.)
 - 3) Part 301 Inland Lakes and Streams (MCL 324.30101 et seq.)
 - 4) Part 303 Wetlands (MCL 324.30301 et seq.)
 - 5) Part 323 Shoreland Protection and Management (MCL 324.32301 et seq.)
 - 6) Part 325 Great Lakes Submerged Lands (MCL 324.32501 et seq.)
 - 7) Part 353 Sand Dunes Protection and Management (MCL 324.35301 et seq.)
 - b. Avian and Wildlife Impact: Site plan and other documents and drawings shall provide mitigation measures to minimize potential impacts on avians and wildlife, as identified in the Avian and Wildlife Impact analysis.
 - 1) The application shall demonstrate consultation with the U.S. Fish and Wildlife Service's Land-Based Wind Energy Guidelines.
 - 2) Applicants must comply with applicable sections of the Federal Endangered Species Act and Michigan's endangered species protection laws (NREPA, Act 451 of 1994, Part 365).

- 3) The applicant or the applicant's impact assessment must show consultation with the U.S. Fish and Wildlife Service regarding federally listed species and the Michigan Department of Natural Resources for state listed species. Early coordination with state and federal agencies is recommended.
3. Lot Area. Utility scale solar energy systems shall be located on a lot at least twenty (20) acres in size.
4. Setbacks: Setback distance shall be measured from the property line or road right-of-way to the closest point of the solar array at minimum tilt or any SES components and as follows:
 - a. In accordance with the setbacks for principal buildings or structures for the zoning district of the project site 150 feet from the property line of a non-participating lot.
 - b. 250 feet from any existing dwelling unit on a non-participating lot.
5. Height. Utility scale solar energy systems shall not exceed sixteen (16) feet in height, measured from the natural grade below the collector or equipment to the highest point at full tilt.
6. Sound: The sound pressure level of a utility scale SES and all ancillary solar equipment shall not exceed 45 dBA (Leq (1-hour)) at the property line of an adjoining non-participating lot. The site plan shall include modeled sound isolines extending from the sound source to the property lines to demonstrate compliance with this standard.
7. Screening. The Planning Commission may require that a utility scale solar energy system be screened from adjoining residential properties or public rights-of-way. Screening methods may include the use of material, colors, textures, screening walls, fencing, berms, landscaping, and/or natural vegetation that will blend the facility into the natural setting and existing environment.
8. Glare and Reflection. The exterior surfaces of utility scale solar energy collectors shall be generally neutral in color and substantially non-reflective of light. A solar collector - surface shall not be installed or located so that sunlight or glare is reflected into neighboring residences or onto adjacent streets.
9. Location. Solar energy systems shall be located in the area least visibly obtrusive to adjacent residential properties and roads while remaining functional.
5. Ground Cover: A utility scale SES shall include the installation of ground cover vegetation maintained for the duration of operation until the site is decommissioned. The applicant shall include a ground cover vegetation establishment and management plan as part of the site plan. Vegetation establishment must include invasive plant species [and noxious weed, if local regulation applies] control. The following standards apply:
 - a. Sites bound by a Farmland Development Rights (PA 116) Agreement must follow the Michigan Department of Agriculture and Rural Development's Policy for Allowing Commercial Solar Panel Development on PA 116 Lands.
 - b. Ground cover at sites not enrolled in PA 116 must meet one or more of the four types of Dual Use defined in this ordinance.
 - 1) Pollinator Habitat: Solar sites designed to meet a score of 76 or more on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.
 - 2) Conservation Cover: Solar sites designed in consultation with conservation organizations that focus on restoring native plants, grasses, and prairie with the aim of protecting specific species (e.g., bird habitat) or providing specific ecosystem services (e.g., carbon sequestration, soil health).

