

- (c) Lastly, no variances shall be granted by the Zoning Board of Appeals to any of the requirements contained herein. This section specifically is attempting to address state statutory regulations regarding the Land Division Act and allow for the utilization of structures which no longer have viable useful life as an agricultural structure but may be permitted as a residential or other accessory structure. However, the Zoning Board of Appeals shall have authority to interpret this ordinance. The intent of this section of the ordinance is not to encourage or prolong the life of these nonconforming structures but to allow them to exist and be productively utilized.

In the event that the terms of Section 3.45 of Ordinance 52 shall conflict with other Sections of the Township's Zoning Ordinance, specifically including, but not limited to Section 3.27 and Section 3.31, the terms of this section shall control.

SECTION 3.46 WIND ENERGY CONVERSION SYSTEMS
(Section Added by Ordinance 52-M, Effective 10-18-2009)
(As Amended by Ordinance 52-P, Adopted 04-11-2011)

- (a) Purpose and Intent

The purpose of this Section is to establish standards and procedures by which the installation and operation of a Wind Energy Conversion System (WECS) shall be governed within the Township to protect the health, welfare, safety, and quality of life of the general public, and to ensure compatible land uses in the vicinity of the areas affected by wind energy facilities.

- (b) Definitions

- 1) Ambient: The sound pressure level exceeded 90% of the time (i.e., L_{90}).
- 2) Anemometer Tower or Met Tower: 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 Grid Wind Energy Conversion System.
- 3) ANSI: The American National Standards Institute.
- 4) Building-Mounted Wind Energy Conversion System. A Wind Energy Conversion System, attached to a building's roof, walls, or other elevated surface. A Building-Mounted Wind Energy Conversion System has a nameplate capacity that does not exceed ten kilowatts
- 5) dB(A): The sound pressure level in decibels. It refers to the "a" weighted scale defined by ANSI. A method for weighting the frequency spectrum to mimic the human ear.
- 6) Decibel: The unit of measure used to express the magnitude of sound pressure and sound intensity.
- 7) FAA: The Federal Aviation Administration

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- 8) IEC: The International Electrotechnical Commission.
- 9) ISO: The International Organization for Standardization.
- 10) Large-scale Wind Energy Conversion System. An on-site wind energy conversion system with a height of more than 120 feet.
- 11) Lease Unit Boundary: The boundary around a property leased for purposes of a wind energy facility, including adjacent parcels to the parcel on which the wind energy facility tower or equipment is located. For purposes of setback, the Lease Unit Boundary shall not cross road right-of-ways.
- 12) Mid-scale Wind Energy Conversion System. An on-site wind energy conversion system with a height of more than 60 feet but not more than 120 feet.
- 13) On-Site Wind Energy Conversion System: A land use for generating electric power from wind and is an accessory use that is intended to primarily serve the needs of the consumer at that site.
- 14) Shadow Flicker: Alternating changes in light intensity caused by the moving blade of a Wind Energy Conversion System casting shadows on the ground and stationary objects, such as but not limited to a window at a dwelling.
- 15) Small-scale Wind Energy Conversion System. An on-site wind energy conversion system with a height of 60 feet or less.
- 16) Sound Pressure: An average rate at which sound energy is transmitted through a unit area in a specified direction. The pressure of the sound measured at a receiver.
- 17) Sound Pressure Level: The sound pressure mapped to a logarithmic scale and reported in decibels (dB).
- 18) Utility Grid Wind Energy Conversion System: 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 or an electric substation. A Utility Grid Wind Energy Conversion System is designed and built to provide electricity to the electric utility grid.
- 19) Wind Energy Conversion System (WECS): Shall mean a combination of:
 - a) A surface area (typically a blade, rotor, or similar device), either variable or fixed, for utilizing the wind for electrical powers; and
 - b) 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
 - c) The generator, alternator, or other device to convert the mechanical energy of the surface area into electrical energy; and

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- d) The tower, pylon, or other structure upon which any, all or some combination of the above are mounted.
 - e) Other components not listed above but associated with the normal construction, operation, and maintenance of a WECS such as substations, anemometer towers or met towers, cables and wires and other buildings accessory to such facility.
- 20) Wind Farm: Clusters of two or more Utility Grid Wind Energy Conversion Systems, placed upon a lot or parcel with the intent to sell or provide electricity to a site or location other than the premises upon which the Wind Energy Conversion Systems are located. Said Wind Energy Conversion Systems may or may not be owned by the owner of the property upon which they are placed.

