

RESOLUTION NO. 22-16

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF DOUGLAS COUNTY, KANSAS ADOPTING TEXT AMENDMENTS TO THE ZONING REGULATIONS FOR THE UNINCORPORATED TERRITORY OF DOUGLAS COUNTY, KANSAS.

WHEREAS, the Lawrence-Douglas County Planning Commission, after holding a public hearing on February 23, 2022, following due and lawful notice pursuant to K.S.A. 12-757 and the *Zoning and Land Use Regulations for the Unincorporated Territory of Douglas County, Kansas*, as codified in Chapter 12, Article 3 of the Douglas County Code and as amended (the "Zoning Regulations"), has recommended that the Board of County Commissioners of Douglas County, Kansas (the "Board") make text amendments to the Zoning Regulations, the nature and description of such change being fully set forth below; and

WHEREAS, on April 20, 2022 the Board found that the Zoning Regulations should be amended to develop specific use standards for Solar Energy Conversion Systems by adopting the text amendments set forth below.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF DOUGLAS COUNTY, KANSAS AS FOLLOWS:

I. Adoption of Text Amendments. The Board hereby finds that the statutory provisions for the amendment of the Zoning Regulations has been fully complied with and hereby adopts the following text amendments (the "Text Amendments") amending the Zoning Regulations as follows:

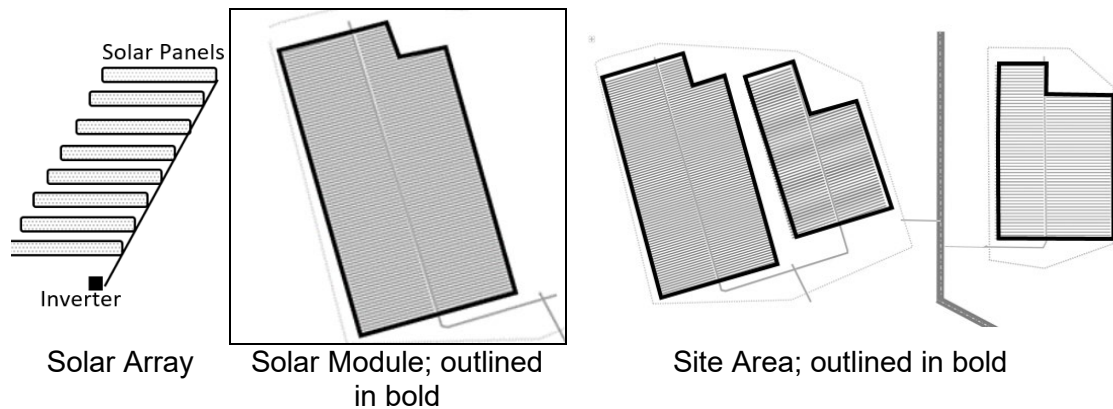
A. Revising section 12-306 Use Specific Standards by adding subsection 12-306-49 **LIMITED SCALE SOLAR ENERGY CONVERSION SYSTEMS (LSECS) AND COMMERCIAL/UTILITY SCALE SOLAR ENERGY CONVERSION SYSTEMS (CSECS)** as follows:

12-306-49.01 Definitions

- a. Agrivoltaic: A solar energy conversion system that includes the dual use of the land: combining agriculture and a solar energy conversion system. The most common types of agrivoltaic facilities include the growing of crops, providing for pollinators, or grazing of animals. These agricultural activities occur underneath and surrounding the panels or Modules.
- b. Concentrating Solar Thermal Devices: Also known as concentrated solar power; these systems use mirrors or lenses to reflect and concentrate sunlight onto a receiver. The energy from the concentrated sunlight heats the receiver to a higher temperature. This heat is then used to spin a turbine or power an engine to generate electricity
- c. Extraordinary Events: Any of the following would be considered an 'extraordinary event': large-scale or facility-wide damage to Solar Arrays/panels and facilities due to wind, storm, hail, fire, flood, earthquake, or other natural disaster; explosion, grievous injury to any citizen or employee; or similar event.

- d. Grading: The act of excavation or filling or a combination of both or any leveling to a smooth horizontal or sloping surface on a property but not including normal cultivation associated with an agricultural operation.
- e. Net Metering: a system in which solar panels or other renewable energy generators are connected to a public-utility power grid and surplus power is transferred onto the grid, allowing customers to offset the cost of power drawn from the utility.
- f. Operator: The party or entity responsible for the construction, operation, maintenance, and decommissioning of the Solar Energy Conversion System.
- g. Permeable Fencing: Fencing that allows wildlife to pass through. Examples include typical barb-wire fencing or wire fencing with larger holes than a traditional chain link fence, woven wire, with wildlife corridors for larger wildlife.
- h. Solar Energy Conversion System (SECS): a machine or device that converts sunlight into heat (passive solar) or into electricity, whether by photovoltaics (PV), Concentrating Solar Thermal Devices (CST), or other conversion technology.
 - 1) Personal or Accessory Solar Energy Conversion System: Solar energy conversion systems that are used for personal use or are accessory to other uses. Electricity created is for consumption on-site and not for transfer or sale to a third party (although net metering is permitted).
 - 2) Limited Scale Solar Energy Conversion System (LSECS): Solar energy conversion system that does not exceed 20 contiguous acres in area. Minor structures other than energy conversion equipment may be included in this use. A limited scale system is typically created by people that join together to cooperatively create and use solar energy. Electricity created is for consumption of members in the group and not for transfer or sale to a third party (although net metering, or sale to the utility company, is permitted.)
 - 3) Commercial/Utility Scale Solar Energy Conversion System (CSECS): Solar energy conversion systems, commonly referred to as 'solar farms', that convert solar energy into electricity for the primary purpose of storage and sales of generated electricity. This term includes all appurtenant facilities such as roads, substations, and operation or maintenance buildings. The system is connected to transmission, collector, feeder lines, and/or battery storage, and is intended for use in a larger electrical network exclusive of individual use. Also known as Commercial Solar Energy Conversion System.
- i. Area Definitions:
 - 1) Solar Array: A collection of multiple solar panels that generate electricity as a system, most typically this is a group of solar panels connected to the same inverter.
 - 2) Solar Module: A grouping of Solar Arrays. The area of a Solar Module is measured with the panels as horizontal as possible. The Module may be separated from other Modules by fencing, wildlife corridors, natural areas, roads, etc. Appurtenant structures such as sub-stations, battery storage, and other storage buildings, are not included in this definition.