- 3) Forage: Solar sites that incorporate rotational livestock grazing and forage production as part of an overall vegetative maintenance plan.
- c. Project sites that are included in a brownfield plan adopted under the Brownfield Redevelopment Financing Act, PA 381 of 1996, as amended, that contain impervious surface at the time of construction or soils that cannot be disturbed, are exempt from ground cover requirements.
6. Lot Coverage: A utility scale SES shall not count towards the maximum lot coverage or impervious surface standards for the district.
7. Land Clearing: Land disturbance or clearing shall be limited to what is minimally necessary for the installation and operation of the system and to ensure sufficient all-season access to the solar resource given the topography of the land. Topsoil distributed during site preparation (grading) on the property shall be retained on site.
8. Access Drives: New access drives within the SES shall be designed to minimize the extent of soil disturbance, water runoff, and soil compaction on the premises. The use of geotextile fabrics and gravel placed on the surface of the existing soil for the construction of temporary drives during the construction of the SES is permitted, provided that the geotextile fabrics and gravel are removed once the SES is in operation.
9. Wiring: SES wiring (including communication lines) shall be buried underground.
10. Lighting: Utility scale SES lighting shall be limited to inverter and/or substation locations only. Light fixtures shall have downlit shielding and be placed to keep light on-site and glare away from adjacent properties, bodies of water, and adjacent roadways. Flashing or intermittent lights are prohibited.
11. Signage: Signage shall be minimal, limited to high voltage warnings and emergency contact information, and posted at all entry/exit points.
12. Repowering: In addition to repairing or replacing SES components to maintain the system, a utility scale SES may at any time be repowered, without the need to apply for a new special land use permit, by reconfiguring, renovating, or replacing the SES to increase the power rating within the existing project footprint.
 - a. A proposal to change the project footprint of an existing SES shall be considered a new application, subject to the ordinance standards at the time of the request. [Expenses for legal services and other studies resulting from an application to modify an SES will be reimbursed to the township by the SES owner in compliance with established escrow policy.]
13. Obstruction: Solar energy systems shall not obstruct or impede solar access to adjacent and neighboring properties.
14. Power lines: On site power lines between all structures and ancillary equipment and inverters shall be installed and maintained underground.
15. Fencing: A utility scale SES shall be secured with perimeter fencing to restrict unauthorized access. If installed, perimeter fencing shall be a minimum of 7 feet and a maximum of 8 feet. Barbed wire and chain link fencing is prohibited. Fencing is not subject to setbacks.
16. Complaint Resolution:
 - a. Complaint resolution plan shall be presented to the planning commission and approved prior to approval of a special land use permit.
 - b. The complaint resolution program will describe how the developer receives, responds, and resolves complaints that may arise from the operation of the SES.

- c. The complaint resolution plan shall include appropriate timelines for response and other detailed information (such as forms and contact information).
- 17. Operation and Maintenance Plan. The applicant shall submit a plan to the Township for the operation and maintenance of the utility scale solar energy system, which shall include measures for maintaining safe access to the installation and storm water controls, as well as general procedures of operational maintenance of the installation, as applicable.
- 18. Emergency Services. Upon request by Buchanan Charter Township, the owner/operator of the utility scale solar energy system shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the solar energy system shall be clearly marked on the plan. The owner/operator shall identify a current responsible person for public inquiries throughout the life of the installation. An information sign shall be posted and maintained at the entrance(s) which lists the current name, phone number and email address of the operator.
- 19. Maintenance. The utility scale solar energy system owner/operator shall maintain the facility in good and safe condition at all times. Maintenance shall include, but not be limited to, structural repairs, safety-related upgrades, and integrity of security measures. Site access roads or drives shall be maintained to a level acceptable to local emergency services personnel. The owner/operator shall be responsible for the cost of fully maintaining the solar photovoltaic installation and any access road(s).
- 20. Decommissioning Plan: A decommissioning plan is required at the time of application.
 - a. The decommissioning plan shall include:
 - 1) The anticipated life of the project
 - 2) The anticipated manner in which the project will be decommissioned, including a description of which above-grade and below-grade improvements will be removed, retained (e.g. access drive, fencing), or restored for viable reuse of the property consistent with the zoning district,
 - 3) The projected decommissioning costs for removal of the SES (net of salvage value in current dollars) and soil stabilization, less the amount of the surety bond posted with the State of Michigan for decommissioning of panels installed on PA 116 lands. A review of the projected decommissioning costs shall be conducted every three years for the life of the project and approved by the planning commission board.
 - 4) The method of ensuring that funds will be available for site decommissioning and stabilization (in the form of surety bond, irrevocable letter of credit, or cash deposit), and:
 - b. An SES owner may at any time:
 - 1) Proceed with the decommissioning plan approved by the Planning Commission and remove the system as indicated in the most recently approved plan; or
 - 2) Amend the decommissioning plan with Planning Commission approval and proceed according to the revised plan.
- 20. Decommissioning.
 - a. Any utility-scale solar energy system which has 1) reached the end of its useful life, 2) has not operated continuously for one year or longer or 3) whose owners determine they shall cease operation of the SES, shall be considered ready for decommissioning. The owner/operator shall notify the Township directly or by certified mail of the proposed date of discontinued operations and plans for removal.
 - b. The owner/operator shall physically remove the installation no more than one hundred and fifty (150) days after the date of discontinued operations.