~~(e) Type of Review Required and Applicable Regulations~~

- ~~1) A building permit, and adherence to the regulations set forth in this Section shall be required for all Building Mounted Wind Energy Conversion Systems in all zoning districts. Site plan approval, a building permit, and adherence to the regulations set forth in this Section shall be required for all Small-scale Wind Energy Conversion Systems located in non-residential zoning districts.~~
- ~~2) Special land use review (as set forth in Section 17.20 of this Ordinance), site plan approval, a building permit, and adherence to the regulations set forth in this Section shall be required for Small-scale Wind Energy Conversion Systems located in residential zoning districts, and all Mid-scale Wind Energy Conversion Systems located in any zoning district.~~
- ~~3) Special land use review (as set forth in Section 17.20 of this Ordinance), site plan approval, a building permit, and adherence to the regulations set forth in this Section shall be required for all Large-scale Wind Energy Conversion Systems and Utility Grid Wind Energy Conversion Systems. Large-scale and Utility Grid WECS shall not be permitted in any zoning district other than the AG and I zoning districts.~~

Type of WECS	Is Special Use Review Required? (follow procedure in §17.20)	
	Residential Districts	Non-Residential Districts
Building-Mounted	No	No
Small-scale	Yes	No
Mid-scale	Yes	Yes
Large-scale	Yes	Yes

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Utility Grid	<i>not permitted in residential districts</i>	<i>Yes in AG and I districts not permitted in C or FP districts</i>
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(c) Type of Review Required and Applicable Regulations

- 1) A building permit, and adherence to the regulations set forth in this Section shall be required for all Building-Mounted and Small-scale Wind Energy Conversion Systems located in all zoning districts.
- 2) Site sketch plan approval, a building permit, and adherence to the regulations set forth in this Section shall be required for all Mid-scale Wind Energy Conversion Systems located in all zoning districts.
- 3) Special land use review (as set forth in Section 17.20 of this Ordinance), site plan approval, a building permit, and adherence to the regulations set forth in this Section shall be required for Large-scale Wind Energy Conversion Systems located in any zoning districts.
- 4) Special land use review (as set forth in Section 17.20 of this Ordinance), site plan approval, a building permit, and adherence to the regulations set forth in this Section shall be required for all Utility Grid Wind Energy Conversion Systems. Utility Grid WECS shall not be permitted in any zoning district other than the AG and I zoning districts.

	Required Review Process	
Type of WECS	Residential Districts	Non-Residential Districts
Building-Mounted	Building Permit	Building Permit
Small-scale	Building Permit	Building Permit
Mid-scale	SKP	SKP
Large-scale	SU	SU
Utility Grid	Not permitted in residential districts	SU in AG and I districts; not permitted in C or FP districts
Sketch Plan Review		SKP
Site Plan Review		SP
Special Use Review (follow procedure in §17.20)		SU

(d) Standards for Building-Mounted Wind Energy Conversion Systems

The following standards shall apply to Building-Mounted WECS:

- 1) Purpose. Designed to primarily serve the needs of a home, farm, or small business.
- 2) Height. The maximum permitted height, measured from the highest point of the roof, excluding chimneys, cupolas, spires, and similar projections, to the highest point of the WECS including the top of the blade in its vertical position, for Building-Mounted WECS is as follows:

Zoning District	Maximum Height for Building-Mounted WECS
Residential	10 Feet
Non-Residential (one acre or less)	10 Feet
Non-Residential (greater than one acre)	15 Feet