- 3) **Site Area:** The footprint of the solar facility including the various Solar Modules, whether on property that is commonly owned/controlled or is under separate ownership. The Site Area is the cumulative total of the Solar Modules within the facility. The Site Area is measured with the panels as horizontal as possible. This term does not include the wildlife corridors or other features of the solar energy conversion system that are not considered part of the Solar Module.
- 4) **Project Area:** The total impacted area including the Site Area along with the accessory or appurtenant structures and equipment, wildlife corridors, and other components of the solar energy conversion system.



- j. **Wildlife Corridors:** A vegetated route or other connection which allows movement of wildlife between areas of habitat. A wildlife corridor may be naturally occurring areas such as stream corridors, or constructed breaks in the contiguously fenced areas other than for roads. A wildlife corridor allows animals to travel through an area that may be fragmented with solar energy conversion systems, or other features, rather than using the nearby roadways.

12-306-49.02 Limited Scale and Commercial/Utility Scale Solar Energy Conversion System

- a. **Purpose of Regulations.** It is the purpose of this section to provide details related to any application for a Limited Scale Solar Energy Conversion System (LSECS) or Commercial/Utility Scale Solar Energy Conversion System (CSECS) Project; create a process to permit the development of a LSECS or CSECS project; and identify significant environmental, social, and economic impacts related to the LSECS or CSECS project.
- b. **Intent of Regulations.** It is the intent of these regulations to address major issues associated with the project; however, issues that are not listed and that are deemed significant during the course of review will be addressed with the review and conditions of each individual conditional use permit.
 - 1) These regulations specify the plans, information surveys, and studies that must be submitted as part of the Conditional Use Permit (CUP) application.
 - 2) Appropriate locational criteria for siting a Commercial Solar Energy Conversion System are provided.
 - 3) Standards are provided to:

- i. Ensure the land remains viable for agricultural uses during the life of the CSECS and following decommissioning;
 - ii. Minimize the impact of the system on nearby properties;
 - ii. Minimize negative environmental impacts;
 - iii. Ensure reclamation of the site; and
 - iv. Provide appropriate decommissioning and disposal measures.
- c. Applicability.
 - 1) These standards do not apply to Personal or Accessory Energy Conversion Systems. Personal or Accessory Energy Conversion Systems are authorized and regulated with the most recently adopted Construction Codes of Douglas County, Chapter 13 of the Douglas County Code and are expressly exempt from the CUP process/requirements.
 - 2) These standards and regulations apply to both Limited Scale and Commercial/Utility Scale Solar Energy Conversion Systems proposed in the unincorporated territory of Douglas County, except where specifically noted.

12-306-49.03 Approvals Required for Revisions

- a. Conditional Use Permit. Any proposed expansion of the facility will require approval of a new conditional use permit. This would include an increase in the Site Area or the area for accessory equipment.
- b. Site Plan. Minor modifications may be approved through the site plan process. A minor modification includes changes which do not increase the Site Area or the area for accessory equipment.

12-306-49.04 Conditions Required for Approval

In addition to the findings of fact listed in Section 12-307-2.07, the following considerations shall be evaluated with the review of any application:

- a. The Operator shall demonstrate their ability to strictly conform to all applicable performance standards detailed in these Regulations as well as applicable Local, State, and Federal laws or regulations.
- b. Key issues to be considered with the review of the application include, but are not limited to:
 - 1) Visual impact;
 - 2) Impact on Wildlife Habitat/ Native Flora and Fauna;
 - 3) Impact on cultural, historical, or archeological features;
 - 4) Impact on critical wildlife habitats, current state-listed threatened and endangered species, and species in need of conservation as defined by Kansas Department of Wildlife and Parks.
 - 5) Impact on environmentally sensitive lands;

- 6) Impact on water quality and soil erosion;
- 7) Impact on infrastructure, including roads and bridges for construction access;
- 8) Aviation/Federal Aviation Administration (FAA) impacts;
- 9) Cumulative Impacts;
- 10) Company experience, reputation, and financial ability;
- 11) Decommissioning, removal, reclamation, and disposal;
- 12) Bond agreement or other means of ensuring reclamation, disposal, and decommissioning performance;
- 13) Specific requirements for building and construction;
- 14) Emergency services and training requirements; and
- 15) Degree to which agricultural uses and wildlife habitat are accommodated with the facility layout and design.

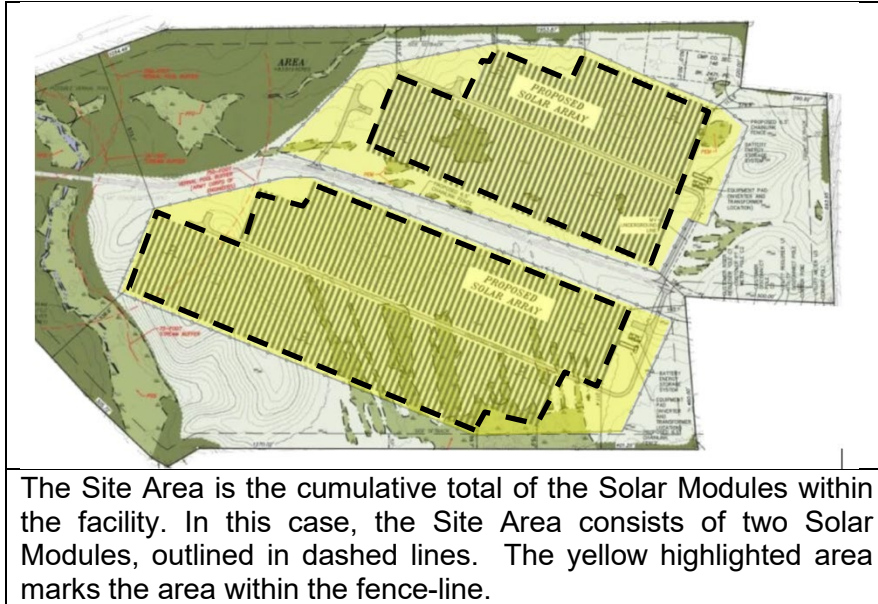
12-306-49.05 Standards

The following standards apply to all Limited Scale and Commercial/Utility Scale Solar Energy Conversion Systems, except where specifically noted:

- a. Concentrating Solar Thermal Devices. Solar energy conversion systems shall not utilize concentrating solar thermal devices.
- b. Farmland. As food sustainability and preservation of prime agricultural land are goals of the comprehensive plan, and agricultural tourism and economic development are priorities within the Douglas County Food System Plan, and Limited Scale or Commercial/Utility Scale Solar Energy Conversion Systems (CSECS) commonly utilize land for multiple decades, the following standards shall apply:
 - 1) Projects that further enhance climate and food system resilience and preserve agricultural character by enabling the integration of food production into their design are encouraged.
 - 2) Systems may be located on prime farmland and farmland of statewide importance when the natural topography is preserved with limits set on grading.
 - i. Grading of prime farmland and farmland of statewide importance shall be limited to maintain the natural topography.
 - 3) Where approved, grading shall not exceed 5% of the site area unless a modification is granted by the Board of County Commissioners.
 - i. A modification from this grading requirement may be granted if it is found to be necessary to ensure proper drainage or to mitigate unusual site constraints.
 - ii. Grading may occur to the extent needed to accommodate the system on brownfield sites or other previously disturbed land.
 - iii. Grading for battery storage, transformers, access, roads, and grid connection infrastructure does not count toward the 5% limit.

- c. Height. Solar panels shall not exceed fifteen (15) feet in height, measured when oriented at maximum tilt; with the following exceptions:
- 1) Said height restrictions shall not apply to appurtenant enclosed structures. Structures shall comply with the height limit for the zoning district.
 - 2) The Board of County Commissioners may approve a modification to allow panels of greater height, if found to be necessary to accommodate slopes without grading or to accommodate agrivoltaics, provided the height of the solar panels do not negatively impact nearby land uses or the character of the area.
- d. Location. The system shall be located to:
- 1) Accommodate the future growth of incorporated cities;
 - 2) Utilize existing terrain, vegetation, and structures to screen the project from off-site view, to the extent possible. If this is not possible, additional screening may be required;
 - 3) Avoid steep slopes of 15% or greater;
 - 4) Make use of brownfield sites, or similar, where possible; and
 - 5) Minimize impact to environmentally sensitive lands listed in Section 20-314.
 - i. Given that additional land area may be required to ensure adequate wildlife habitat and corridors and given that the area within the conditional use permit may include land that is not part of the Site Area or Project Area; the maximum protection limit of 40% of the property set in Section 12-314 is not applicable to the CSECS projects. Rather the area designated for protection shall be determined with the review of each conditional use permit.
 - ii. Temporary construction barriers shall be installed along the perimeter of the drip-line of a protected stand of mature trees, or 200 feet from the historic trail, or at the boundary of other protected environmentally sensitive lands. This fencing is to be signed with the following requirement: 'Grading, vehicles, equipment, or the storage of materials is not permitted beyond the construction fence-line.' This fencing must remain in place until construction is complete.
 - 6) Facilities shall be located a minimum of 200 feet from historic trails that are identified on the County GIS map.
- e. Size.
- 1) In order to maintain the rural character and preserve agricultural land the CSECS Site Area shall be limited to no more than 1,000 acres total, unless the Board of County Commissioners approves a modification from this standard based on site specific characteristics which are determined to aid in the preservation of rural character or natural features or to promote the shared agricultural use of the property.
 - i. The size of the CSECS Site Area shall be measured as shown in the following

graphic. The Module and Site Area are measured when the panels are in their most horizontal position, if a tracking system is used, and does not include access drives, batteries, transformers, ancillary structures, or their required setbacks.



- 2) No LSECS shall contain more than 20 contiguous acres total.
 - i. The size of the LSECS shall be measured as the area within the Solar Module as illustrated in this section. The Module area is measured when the panels are in their most horizontal position, if a tracking system is used.
- f. Glare. All solar panels must be constructed to minimize glare or reflection onto adjacent properties and adjacent roadways and must not interfere with traffic, including air traffic, or create a safety hazard as per any Local, State, and Federal laws and regulations. Examples of measures that can be utilized to limit glare include, but are not limited to:
 - 1) Textured glass;
 - 2) Anti-reflective coatings;
 - 3) Screening;
 - 4) Distance; or
 - 5) Positioning units in a manner that reduces glare.
- g. Vegetation. The system shall be designed to accommodate concurrent use of the land for livestock grazing, row crops, other agrivoltaic uses, or contain a diverse array of native grasses and forbs for native habitat under and between the rows of solar panels. Ground around and under solar panels/Arrays and in designated buffer areas shall be planted and maintained in perennial vegetated ground cover or agricultural plants that are managed to prevent erosion and runoff, and meet the following standards:
 - 1) Clearing of natural vegetation shall be limited to that which is necessary for the

construction, operation, and maintenance of the system, access roadways, and other approved site improvements.

- 2) Removal of stands of mature trees (as defined in the Zoning Regulations), shall be limited and shall comply with the environmental protection standards in Section 12-314, with the area exception noted in Sub-section d.
- 3) The surface of the project site shall be prepared as shown on the approved Vegetation Management and Agrivoltaic Plan. For the remainder of the Project Area, disturbed soils shall be seeded to prevent erosion and manage runoff. Seed mixes for perennial plantings should include a diversity of grasses and wildflowers; Native plants, wildflowers, and agriculture are preferred.
- 4) Any pesticides used on the site shall be applied only by a pesticide applicator certified by the Kansas Department of Agriculture. If the vegetation plan has been designed to minimize the use of pesticides or herbicides, those practices should be clearly stated on the site plan and noted in the operation plan.

h. Soils

All grading and construction activities shall preserve existing topsoil.