- c. If the owner/operator fails to remove the installation in accordance with the requirements of this section within 150 days of discontinued operations or the proposed date of decommissioning, the Township may enter the property and physically remove all of the solar energy system and facilities and charge the cost back to the owner(s) of the lot.
- d. Removal of the solar energy system and facilities shall consist of all of the following:
 - 1) Physical removal of all aboveground or underground utility-scale solar energy systems, structures, equipment, security barriers, and transmission lines from the site.
 - 2) Disposal off-site of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
 - 3) Restoration and stabilization or re-vegetation of the site as necessary to minimize erosion.
- e. Decommissioning an SES must commence when the soil is dry to prevent soil compaction and must be complete within 18 months after abandonment. An SES that has not produced electrical energy for 12 consecutive months shall prompt an abandonment hearing.

21. Financial Guarantee.

- a. The applicant for a utility scale solar energy system shall provide to the Township a form of monetary surety or security, either through an escrow account, letter of credit, bond, or other instrument, acceptable to the Township Attorney.
- b. The purpose of the surety or security is to cover the cost of removal of the utility scale solar energy system in the event the owner/operator does not fully remove the solar energy system and facilities, or the Township must remove the same.
- c. The amount of the financial surety or security shall not exceed more than 125 percent of all costs of removal and compliance with the additional requirements set forth herein.
- d. The estimated costs of removal shall be submitted by the applicant to the Township and be prepared by a qualified engineer.
- e. The surety or security shall be subject to review and approval by the Planning Commission and the Township Attorney and shall be a condition of special land use approval.
- f. The amount of the surety or security shall increase by the Federal CPI every five years.