- 3) Setbacks. Building-Mounted WECS, including any support apparatus, shall be setback a minimum of 15 feet from the property line, street right-of-way, or overhead utility lines if mounted directly on the roof of the building.
- 4) Location and Separation: The Building-Mounted WECS shall not be affixed to a wall on the façade of a building facing a street. If more than one Building-Mounted WECS is installed on the same building, a separation equal to the height of the tallest Building-Mounted WECS shall be maintained between the base of each Building-Mounted WECS. However, no more than two Building-Mounted WECS shall be located on any parcel of land located in a residentially-zoned district.
- 5) Guy Wires. Guy wires shall not be permitted as part of the Building-Mounted WECS.
- ~~6) Sound Pressure Level and Noise. The sound created by a Building-Mounted WECS shall not exceed 55 dB(A) at the property line closest to the WECS. This sound pressure level may be exceeded during short term events such as utility outages and/or severe wind storms. If the ambient sound pressure level exceeds 55 dB(A), the standard shall be ambient dB(A) plus 5 dB(A). Vibrations shall not be produced which are audible beyond the property on which the Building-Mounted WECS is located~~
- 6) Sound Pressure Level and Vibrations. The sound created by a Building-Mounted WECS shall not exceed 55 dB(A) at the property line closest to the WECS. This sound pressure level may be exceeded during short term events such as utility outages and/or severe wind storms. If the ambient sound pressure level exceeds 55 dB(A), the standard shall be ambient dB(A) plus 5 dB(A). Vibrations shall not be

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produced which are humanly perceptible beyond the property on which the Building-Mounted WECS is located.

- 7) Construction Codes, Towers, & Interconnection Standards. Building-Mounted WECS shall comply with all applicable state construction and electrical codes and local building permit requirements.
 - a) The applicant acknowledges that by receipt of these permits the Township and its Official are not responsible for and cannot guarantee the structural integrity of the building to which the Building-Mounted WECS is being affixed. It is recommended that the applicant obtain the services of a structural engineer or other competent professional to determine whether the roof upon which the WECS is being mounted has the structural integrity to withstand the additional load forces. Since these attachments may not be regulated by State Code at this time, the Township and Building Official do not have the ability to pass judgment upon the anchoring system and load bearing of the structure.
 - b) Building-Mounted WECS shall comply with Federal Aviation Administration requirements, the Michigan Airport Zoning Act (Public Act 23 of 1950, MCL 259.431 et seq.), the Michigan Tall Structures Act (Public Act 259 of 1959, MCL 259.481 et seq.), and other applicable local and state regulations. An interconnected Building-Mounted WECS shall comply with Michigan Public Service Commission and Federal Energy Regulatory Commission standards, except that off-grid systems are exempt from this requirement.
 - 8) No lettering, advertising or graphics, except for manufacturer insignia, shall be permitted on any part of the structure, hub, or blades.
 - 9) Safety. A Building-Mounted WECS shall have automatic braking, governing, or a feathering system to prevent uncontrolled rotation or over speeding. All Building-Mounted WECS shall have lightning protection.
 - 10) Decommissioning. The applicant shall decommission the Building-Mounted WECS within twelve (12) months after the useful life of the project. The Building-Mounted WECS will be presumed to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months. The owner of the Building-Mounted WECS shall be responsible for all costs associated with decommissioning of the WECS. If the Building-Mounted WECS owner fails to complete the decommissioning within the required twelve (12) months, the Township may have the WECS decommissioned with the expense charged to the violator and/or become a lien on the property. Decommissioning shall include removal of the Building-Mounted WECS, electrical components, foundation, and all other associated facilities.
- (e) Standards for Small-scale and Mid-scale Wind Energy Conversion Systems
- The following standards shall apply to Small-scale and Mid-scale WECS, including Anemometer Towers:

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- 1) Purpose. Designed to primarily serve the needs of a home, farm, or small business.
- 2) ~~Height. The maximum permitted height, measured from the average grade to the highest point of the tower including the top of the blade in its vertical position, for Small-scale WECS and Mid-scale WECS is as follows:~~