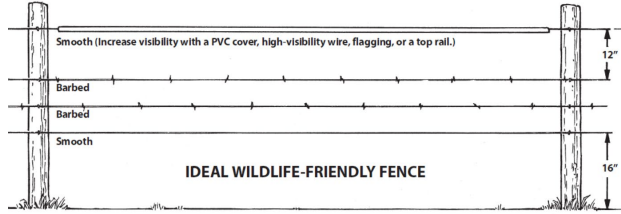
- 1) Temporary Displacement or Removal of Soil
 - i. Topsoil may be temporarily displaced where grading has been approved as part of an installation.
 - (a) The amount of topsoil displaced shall be minimized.
 - (b) Topsoil shall be stockpiled on the site
 - (c) After rough grading, the topsoil shall be redistributed uniformly on the surface of all areas to be vegetated.
 - (d) Displaced topsoil shall not be removed from the site except as required to remediate contamination per the standards in the following section.
 - ii. Topsoil shall not be removed from the site except as required by Kansas Department of Health and Environment (KDHE) due to contamination, or other applicable Local, State, Or Federal Laws.
 - (a) The amount of soil removed shall be reported to KDHE and the Zoning and Codes Director.
 - (b) The Zoning and Codes Director may require topsoil to be brought to the site for reapplication and planting, depending on the amount that was removed.
 - (c) Contaminated topsoil shall be disposed of in accordance with Local, State or Federal regulations.

i. Setbacks.

- 1) All structures shall be located in compliance with the setbacks required for that zoning district.
- 2) The solar panels/Array and appurtenant structures shall be located a minimum of 500 feet from any existing residence (building permit plans have been submitted or the residence is on-site at time of conditional use permit approval), as measured from the dwelling, unless a lesser setback is agreed to by the owner of the residence.
 - i. Buffering or screening landscaping, fencing, agricultural uses, and access drives may be within this 500 foot setback.
 - ii. Written evidence of the setback agreements, including any additional landscaping, shall be provided to the Planning Office as part of the conditional use permit application and, with the approval of the conditional use permit, shall be filed with the Register of Deeds by Planning Staff, at applicant's expense.
- 3) Battery storage shall not be located within 500 feet of an existing residence (building permit plans have been submitted or the residence is on-site at time of conditional use permit approval).
- 4) No portion of a system may encroach upon the public right-of-way with the exception of distribution or transmission lines (overhead or underground) provided all applicable approvals from the authority having jurisdiction over that portion of the right-of-way have been obtained.
- 5) Additional setbacks may be required to mitigate site specific issues or to provide for frontage roads, cross-access easements, commercial corridors, or other means of egress/ ingress.

j. Fencing/Screening.

- 1) Properties containing CSECS may be enclosed by perimeter fencing to restrict unauthorized access. Wildlife friendly fencing, such as a barb-wire fence with smooth wires for the top and bottom strings, or woven wire or other permeable fencing, as illustrated in this section, shall be used where possible.
 - i. Where wildlife friendly fencing is not utilized, additional wildlife corridors, including escape corridors, may be required in areas prone to grass fires or flooding.
- 2) As required by Local, State, and Federal regulations, critical electrical and communications equipment, may be fenced with chain-link fence topped with barbed wire when such measures are deemed necessary to ensure public safety and provide additional security for the equipment.
- 3) Specific standards for battery energy storage system fencing provided in the following section.



Wildlife friendly barb/smooth wire fence. This is a permeable fence.

Wildlife friendly wire woven fence

- 4) Wildlife corridors shall be provided as determined necessary by wildlife biologists with the Kansas Department of Wildlife and Parks, or other specialists designated by the County to accommodate wildlife in the area.
- 5) Unless waived by the property owner, a 25-foot deep buffer area shall be provided, and maintained, along property lines between the systems and adjoining non-participating residential properties, or along the Site Area fencing for participating residential properties, for the purpose of screening the residential portion of the property.
 - i. The buffer area shall include the minimal features necessary to provide an adequate buffer in order to minimize land disturbance.
 - ii. The buffer may include a combination of berms, fences, and/or vegetation and may occur within the required setbacks on the facility property.
 - iii. The buffer area shall be designed to buffer the view of the facility from the residence and the residential portion of the property.
 - iv. Evidence of waivers shall be provided to the Planning Office and shall be filed with the Register of Deeds at the applicant's expense.

k. Battery energy storage system

All battery energy storage systems shall comply with requirements of the National Fire Protection Association (NFPA) 855 and all other local, state, and federal regulations. At a minimum, the following standards shall apply:

- 1) Battery energy storage systems, including all mechanical equipment, shall be enclosed by a fence with a self-locking gate to prevent unauthorized access unless housed in a dedicated-use building.
- 2) The area within ten (10) feet on each side of a battery energy storage system shall be cleared of combustible vegetation and surfaced with gravel or other non-combustible surfacing.
- 3) Signage for the battery energy storage system shall be in compliance with ANSI Z535 and shall include the following information: the type of technology associated with the battery energy storage system; any special hazards associated; the type of

suppression system installed in the area of the battery energy storage system, and 24-hour emergency contact information.

- i. As required by the National Electric Code (NEC), disconnect and other emergency management information shall be clearly displayed on a light reflective surface. A clearly visible warning sign concerning voltage shall be placed at the base of all pad-mounted transformers and substations.
 - ii. Warning signage spacing shall be determined with the battery energy storage plan.
- 4) Battery storage shall not be located within 500 feet of an existing residence (building permit plans have been submitted or the residence is on-site at time of conditional use permit approval).

l. Signage.

- 1) Perimeter fencing shall incorporate appropriate safety signage, at a minimum spacing of every 500 feet.
- 2) Signage, including addresses for each fenced area, shall be provided as required by the Emergency 911 dispatch.

m. Lighting.