Section 15.51 Wind Energy System, Utility Scale/Commercial

1. Pre-Application Permits: Utility-scale/Commercial WES shall comply with applicable utility, Michigan Public Service Commission, Federal Energy Regulatory Commission interconnection standards, FAA requirements, and tall structures requirements, including but not limited to:
 - a. Aviation and Airport:
 - 1) Federal Aviation Administration (FAA) requirements. The minimum FAA lighting standards shall not be exceeded. The lighting plan submitted to the FAA shall include an Aircraft Detection Lighting System (ADLS) for the utility-scale WES. The tower shaft shall not be illuminated unless required by the FAA.
 - 2) Michigan Airport Zoning Act (Public Act 23 of 1950 as amended, MCL 259.431 et seq.).
 - 3) Michigan Tall Structures Act (Public Act 259 of 1959 as amended, MCL 259.481 et seq.).
 - b. Environment: The application will demonstrate mitigation measures to minimize potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, historical and cultural sites, and antiquities, as identified in the Environmental Analysis. The application shall demonstrate compliance with:
 - 1) Michigan Natural Resources and Environmental Protection Act (Act 451 of 1994, MCL 324.101 et seq.) (including but not limited to: Part 31 Water Resources Protection (MCL 324.3101 et seq.),
 - 2) Part 91 Soil Erosion and Sedimentation Control (MCL 324.9101 et seq.)
 - 3) Part 301 Inland Lakes and Streams (MCL 324.30101 et seq.)
 - 4) Part 303 Wetlands (MCL 324.30301 et seq.)
 - 5) Part 323 Shoreland Protection and Management (MCL 324.32301 et seq.)
 - 6) Part 325 Great Lakes Submerged Lands (MCL 324.32501 et seq.)
 - 7) Part 353 Sand Dunes Protection and Management (MCL 324.35301 et seq.)
 - c. Avian and Wildlife Impact: Site plan and other documents and drawings shall provide mitigation measures to minimize potential impacts on avians and wildlife, as identified in the Avian and Wildlife Impact analysis.
 - 1) The application shall demonstrate consultation with the U.S. Fish and Wildlife Service's Land-Based Wind Energy Guidelines.
 - 2) Applicants must comply with applicable sections of the Federal Endangered Species Act and Michigan's endangered species protection laws (NREPA, Act 451 of 1994, Part 365).
 - 3) The applicant or the applicant's impact assessment must show consultation with the U.S. Fish and Wildlife Service regarding federally listed species and the Michigan Department of Natural Resources for state listed species. Early coordination with state and federal agencies is recommended.
 - d. Ground Cover: A utility scale WES shall include the installation of ground cover vegetation maintained for the duration of operation until the site is decommissioned. The applicant shall include a ground cover vegetation establishment and management plan as part of the site plan. Vegetation establishment must include invasive plant species control. The following standards apply:

1. Ground cover at sites not enrolled in PA 116 must meet one or more of the four types of Dual Use defined in this ordinance.
 - i. Pollinator Habitat: Solar sites designed to meet a score of 76 or more on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.
 - ii. Conservation Cover: Solar sites designed in consultation with conservation organizations that focus on restoring native plants, grasses, and prairie with the aim of protecting specific species (e.g., bird habitat) or providing specific ecosystem services (e.g., carbon sequestration, soil health).
 - iii. Forage: Solar sites that incorporate rotational livestock grazing and forage production as part of an overall vegetative maintenance plan.
 2. Project sites that are included in a brownfield plan adopted under the Brownfield Redevelopment Financing Act, PA 381 of 1996, as amended, that contain impervious surface at the time of construction or soils that cannot be disturbed, are exempt from ground cover requirements.
2. Utility Scale Commercial Wind Energy Systems (WES) shall be subject to the following requirements:
- a. These facilities may be a principal use or an accessory use on a parcel.
 - b. Minimum lot size for a utility scale/commercial WES shall be twenty (20) acres, but a minimum of five (5) acres of site area is required for each WES proposed within an eligible property.
 - c. In addition to the requirements for site plan application and review outlined in Chapter 13, the following information shall be included with any application of a Special Land Use for a WES:
 - 1) Location of overhead electrical transmission or distribution lines.
 - 2) Location and height of all buildings, structures, towers, guy wires, guy wire anchors, security fencing, and other above ground structures associated with the WES.
 - 3) Locations and height of all adjacent buildings, structures, and above ground utilities located within three hundred (300) feet of the exterior boundaries of the site housing the WES. The boundaries to include the outermost locations upon which towers, structures, fencing, facilities, and other items associated with a WES are placed. Specific distances to other on-site buildings, structures, and utilities shall be provided.
 - 4) A proper buffer or greenbelt to screen the use from any adjacent Residential District or use and the public road.
 - 5) Existing and proposed setbacks of all structures located on the property in question.
 - 6) Sketch elevation of the premises accurately depicting the proposed WES and its relationship to all structures within three hundred (300) feet. For wind farms in which case numerous towers of similar height are planned, sketches are necessary only at borders of proposed project and when adjacent to other established structures within three hundred (300) feet.
 - 7) Access road to the WES facility with detail on dimensions, composition, and maintenance.
 - 8) Planned security measures to prevent unauthorized trespass and access.
 - 9) WES maintenance programs shall be provided that describes the maintenance program used to maintain the WES, including removal when determined to be obsolete.