Type of WECS	Minimum Height	Maximum Height to top of blade at vertical
Small-scale	<i>no minimum</i>	60 feet
Mid-scale	60.1 feet	120 feet

~~For the purposes of this section, grade shall be defined as the average grade of the lot or parcel of land upon which the WECS is located.~~

- 2) Height. The maximum permitted height, measured from the average grade to the center of the hub, for Small-scale WECS and Mid-scale WECS is as follows:

Type of WECS	Minimum Height	Maximum Height to Hub
Small-scale	No minimum	60 feet
Mid-scale	60.1 feet	120 feet

For the purposes of this section, grade shall be defined as the average grade of the lot or parcel of land upon which the WECS is located.

- 3) ~~Setbacks. The minimum required setback for Small-scale WECS and Mid-scale WECS are as follows:~~

Type of WECS	Minimum Setback
Small-scale	150% of tower height
Mid-scale	150% of tower height in AG and I districts 200% of tower height in all other districts

~~*Height shall be as measured consistent with sub-section (e)2, above.~~

~~No part of the WECS structure, including guy wire anchors, may extend closer than 10 feet to the owner's property lines, or the distance of the required principal structure setback in the respective zoning district, whichever results in the greater setback.~~

- 3) Setbacks. The minimum required setback for Small-scale WECS and Mid-scale WECS are as follows:

Type of WECS	Minimum Setback
Small-scale	150% of tower height
Mid-scale	150% of tower height in AG and I districts 200% of tower height in all other districts

*Height shall be as measured from the average grade to the highest point of the tower including the top of the blade in its vertical position.

No part of the WECS structure, including guy wire anchors, may extend closer than 10 feet to the owner’s property lines, or the distance of the required principal structure setback in the respective zoning district, whichever results in the greater setback.

- 4) ~~Minimum Lot Area. The minimum lot area for a property to be eligible to have a Small-scale or Mid-scale WECS shall be as follows:~~

Type of WECS	Minimum Lot Area
Small-scale	2 acres
Mid-scale	5 acres

- 4) Minimum Lot Area. The minimum lot area for a property to be eligible to have a Small-scale or Mid-scale WECS shall be as follows:

Type of WECS	Minimum Lot Area
Small-scale	1 acre
Mid-scale	5 acres

On property less than 5 acres in area, there shall be no more than one building mounted WECS or one small-scale building mounted WECS.

On property 5 acres or greater, there shall be no more than one small-scale or mid-scale WECS in addition to any building mounted WECS.

Special use, site plan approval, and adherence to the regulations set forth in this section shall be required for any property over five acres requesting more than one small or mid-scale WECS. There shall be a minimum of 1 acre for each small-scale WECS, and five acres for each mid-scale WECS.

- 5) Minimum Ground Clearance. The minimum vertical blade tip clearance from grade shall be 20 feet for any Small-scale or Mid-scale WECS.