- 1) Security or safety lighting relating to the CSECS and appurtenant structures shall be limited to the minimum necessary to mitigate visual impacts.
- 2) No exterior lighting fixture shall be installed that exceeds fifteen (15) feet in height unless proven necessary by the applicant and approved as part of the conditional use review process.
- 3) No light source shall be directed off-site. All external lighting shall be shielded and downcast such that light does not encroach upon adjacent properties or the night sky.
- 4) All exterior lighting, where used, shall be motion activated and on a timer, or switch-operated.
- 5) If LED lights are used, the color temperature shall be no more than 3000K (Kelvin).

n. Noise.

- 1) The operational noise generated from the solar installation equipment, including inverters, battery energy storage systems, components, and associated ancillary equipment shall not exceed a noise level of 60 decibels (60 dBA) as measured at the property line or 500 feet from an existing residence, (building permit plans have been submitted or the residence is on-site at time of conditional use permit approval).
- 2) Applicants shall submit equipment and component manufacturer noise ratings at the time of application to demonstrate compliance with the maximum permitted noise level, as noted above.

- 3) Transformers, inverters, or other sound or vibration generating equipment must be placed so that low level recurring ambient noise does not exceed the limit noted above. Noise levels can be minimized with type of equipment or the placement of equipment interior to the site, shielded by proposed solar panels and/or by specifically placed noise- and vibration- deadening fence, landscape, or other efforts.
- 4) Construction noise shall be analyzed and mitigated as outlined in the Construction Impact Assessment, Section d 'Additional Materials'.

o. Electrical Interconnections.

- 1) All electrical interconnection and distribution lines within the subject site shall be located underground, with the following exceptions:
 - i. When site conditions require. A modification may be granted by the Board of County Commissioners in instances where shallow bedrock, water courses, or other protected environmentally sensitive lands as currently defined in 12-314 of these regulations, make underground connections detrimental.
 - ii. Generation tie-lines from the project substation to a utility substation may be aboveground.
- 2) Underground cables shall be located at least 3 feet, vertically or horizontally, from existing underground utilities.
- 3) Off-site, above ground utility or power lines may only be used for generation tie-lines from the project substation to a utility substation and must be located in public right-of-ways, easements, or other legally dedicated tracts of land.

p. Maintenance. All structures shall be maintained and kept in good condition by the owner or operator.

- 1) Maintenance shall include, but not be limited to, painting, structural repairs, replacement of damaged or worn parts or cables, and integrity of security measures.
- 2) Site access shall be maintained to a level acceptable to local emergency personnel. The owner or operator shall be solely responsible for maintaining the subject site, all appurtenant structures and the installation and maintenance of any access road(s), unless accepted as public right-of-way.

q. Ground Water Testing. With each approved CSECS conditional use permit application, an optional water analysis of active wells within one-quarter mile of the Site Area shall be offered by the operator prior to the installation of the equipment.

- 1) This offer shall be made to all owners of property within 1/4 mile of the Site Area by certified mail, at least one-month prior to the installation.
- 2) A copy of the certified letter and a list of property owners notified shall be provided to the Planning Office along with a list of all property owners who requested the testing and the results of that testing. This must occur prior to the installation of the facility.

- 3) The test shall analyze the water in the nearby wells for substances such as lead and cadmium, as determined with the conditional use permit, and shall include a pesticide panel.
 - 4) The results of ground water testing shall be provided to the Director of Zoning and Codes and sent by certified mail to the landowner.
- r. Affidavit. Upon issuance of a permit for a Conditional Use by the Zoning and Codes office, Zoning and Codes shall file an affidavit with the Register of Deeds on all the properties within the Conditional Use Permit, which includes a copy of the Conditional Use Permit and all setback and buffer waivers. Filing fees will be covered by the applicant.
- s. Liability Insurance. Applicants shall provide general liability insurance, showing general liability insurance coverage for the lifespan of the project encompassing installation and operation through decommissioning. Evidence shall be provided annually in the form of a certificate of insurance.
- t. Airspace Overlay or Airstrip. If a system is proposed to be placed within an Airspace Overlay (ASO) overlay district or within 5 miles of any airstrip, the applicant shall provide acknowledgement of location approval or acceptance from the Federal Aviation Administration with the conditional use permit.
- u. Other Standards and Codes. All LSECS and CSECS shall be in compliance with all applicable local, state, and federal regulatory standards including, but not limited to, the Endangered Species Act, Clean Water Act, the International Building Code, National Fire Protection Association 855 Standards, and the National Electric Code, as amended.
- v. Modifications. Upon a written request by the applicant, the Board of County Commissioners may approve a modification from the standards upon a determination by the Board of County Commissioners that said modification is necessary and is consistent with the purpose and intent of these regulations. The Planning Commission shall make recommendations to the Board on requested modifications in conjunction with their recommendation on the conditional use permit.
 - 1) Items that are available for modification are the size of the Site Area, height of the solar panels, amount of grading possible, and the location (above- or below-ground) of electrical interconnections and distribution lines.
- w. Building Permits and Plan Review. The applicant shall contract with a special inspector and/or Plan Reviewer, approved by the Zoning and Codes Director, for construction plan review and all required construction inspections, at the operator's expense.
- x. Time Frame. The conditional use permit may be approved with a time frame of up to 25 years from the date of the Board of County Commissioners approval. Continuation of the use beyond that time frame will require the submission and approval of a new conditional use permit.
- y. Transfer of Operator. If the Operator listed on the approved CUP plans to sell or otherwise transfer their responsibilities to an entity not listed on the CUP, the listed Operator shall notify the Zoning and Codes Director of this proposed change. Furthermore, the new

Operator shall notify the Board of County Commissioners and the Zoning and Codes Director in writing, acknowledging their acceptance of responsibility and intent to comply with all conditions listed in the approved CUP.

- 1) The Board of County Commissioners may approve the transfer of operator if they find the proposed Operator has demonstrated their ability to strictly conform to all applicable performance standards detailed in these Regulations as well as applicable Local, State, and Federal laws or regulations.

z. Extraordinary Event.

1) Within 3 days of an extraordinary event, the Operator shall provide written notice of the event to the Zoning and Codes Director, noting the cause and the degree of damage associated with the event.

2) Within 30 days of the event, the Operator shall provide the Zoning and Codes Director with a mitigation plan noting the steps they will take to mitigate any negative impacts. Additional mitigation steps may be required by the Zoning and Codes Office.