- d. A copy of the manufacturer's installation instruction shall be provided. Included as part of or as an attachment to the installation instructions shall be standard drawings of the structural components of the wind energy system and support structures, including base and footings provided along with engineering data and calculations to demonstrate compliance with the structural design provisions of the Building Code; drawings and engineering calculations shall be certified by a registered engineer licensed to practice in the State of Michigan.
 - e. Each WES shall be grounded to protect against natural lightning strikes in conformance with the National Electrical Code. Additionally, WES electrical equipment and connections shall be designed and installed in adherence to the National Electrical Code as adopted by the Community.
3. Accessory Uses: An Operations and Maintenance Office building, a substation, or ancillary equipment shall comply with property setback requirements of the respective zoning district. Overhead transmission lines and power poles shall comply with the setback and placement requirements applicable to public utilities.
4. Construction Codes, Towers, and Interconnection Standards: Utility-scale WES shall comply with all applicable state construction and electrical codes and local building permit requirements.
- a. A minimum of a six (6) foot tall fence shall be provided around the perimeter of the WES, or in the case of several WES, around the perimeter of the site.
 - b. An Anemometer Tower shall be set back a distance equal to 2 times height from a property line or road right-of-way.
 - c. A wind turbine setback shall be measured from grade to the height of the blade in the vertical position or the highest point of the WES, whichever is greater and shall not exceed:
 - 1) Road right of way: A horizontal distance equal to 1.5 times the hub height of the tower;
 - 2) Non-participating parcels: A horizontal distance equal to 3 times the hub height of the tower from the property line;
 - d. WES shall not be located within thirty (30) feet of an above ground utility line.
 - e. The height of a WES shall be measured from grade to the height of the blade in the vertical position or the highest point of the WES, whichever is greater. Maximum height for a utility scale/commercial WES shall be two hundred (200) feet for a utility scale/commercial WES.
 - f. WES shall be of monopole design and shall not have guy wires.
 - g. The on-site electrical transmission lines connecting the WES to the public utility electricity distribution system shall be located underground.
 - h. No WES shall be interconnected with a local electrical utility company until the utility company has reviewed and commented upon it. The interconnection of the WES with the utility company shall adhere to the National Electrical Code as adopted by the Community.
 - i. Milton Township hereby reserves the right upon issuing any WES special land use permit to inspect the premises on which the WES is located. If a WES is not maintained in operational condition and poses a potential safety hazard, the owner shall take expeditious action to correct the situation. If the conditions are not corrected within 30 days, the Township may invoke enforcement proceedings as described in Chapter 15.05 and Chapter 18 of the Milton Township Zoning Ordinance.

- j. Any WES which are not used for six (6) successive months shall be deemed abandoned and shall be dismantled and removed from the property at the expense of the property owner.
5. Visual Impact:
- a. A project shall be constructed using WES components (tower, nacelle, blade) of similar design, size, operation, and appearance throughout the project.
 - b. The applicant shall avoid state or federal scenic areas and significant visual resources listed in the local unit of government's Master Plan. Utility-scale WES projects shall use tubular towers and all utility-scale WES in a project shall be finished in a single, non-reflective, matte finish, color approved by the Planning Commission.
 - c. Colors and surface treatment of the WES and supporting structures shall minimize disruption of the natural characteristics of the site. No part of the structure shall be used for signs or advertising.
6. Safety:
- a. Utility-scale WES shall be designed to prevent unauthorized access to electrical and mechanical components and shall have access doors that are kept securely locked at all times when service personnel are not present.
 - b. All spent lubricants and cooling fluids shall be properly and safely removed in a timely manner from the site of the WES.
 - c. Each WES shall have two (2) signs, not to exceed two (2) square feet in area.
 - 1) One sign posted at the base of the tower containing the following information:
 - i. Warning high voltage.
 - ii. Manufacturer's name.
 - iii. Emergency phone number.
 - iv. Emergency shutdown procedures
 - 2) A sign shall be placed at the road access to a wind turbine to warn visitors about the shall be posted near the tower or Operations and Maintenance Office building that will potential danger of falling ice.
 - d. Blade-arcs created by the WES shall have a minimum of thirty (30) feet of clearance over any structure, land or tree within a two hundred (200) foot radius of the tower.
 - e. To prevent unauthorized climbing, WES towers must comply with one of the following provisions:
 - 1) Tower climbing apparatus shall not be located within twelve (12) feet of the ground.
 - 2) A locked anti-climb device shall be installed on the tower.
 - 3) Tower capable of being climbed shall be enclosed by a locked, protective fence at least six (6) feet high.
7. Signal Interference: No utility-scale WES shall be installed in any location where its proximity to existing fixed broadcast, retransmission, or reception antennae for radio, television, or wireless phone or other personal communication systems would produce interference with signal transmission or reception unless the applicant provides a replacement signal to the affected party that will restore