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- ~~6) Sound Pressure Level. The sound created by a Small-scale or Mid-scale WECS shall not exceed 55 dB(A) at the property line closest to the WECS. This sound pressure level may be exceeded during short term events such as utility outages and/or severe wind storms. If the ambient sound pressure level exceeds 55 dB(A), the standard shall be ambient dB(A) plus 5 dB(A).~~
 - 6) Sound Pressure Level and Vibrations. The sound created by a Small-scale or Mid-scale WECS shall not exceed 55 dB(A) at the property line closest to the WECS. This sound pressure level may be exceeded during short term events such as utility outages and/or severe wind storms. If the ambient sound pressure level exceeds 55 dB(A), the standard shall be ambient dB(A) plus 5 dB(A). Vibrations shall not be produced which are humanly perceptible beyond the property on which the WECS is located.
 - 7) Construction Codes, Towers, & Interconnection Standards. Small-scale or Mid-scale WECS including towers shall comply with all applicable state construction and electrical codes and local building permit requirements.
 - 8) Small-scale or Mid-scale WECS including towers shall comply with Federal Aviation Administration requirements, the Michigan Airport Zoning Act (Public Act 23 of 1950, MCL 259.431 et seq.), the Michigan Tall Structures Act (Public Act 259 of 1959, MCL 259.481 et seq.), and other applicable local and state regulations. An interconnected Small-scale or Mid-scale WECS shall comply with Michigan Public Service Commission and Federal Energy Regulatory Commission standards, except that off-grid systems are exempt from this requirement.
 - 9) No lettering, advertising or graphics, except for manufacturer insignia, shall be permitted on any part of the tower, hub, or blades.
 - 10) Safety. A Small-scale or Mid-scale WECS shall have automatic braking, governing, or a feathering system to prevent uncontrolled rotation or over speeding. All wind towers shall have lightning protection. If a tower is supported by guy wires, the wires shall be clearly visible to a height of at least 6 feet above the guy wire anchors.
 - 11) Decommissioning. The applicant shall decommission the Small-scale or Mid-scale WECS within twelve (12) months after the useful life of the project. The Small-scale or Mid-scale WECS will be presumed to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months. The owner of the Small-scale or Mid-scale WECS shall be responsible for all costs associated with decommissioning of the WECS. If the Small-scale or Mid-scale WECS owner fails to complete the decommissioning within the required twelve (12) months, the Township may have the WECS decommissioned with the expense charged to the violator and/or become a lien on the property. Decommissioning shall include removal of the Small-scale or Mid-scale WECS, electrical components, foundation, and all other associated facilities.
- (f) Standards for Large-scale and Utility Grid Wind Energy Conversion Systems

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The following standards shall apply to Large-scale Wind Energy Conversion Systems and Utility Grid Wind Energy Conversion Systems, including Anemometer Towers.

- 1) **Maximum Height.** The maximum permitted height of a Large-scale or Utility Grid WECS tower shall be 350 feet from existing grade to the center of the hub, and the total height of the tower and blade in the full vertical position may not exceed 500 feet.

For the purposes of this section, grade shall be defined as the average grade of the lot or parcel of land upon which the WECS is located.

- 2) **Setbacks.** A distance equal to 150% of the height of the tower including the top of the blade in its vertical position from all property lines or from the lease unit boundary where the WECS is located, public roads, and communication or electrical lines. Operations and maintenance office building, a substation, or ancillary equipment shall comply with any property setback requirement of the respective zoning district. Overhead transmission lines and power poles shall comply with the setback and placement requirements applicable to public utilities.
- 3) **Tower Separation.** Turbine/tower separation shall be based on 1) industry standards, 2) manufacturer recommendation, and 3) the characteristics [prevailing wind, topography, etc.] of the particular site location. At a minimum, there shall be a separation between towers of not less than three (3) times the turbine (rotor) diameter; and, the WECS shall be designed to minimize disruption to farmland activity. Documents shall be submitted by the developer/manufacturer confirming specifications for turbine/tower separation.
- 4) **Minimum Lot Area Size.** The minimum lot size for a property to be eligible to have a Large-scale or Utility Grid WECS shall be five acres.
- 5) **Minimum Ground Clearance.** The minimum vertical blade tip clearance from grade shall be 20 feet for a Large-scale or Utility Grid WECS.
- ~~6) **Sound Pressure Level.** Audible noise or the sound pressure level from the operation of the Large-scale or Utility Grid WECS shall not exceed fifty-five (55) dB(A), or the ambient sound pressure level plus five (5) dB(A), whichever is greater. The audible noise or sound pressure shall be measured at the property lines or the lease unit boundary where the WECS is located, whichever is farther from the source of the noise. This sound pressure shall not be exceeded for more than three minutes in any hour of the day.~~
- 6) **Sound Pressure Level and Vibrations.** Audible noise or the sound pressure level from the operation of the Large-scale or Utility Grid WECS shall not exceed fifty-five (55) dB(A), or the ambient sound pressure level plus five (5) dB(A), whichever is greater. The audible noise or sound pressure shall be measured at the property lines or the lease unit boundary where the WECS is located, whichever is farther from the source of the noise. This sound pressure shall not be exceeded for more than three minutes

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in any hour of the day. Vibrations shall not be produced which are humanly perceptible beyond the property on which the WECS is located.