- aa. Reviews. The solar facility shall be reviewed for compliance with the standards of the conditional use permit 1 year after release of Certificate of Occupancy and every 5 years thereafter through the life of the conditional use permit. These reviews may be conducted by a third party firm, selected by the Director of Zoning and Codes, and financed by the Operator.

12-306-49.06 Application and Required Documents

The following additional notice and materials are required as part of the application submittal:

- a. Additional Public Notice. Prior to submitting an application for a Conditional Use Permit for a Commercial/Utility Scale Solar Energy Conversion System (CSECS), the applicant shall mail notice of the potential development application to property owners within a one-mile radius of the property included in the application. (This is in addition to the Planning Office's mailed notification of the Planning Commission public hearing to property owners within ½ mile of the subject property).

- 1) The applicant shall submit a certificate of mailing provided by the Planning Office for this notice, a sample letter, and a list of notified property owners at the time of the application.
 - i. A certified list of property owners within one-mile of the property within the CUP application shall be obtained from the Douglas County Clerk's Office, within 30 days of the mailing date.
 - ii. The notice shall be sent by mail and shall include a brief description of the project, proposed construction date, date the application will be submitted to the planning office, the person with contact information (phone, email, address) designated by the applicant to respond to questions concerning the proposed application and the following statement:

This letter is being sent to the owners of nearby property for the purpose of informing the property owners and other interested

parties about the proposed Commercial Solar Energy Conversion System (CSECS) project described further in this letter. This letter does not grant the recipient and/or the property owner any additional legal rights to challenge the proposed development, instead, it is being provided solely to advise property owner(s) of the pending development. For further information, contact the applicant's designated representative or the Lawrence-Douglas County Planning Office at 785-832-7700."

- iii. The applicant is responsible for mailing notice to all property owners listed on the certified property owner list prior to the submittal of the conditional use permit application.
 - iv. When required notices have been properly addressed and deposited in the mail, failure of a party to receive such notice will not be grounds to invalidate any action taken by the Planning Commission or the Board of County Commissioners.
- b. Existing Conditions. A physical and digital site plan of existing conditions showing the following (digital site plan must be formatted to toggle each layer off and on):
- 1) Existing property lines and property lines extending one hundred (100) feet from the exterior boundaries, including the names of the adjacent property owners and current use of those properties, as determined by site inspection or from the Douglas County Appraiser's Office Land Use map, which is available from the Planning Office;
 - 2) All recorded easements on the property, with type and recording information, and the location and width of all public road right-of-way.
 - 3) Existing points of ingress and egress to the property.
 - 4) Location and size of any known wells (oil, water, geothermal, etc.);
 - 5) Existing buildings and any paved or gravel surfaces, with dimensions;
 - 6) Contour lines showing the existing topography of the site at one-foot intervals. The source of the topography must be stated. If the site contains any FEMA mapped floodplain, the topography must be tied to the FIRM datum.
 - 7) Boundaries and designations of any Special Flood Hazard Areas identified on the Flood insurance Rate Map (FIRM) of Douglas County, Kansas;
 - 8) Existing vegetation (list type and percentage of coverage; i.e. grassland, plowed field, wooded areas, etc.);
 - 9) Existing swales, channels, ditches or streams, existing ponds and lakes, and existing culverts.
 - 10) Soil map showing location of soils classified as Class 1 and 2 soils, prime farmland, and farmland of statewide importance as identified in the Natural Resource Conservation Service (NRCS) soil survey;

- 11) Environmentally sensitive lands as defined in Section 12-314 of the Douglas County Zoning Regulations.
 - 12) Map of residential uses and structures within 1000 feet of the facility boundary; and
 - 13) Presence of any critical habitat for threatened or endangered species as determined by ~~from~~ Kansas Department of Wildlife and Parks.
 - 14) The location of any underground pipelines and all utility easements; including but not limited to railroad and drainage easements.
- c. Proposed Conditions. A physical and digital site plan of proposed conditions showing the following:
- 1) Number, location and spacing of solar panels and all appurtenant structures. Panel type, fixed or tracking, to be listed on the plan;
 - 2) Name and address of Operator;
 - 3) Location and width of access drives;
 - 4) Planned location of underground and overhead electric lines connecting the solar farm to any building, substation, or other electric load;
 - 5) Proposed phasing schedule;
 - 6) New electrical equipment other than at the existing building or substation that is the connection point for the solar farm;
 - 7) Planned wildlife corridors;
 - 8) Environmentally sensitive lands to be protected;
 - 9) Clearly delineated limits of proposed land disturbance or vegetation removal for all phases of construction and operation.
 - 10) Location and height of any proposed lighting;
 - 11) A description of the method of connecting the Array to a building or substation;
 - 12) Wiring diagram for the site;
 - 13) Locations and size of planned temporary construction laydown yards; and
 - 14) Approximate limits of disturbance for all temporary and permanent project components (panels, inverters, access drives, buried electric collection lines, temporary laydown yards, substation, etc.) (Project Area).
 - 15) Utility easements including, but not limited to, easements for transmission and interconnection.

d. Additional Materials. The following shall be submitted with the application:

- 1) Public outreach required for CSECS. Information regarding public outreach, such as how the applicant informed nearby property owners and interested stakeholders in the community, what meetings were held, and/or what information was provided;
- 2) Manufacturer's specification and recommended installation methods for all major equipment, including solar panels, mounting systems, and foundations for poles or racks;
- 3) Installation methods for foundations for poles or racks;
- 4) Assessment of construction impacts such as, but not limited to, noise, vibration, lights, waste-management, water supply, etc. and mitigation measures. Mitigation measures could include, but are not limited to, limited construction hours, reduced scope of work at one time, alternate construction methods, etc.;
- 5) A preliminary equipment specification sheet that documents the proposed battery energy storage system components, inverters, and associated electrical equipment to be installed;
- 6) A grading/vegetation removal plan which includes all proposed changes to the topography and vegetation on the site (clearing, grading, topographic changes, tree removal, etc.);
- 7) A stormwater management plan with supporting calculations, documenting how increased runoff will be conveyed throughout the site. The calculations must include the design of open channels and culverts on site. Based on recommendations from the County Engineer, storage and controlled release at points of discharge from the site may be required; if so, the stormwater management plan must be implemented on the final site plan prior to approval.
 - i. Preliminary stormwater management plans may be provided with the original application, as required by the County Engineer, however, engineered or detailed plans must be submitted for the County Engineer's review and evaluation prior to the Board of County Commission's final action on the application.
 - (a) More detailed information may be required by staff when needed to make informed decisions on the use.
 - (b) Changes required by the stormwater plan, such as detention, shall be shown on the final plans for the Board of County Commission's consideration.
- 8) A copy of any Interconnection Facilities Studies;
- 9) A copy of the interconnection agreement with the local electric utility shall be provided prior to the release of the conditional use permit plans for building permits;

- 10) A copy of the KDHE approved SWPPP (Stormwater Pollution Prevention Plan) for the site.
- 11) An operation and maintenance plan which includes measures for maintaining access drives to provide access for emergency vehicles, as well as general procedures for operation and maintenance of the installation;
- 12) Traffic and Road Maintenance Plan;
A traffic and haul route plan based on the recommendations of the County Engineer and Township Trustee, where applicable. The plan shall include, but is not limited to:
 - i. A general project schedule;
 - ii. A traffic study estimating the volume and type of traffic generated by the project, both during construction and during normal operations. The study must identify proposed haul routes for construction traffic, trucks, and oversize or overweight loads.
 - (a) Based on the traffic study and the County Engineer's recommendations, the following items may be required prior to approval of the conditional use permit:
 1. Notes on the plan designating haul routes from the site to a paved county or state highway.
 2. Road maintenance agreement to be executed with the county or township, addressing compensation for road maintenance or dust control on public roadways.
 3. Public improvement agreements to be executed with the county or township, addressing compensation for necessary road, bridge, or culvert improvements on public roadways.
- 13) Landscaping Plan;
A landscape plan detailing all proposed changes to the landscape of the site required to accommodate buffering or screening from adjacent properties.
 - i. The plan shall include the installation, establishment, and maintenance of buffering or screening landscaping as required.
 - ii. A species list shall be provided for all buffering or screening landscaping. Sizes of landscaping shall comply with the landscape standards of Section 12-307 (Site Plan Contents).
 - iii. The landscaping plan shall include management methods and schedules noting how the vegetation will be managed on an annual basis, with particular attention given to the establishment period of approximately three (3) years.
- 14) Vegetation Management and Agrivoltaic Plan;
A vegetation management and agrivoltaic plan detailing all proposed changes to the vegetation of the site and outlining all proposed agrivoltaic uses, current or future.

- i. The plan shall show where existing vegetation is to be removed and what new vegetation will be planted.
 - ii. The plan shall include the installation, establishment, and maintenance of ground cover and other vegetation to minimize erosion, maintain soil health, and accommodate the proposed agrivoltaic use.
 - iii. The plan shall include management methods and schedules noting how the vegetation will be managed on an annual basis, with particular attention given to the establishment period of approximately three (3) years.
 - iv. The plan shall identify the types and locations of intended agrivoltaic activities. If the facility is not designed to accommodate agrivoltaic, that should be stated in the plan.
 - v. Other elements that may be included in this plan include, but are not limited to:
 - (a) Collaborative research on cropping systems or ecosystems coexisting with solar facilities, or carbon sequestration; or
 - (b) Land access and/or training for beginning farmers or underrepresented groups in farming.
- 15) Emergency Services, Fire, and Safety Plan:
A plan including all means of managing an Extraordinary Event at the solar installation shall include, but will not be limited to, the following information:
- i. The project summary, electronic schematics, site plans, emergency ingress/egress, with the location of the access drives and the width and load rating of the access drives.
 - ii. Emergency contact information; which will also be posted on the site.
 - iii. Description of how the fire safety system, and its associated controls will function and be maintained in proper working order.
 - iv. Fire protection and suppression systems for buildings that store batteries, hazardous material, or compressed gases.
 - v. Site control measures during and after any emergency. All means of managing an emergency including shutting down the installation shall be noted and clearly marked.
 - vi. Procedures for inspection and testing of associated alarms, interlocks, and controls shall be noted on the plan.
 - vii. Material Safety Data Sheet (MSDS) unless the facility meets the reporting thresholds of Emergency Planning and Community Right to Know (EPCRA) Act in which case the applicant shall provide to submit a Tier II report, if required by the EPA. The EPA requires Tier II reports for facilities that store hazardous chemicals above certain threshold quantities.

- viii. Electrical shock hazards and possible contact with hazardous substances or toxic fumes identified.
 - ix. The Operator shall update the Emergency Services and Fire Safety Plan annually in collaboration with Emergency Management, and provide new copies to the system owner, the local fire district, emergency response agencies, Douglas County Emergency Management, and the Zoning and Codes Office.
 - x. Any specialty response equipment required to adequately manage Extraordinary Events will be provided, updated, and/or replaced by the operator, as needed and at the operator's expense.
 - xi. Annual Emergency and Extraordinary Event response training will be provided for all emergency response stakeholders on the plan, site, equipment, and processes required to assure their safety and effective management during an event
- 16) Solar Glare Hazard Analysis:
The applicant shall provide a Solar Glare Hazard Analysis utilizing the latest version of the Solar Glare Hazard Analysis Tool (SGHAT), or its equivalent, to evaluate the solar glare aviation hazard and potential impact on neighbors.
- 17) Soil Sampling Plan:
The plan shall outline a procedure to characterize and document the soil health and any heavy metals present at the following phases: before construction begins; when construction is complete, prior to renewing a CUP, prior to beginning decommissioning and reclamation; and following decommissioning/reclamation of the site.
- i. The soil sampling plan shall include, but is not limited to, the following: 1. total carbon (organic and inorganic), 2. phospholipid fatty acid (PFLA) for soil health, and 3. heavy metals such as lead and cadmium as determined with the review of the conditional use permit.
 - ii. The surface soil sample locations shall be established prior to construction and will be utilized for each scheduled sampling event.
 - iii. A map of sampling sites shall be included with the plan.
 - iv. A photo for each sample that demonstrates the location within the site and current vegetation shall be provided.
 - v. Sampling shall occur at one 25-foot by 25-foot sampling site within each discrete fenced area in a location deemed to be representative of the vegetation and soil conditions for the fenced area.
 - vi. Subsamples of soil shall be taken of the upper 0-6 inches of soil, with 5 subsamples combined and mixed to form a representative sample for each 25-foot by 25-foot sample site designated on the map.