reception to at least the level present before operation of the WES. No utility-scale WES shall be installed in any location within the line of sight of an existing microwave communications link where operation of the WES is likely to produce electromagnetic interference in the link's operation.

8. Sound Pressure Level: The sound pressure level shall not exceed the following:
 - a. Non-participating property: Sound from a WES shall not exceed 65 dBA Leq measured at the property line [dwelling] or [property line] of a non-participating property. If the average background sound pressure level exceeds 65 dBA Leq the standard shall be background sound dBA plus 10 [for example: 5 or 10] dBA.
 - b. Participating property: Sound from a WES shall not exceed 65 dBA Leq measured at the property line [dwelling] or [property line] of a participating property. If the average background sound pressure level exceeds 65 dBA Leq the standard shall be background sound dBA plus 5 [for example: 5 or 10] dBA.
 - c. Sound measurement methodology: Sound pressure level measurements shall be performed by a third party, qualified professional selected by the developer and approved by the Planning Commission. Testing shall be performed according to the procedures in the most current version of ANSI S12.18 and ANSI S12.9 Part 3. All sound pressure levels shall be measured with a sound meter that meets or exceeds the most current version of ANSI S1.4 specifications for a Type II sound meter.
 - d. Post-construction sound survey: A post-construction sound survey shall commence within the first year of operation to document levels of sound emitted from wind turbines. The study will be designed to verify compliance with sound standards applicable to this ordinance. The WES owner shall provide SCADA data during the testing period to the sound consultant completing the study.
 - e. Any proposed WES shall not produce vibrations humanly perceptible beyond the property on which it is located.
9. Shadow Flicker: Shadow flicker shall not exceed 30 hours per year and/or 30 minutes per day measured to the exterior wall of a dwelling or other occupied building on a non-participating parcel. Mitigation measures to minimize or eliminate potential impacts from shadow flicker, as identified in the Shadow Flicker Impact Analysis for human-occupied structures, shall include, but not be limited to:
 - a. Change the proposed location of the wind energy tower; or
 - b. The utility-scale WES shall be turned off by manufacturer approved automated system during the period of time an inhabited structure receives shadow flicker; or
 - c. The utility-scale WES shall be turned off during flicker events after 30 hours/year of shadow flicker on an inhabited structure; or
 - d. There is screening (forest, other building(s), topography, window treatments/blinds) which shields the inhabited structure from a direct line of sight to the rotors causing shadow flicker.
 - e. WES shall not have affixed or attached any lights, reflectors, flashers or any other illumination, except for illumination devices required by FAA regulations.
10. Complaint Resolution:
 - a. Complaint resolution plan shall be presented to the planning commission and approved prior to approval of a special land use permit.