- 7) Safety. The Large-scale or Utility Grid WECS shall meet the following safety requirements:
 - a) The Large-scale or Utility Grid WECS 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 Large-scale or Utility Grid WECS.
 - c) A sign shall be posted near the tower or operations and maintenance office building that will contain emergency contact information. Signage placed at the road access shall be used to warn visitors about the potential danger of falling ice.
 - d) All collection system wiring shall comply with all applicable safety and stray voltage standards.
 - e) Large-scale or Utility Grid WECS towers shall not be climbable on the exterior.
- 8) Post-Construction Permits, Construction Codes, Towers, and Interconnection Standards. The Large-scale or Utility Grid WECS shall comply with all applicable state construction and electrical codes and local building permit requirements.
- 9) Pre-Application Permits.
 - a) Utility Infrastructure. The utility infrastructure shall comply with Federal Aviation Administration (FAA) requirements, the Michigan Airport Zoning Act (Public Act 23 of 1950, as amended, M.C.L. 259.431 et seq.), the Michigan Tall Structures Act (Public Act 259 of 1959 as amended, M.C.L. 259.481 et seq.), and other applicable local and state regulations. The minimum FAA lighting standards shall not be exceeded. All tower lighting required by the FAA shall be shielded to the extent possible to reduce glare and visibility from the ground. The tower shaft shall not be illuminated unless required by the FAA. Utility Grid WECS shall comply with applicable utility, Michigan Public Service Commission, and Federal Energy Regulatory Commission interconnection standards.
 - b) Environment.
 - i.) All applications for Large-scale and Utility Grid WECS shall be accompanied by an Impact Assessment, which shall be subject to the review and approval of the Planning Commission. The Impact Assessment shall describe and evaluate the developmental, ecological, social, economic, and physical impacts anticipated as a result of the proposed development. At a minimum, the Impact Assessment shall include the qualifications of the preparer(s), a clear description of the site and proposed improvements, a

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- recent aerial photograph of the site and surrounding areas, and a narrative description of expected environmental impacts of the WECS project.
- ii.) The site plan and other documents and drawings shall show 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 Impact Assessment.
 - iii.) All Large-scale and Utility Grid WECS shall comply with applicable parts of the Michigan Natural Resources and Environmental Protection Act (Act 451 of 1994, M.C.L. 324.101 et seq.) as shown by having obtained each respective permit with requirements and limitations of those permits reflected on the site plan, including but not limited to:
 - a.) Part 31 Water Resources Protection (M.C.L. 324.3101 et seq.),
 - b.) Part 91 Soil Erosion and Sedimentation Control (M.C.L. 324.9101 et seq.),
 - c.) Part 301 Inland Lakes and Streams (M.C.L. 324.30101 et seq.),
 - d.) Part 303 Wetlands (M.C.L. 324.30301 et seq.),
- 10) Public Roads. A description of the routes to be used by construction and delivery vehicles and of any road improvements that will be necessary in the Township to accommodate construction vehicles, equipment or other deliveries must be provided. Documentation from the Bay County Road Commission and/or Michigan Department of Transportation, as applicable, shall be provided indicating the jurisdiction's approval for use of public streets for transportation of Large-scale or Utility Grid WECS. An agreement or bond which guarantees the repair of damage to any Township maintained public road or other areas caused by construction of the WECS is required.
- 11) Utilities. Power lines should be placed underground, when feasible, to prevent avian collisions and electrocutions. All aboveground lines, transformers, or conductors should comply with the Avian Power Line Interaction Committee (APLIC, <http://www.aplic.org/>) published standards to prevent avian mortality.
- 12) No lettering, company insignia, advertising, or graphics shall be on any part of the tower, hub, or blades. Nacelles may have lettering that exhibits the manufacturer's and/or owner's identification.
- 13) Shadow Flicker. Site plan and other documents and drawings shall show mitigation measures to minimize potential impacts from shadow flicker, as identified in the Shadow Flicker Impact Analysis, as required below.