- b. The complaint resolution program will describe how the developer receives, responds, and resolves complaints that may arise from the operation of the WES.
 - c. The complaint resolution plan shall include appropriate timelines for response and other detailed information (such as forms and contact information).
- 11. Annual Maintenance Review: The WES shall be maintained and kept in a safe working condition. The WES owner shall certify on an annual basis that all turbines are operating under normal conditions. Non-operational turbines at the time of the annual review, shall be identified and provided with an expected date to resolve the maintenance issue. A wind turbine generator that has not been operational for over 12 months shall be considered abandoned and a violation of the special land use permit.
- 12. Decommissioning Plan: A decommissioning plan is required at the time of application. The decommission plan shall include:
 - a. The anticipated life of the project;
 - b. The anticipated manner in which the project will be decommissioned, including a description of which above-grade and below-grade improvements will be removed, retained (e.g. access drive, fencing), or restored for viable reuse of the property consistent with the zoning district;
 - c. The projected decommissioning costs for removal of the WES (net of salvage value in current dollars) and soil stabilization, less the amount of the surety bond posted with the State of Michigan for decommissioning of panels installed on PA 116 lands. A review of the projected decommissioning costs shall be conducted every three years for the life of the project and approved by the planning commission board;
 - d. The method of ensuring that funds will be available for site decommissioning and stabilization (in the form of surety bond, irrevocable letter of credit, or cash deposit), and:
 - e. The planning commission reserves the right to approve, deny, or modify an application to modify an existing WES at the end of useful life, in whole or in part, based on ordinance standards at the time of the request. Expenses for legal services and other studies resulting from application to modify or repower a WES will be reimbursed to the township by the WES owner in compliance with established escrow policy.
- 13. Reasons Prompting Decommissioning: Any utility-scale WES which has:
 - a. Reached the end of its useful life;
 - b. Has not operated continuously for one (1) year;
 - c. Whose owner determines they no longer will operate the WES.
 - d. A WES that has not produced electrical energy for 12 consecutive months shall prompt an abandonment hearing for decommissioning.
- 14. Decommissioning:
 - a. WES shall be fully removed according to the decommissioning plan approved by the Planning Commission under Section 15.51 11. Decommissioning Plan, or according to any amended decommissioning plan approved by the Planning Commission.
 - b. The owner/operator shall notify the Township directly or by certified mail of the proposed date of discontinued operations and plans for removal.

- c. The parcel owners shall be required to restore the site to its prior state and according to the approved decommissioning plan.
- d. The owner/operator shall physically remove the installation no more than one hundred and fifty (150) days after the date of discontinued operations or determination of abandonment.
- e. Removal of the WES and facilities shall consist of all of the following:
 - 1) Physical removal of all aboveground or underground utility-scale WES, structures, equipment, security barriers, and transmission lines from the site;
 - 2) Disposal off-site of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations;
 - 3) Restoration and stabilization or re-vegetation of the site as necessary to minimize erosion;
 - 4) If the owner/operator fails to initiate removal of the installation in accordance with the requirements of this section and the approved decommissioning plan within 150 days of abandonment or the proposed date of decommissioning, the Township may enter the property and physically remove all of the WES and facilities and charge the cost back to the owner(s) of the lot;
 - 5) Decommissioning a WES must commence when the soil is dry to prevent soil compaction and must be complete within 12 months after abandonment.

15. Financial Guarantee.

- a. The applicant for a utility scale wind energy system shall provide to the Township a form of monetary surety or security, either through an escrow account, letter of credit, bond, or other instrument, acceptable to the Township Attorney. The purpose of the surety or security is to cover the cost of removal of the utility scale WES in the event the owner/operator does not fully remove the WES and facilities, or the Township must remove the same.
- b. The amount of the financial surety or security shall not exceed more than 125 percent of all costs of removal and compliance with the additional requirements set forth herein.
- c. The estimated costs of removal shall be submitted by the applicant to the Township and be prepared by a qualified engineer.
- d. The surety or security shall be subject to review and approval by the Planning Commission and the Township Attorney and shall be a condition of special land use approval.
- e. The amount of surety or security shall increase by the Federal CPI every five years.
- f. Surety shall be provided for the applicant to make repairs to public roads damaged by the construction of the WES.
- g. In lieu of a performance security agreement with Milton Township, the applicant may enter into a road use agreement with the Cass County Road Commission to cover the costs of all road damage resulting from the construction of the WES.