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- 14) Decommissioning. A Planning Commission-approved decommissioning plan shall be provided indicating 1) the anticipated life of the project, 2) the estimated decommissioning costs net of salvage value in current dollars, 3) the method of ensuring that funds will be available for decommissioning and restoration, and 4) the anticipated manner in which the project will be decommissioned and the site restored. The Planning Commission may require the applicant to post a bond to the Township in an amount sufficient to ensure removal of the WECS if it becomes abandoned.
 - 15) The following additional standards apply only to Utility Grid Wind Energy Conversion Systems:
 - a) Visual Impact. Utility Grid WECS projects shall use tubular towers and all WECS in a project shall be finished in a single, non-reflective matte finished color. A project shall be constructed using WECS of similar design, size, operation, and appearance throughout the project.

The design of the WECS' buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening and landscaping that will blend facility components with the natural setting and then existing environment.
 - b) Avian and Wildlife Impact. Site plan and other documents and drawings shall show mitigation measures to minimize potential impacts on avian and wildlife, as identified in the Avian and Wildlife Impact analysis, as required below.
 - c) Complaint Resolution. A Planning Commission-approved process to resolve complaints from nearby residents concerning the construction or operation of the project shall be established.
 - d) Electromagnetic Interference. No Utility Grid WECS 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 electromagnetic 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 WECS. No Utility Grid WECS shall be installed in any location within the line of sight of an existing microwave communications link where operation of the WECS is likely to produce electromagnetic interference in the link's operation unless the interference is insignificant.
- (g) Site Plan Review Procedure for all Wind Energy Conversion Systems
- An application to install any WECS shall be reviewed in accordance with all applicable requirements in Section 3.19 – Site Development Plan and Section 17.20 – Special Use Permits (if applicable). In addition to these requirements, site plans and supporting documents for WECS shall include the following additional information:

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- 1) Documentation that sound pressure level, construction code, tower, interconnection (if applicable), and safety requirements have been reviewed and the submitted site plan is prepared to show compliance with these issues.
- 2) Proof of the applicant's public liability insurance for the project.
- 3) A copy of that portion of any of the applicant's lease(s) with the land owner(s) granting authority to install the WECS and/or Anemometer Tower; legal description of the property(ies), Lease Unit(s); and the site plan shows the boundaries of the leases as well as the boundaries of the Lease Unit Boundary.
- 4) The phases, or parts of construction, with a construction schedule.
- 5) The project area boundaries.
- 6) The location, height, and dimensions of all existing and proposed structures and fencing.
- 7) The location, grades, and dimensions of all temporary and permanent on-site and access roads from the nearest county or state maintained road.
- 8) A description of the routes to be used by construction and delivery vehicles and of any road improvements that will be necessary in the Township to accommodate construction vehicles, equipment or other deliveries. For Large-scale or Utility Grid WECS, documentation from the Bay County Road Commission and/or Michigan Department of Transportation, as applicable, shall be provided indicating the jurisdiction's approval for use of public streets for transportation of WECS.
- 9) All new aboveground infrastructure related to the project.
- 10) A copy of Manufacturers' Material Safety Data Sheet(s) which shall include the type and quantity of all materials used in the operation of all equipment including, but not limited to, all lubricants and coolants.
- 11) Description of operations, including anticipated regular and unscheduled maintenance.
- 12) For Large-scale and Utility Grid Wind Energy Conversion Systems, a copy of a shadow flicker analysis at occupied structures to identify the locations of shadow flicker that may be caused by the project and the expected durations of the flicker at these locations from sunrise to sunset over the course of a year. The site plan shall identify problem areas where shadow flicker may affect the occupants of the structures and show measures that shall be taken to eliminate or mitigate the problems.
- 13) A restoration plan for the site after completion of the project which includes the following supporting documentation:

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- a) The anticipated life of the project.
 - b) The estimated decommissioning costs net of salvage value in current dollars.
 - c) The method of ensuring that funds will be available for decommissioning and restoration. The Planning Commission may require the applicant to post a bond to the Township in an amount sufficient to ensure removal of the WECS if it becomes abandoned.
 - d) The anticipated manner in which the project will be decommissioned and the site restored.
- 14) For Utility Grid Wind Energy Conversion Systems only:
- a) A copy of a noise modeling and analysis report and the site plan shall show locations of equipment identified as a source of noise which is placed, based on the analysis, so that the Utility Grid WECS will not exceed the maximum permitted sound pressure levels. The noise modeling and analysis shall conform to IEC 61400 and ISO 9613. After installation of the WECS, sound pressure level measurements shall be done by a third party, qualified professional according to the procedures in the most current version of ANSI S12.18. 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. Documentation of the sound pressure level measurements shall be provided to Monitor Township within 60 days of the commercial operation of the project.
 - b) A visual impact simulation showing the completed site as proposed on the submitted site plan. The visual impact simulation shall be from four viewable angles.
 - c) A copy of an Environmental Analysis by a third party qualified professional to identify and assess any potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, historical and cultural sites, and antiquities. The applicant shall take appropriate measures to minimize, eliminate or mitigate adverse impacts identified in the analysis, and shall show those measures on the site plan. The applicant shall identify and evaluate the significance of any net effects or concerns that will remain after mitigation efforts.
 - d) A copy of an Avian and Wildlife Impact Analysis by a third party qualified professional to identify and assess any potential impacts on wildlife and endangered species. The applicant shall take appropriate measures to minimize, eliminate or mitigate adverse impacts identified in the analysis, and shall show those measures on the site plan. The applicant shall identify and evaluate the significance of any net effects or concerns that will remain after mitigation efforts.

Sites requiring special scrutiny include wildlife refuges, other areas where birds are highly concentrated, bat hibernacula, wooded ridge tops that attract wildlife,

sites that are frequented by federally and/or state listed endangered species of birds and bats, significant bird migration pathways, and areas that have landscape features known to attract large numbers of raptors.

At a minimum, the analysis shall include a thorough review of existing information regarding species and potential habitats in the vicinity of the project area. Where appropriate, surveys for bats, raptors, and general avian use should be conducted. The analysis shall include the potential effects on species listed under the federal Endangered Species Act and Michigan's Endangered Species Protection Law.

The analysis shall indicate whether a post construction wildlife mortality study will be conducted and, if not, the reasons why such a study does not need to be conducted.

- e) A description of the complaint resolution process developed by the applicant to resolve complaints from nearby residents concerning the construction or operation of the project.

The process may use an independent mediator or arbitrator and shall include a time limit for acting on a complaint. The process shall not preclude Monitor Township from acting on a complaint. During construction the applicant shall maintain and make available to nearby residents a telephone number where a project representative can be reached during normal business hours.

END - Section 3.46

**SECTION 3.47 SHARED ACCESS ON NON-RESIDENTIAL LOTS
(Section Added by Ordinance 52-N Effective 09-27-2009)**

The following shared access provisions shall apply to any non-residential zoned lot:

- (a) Access across adjacent lots. For any lot where vehicular access is proposed across another private lot (in lieu of direct connection to a public road), a shared access easement shall be required which demonstrates continuous vehicular access between the proposed use or uses and a public road. Shared access easements shall be created according to the provisions in sub-section (b) below.
- (b) Shared Access Easements. A shared access easement is a privately-owned and maintained right-of-way that provides vehicular access to adjacent building lots. Shared access easements may cover a private access drive and/or any portion of an off-street parking area.

The following standards shall apply to all shared access easements:

1. The minimum width of a shared access easement shall be 66 feet, in order to provide space of construction and maintenance of public utilities, including but not limited to sewer and water. The Planning Commission may reduce the width of the easement if utilities are not required or for other demonstrable reason that a 66-foot wide easement is not necessary.