- vii. Additional soil tests and test sites may be required by the county or KDHE at the operator's expense in the event that one or more panels are damaged to the point that leaching may have occurred or if damaged panels were not removed within 30 days. In that case, a sample will be taken at the location of the incident, and a report will be provided to the Zoning and Codes Office.
 - viii. Additional soil test sites may be required from graded areas over 2 acres.
 - ix. All soil tests shall be conducted at EPA certified labs that are certified for each compound tested. The PLFA may be tested by a non-EPA lab if needed.
 - x. Soil remediation plans shall be provided to the Zoning and Codes Office for review if contamination or soil degradation has occurred. Remediation measures shall be implemented as approved. –Remediation shall not be considered complete until the soil testing results are within a range designated by KDHE, as established with the soil remediation plans.
 - xi. All required soil test results shall be sent by certified mail, with chain of custody, from the testing lab to the zoning and codes office.
- 18) Abandonment, Decommissioning, and Reclamation Plan:
 A decommissioning/reclamation plan shall be required to ensure that facilities are properly removed after their useful life. Decommissioning of solar panels must occur in the event that they do not produce electricity and have no demonstrated plan to restore to operating condition and before the end of the life-span of the conditional use permit.
- i. To verify production level, a report of power generated by the CSECS shall be submitted to the Zoning and Codes Director annually.
 - ii. Director of Zoning and Codes shall issue a Notice of Abandonment to the owner/operator of the facility. The owner/operator shall have the right to respond to the Notice of Abandonment within 30 days from the Notice receipt date. The Director of Zoning and Codes may withdraw the Notice of Abandonment and notify the owner/operator that the Notice has been withdrawn if the owner/operator provides sufficient information to demonstrate that the facility has not been abandoned which may include documentation or certification by the owner/operator of the local electric utility, or that the owner/operator of the facility is actively pursuing a plan, including specified steps and a proposed schedule acceptable to the Director of Zoning and Codes, to bring the facility back into service.
 - iii. The decommissioning/reclamation plan shall include provisions for removal of all structures, foundations, and underground wiring, and any and all materials foreign to the site prior to installation.
 - (a) All cables buried 36 inches or less underground must be removed. Cables that are deeper than 36 inches may remain if the following requirements are met: a map of the buried lines is provided to One Call, and an affidavit is attached to the deed of the property to note that buried cables, deeper

than 36 inches, are present on the property.

- iv. The decommissioning/reclamation plan must ensure the site will be reclaimed to a useful, nonhazardous condition without delay including: Regrading, with a minimum of ground disturbance, seeding of the land after the removal of equipment, and revegetation of reclaimed soil areas with crops or native seed mixes, excluding any invasive species.
 - v. The decommissioning/reclamation plan must include a description of how any changes to the surrounding areas and other systems adjacent to the battery energy storage system, such as, but not limited to, structural elements, means of egress, and required fire detection suppression systems, will be protected during decommissioning and confirmed as being acceptable after the system is removed.
 - vi. The decommissioning/reclamation plan must provide that soil shall be tested following removal of equipment and compared with preliminary soil testing to evaluate any soil contamination and develop remediation program, if needed.
 - vii. Concrete and other materials used in the construction of the site must be removed. If discarded in Douglas County it must be discarded into an approved landfill per Section 12-306-24 of these regulations. Disposal of all solid and hazardous waste must be in accordance with local, state, and federal waste disposal regulations.
 - viii. For any part of the project on leased property, the decommissioning/reclamation plan may incorporate agreements with the landowner regarding leaving access roads, fences, gates or repurposed buildings in place or regarding restoration of agricultural crops or forest resource land. Any use of remaining structures must be in conformance with the regulations in effect at that time.
 - ix. If the Director of Zoning and Codes has issued a notice of abandonment, the permit holder will have one year to complete decommissioning of the utility/commercial scale solar installation and reclamation of the area. Decommissioning and reclamation shall be completed in accordance with the approved decommissioning/reclamation plan. The operator shall notify the Zoning and Codes Director when decommissioning and reclamation is complete.
 - x. The decommissioning/reclamation plan shall include estimated decommissioning costs in current dollars and the method for ensuring that will be available for decommissioning and reclamation. The applicant shall provide the basis for estimates of net costs for decommissioning the site (decommissioning costs less salvage value). The cost basis shall include a mechanism for calculating adjusted costs over the life of the project.
- 19) Bond Requirement:
The applicant shall post a bond, with the Douglas County Clerk, establish an escrow account, or provide such other financial security deemed acceptable by the County, in an amount equal to the estimated decommissioning costs, to ensure proper decommission and reclamation of the site.

- i. The County shall contract with an independent third party for estimated decommissioning and reclamation costs, at the applicant's expense.
- ii. The bond, or other financial security, shall be posted prior to the commencement of the use.
- iii. The bond, or other financial security, shall include a mechanism for adjustment over the life of the project.
 - (a) The bond, or other financial security, shall be adjusted for inflation annually.
 - (b) The Solar Facility owner or operator shall engage a qualified individual to recalculate the estimated cost of decommissioning at an interval of every five years, and every year for the final five years of the CUP. If the recalculated estimated cost of decommissioning exceeds the previous estimated cost of decommissioning, then the owner or operator shall adjust their financial security to meet the new cost estimate. If the recalculated estimated cost of decommissioning is less than the previous estimated cost of decommissioning, then the County may approve reducing the amount of the security to the recalculated estimate of decommissioning cost.
- iv. In the event the operator is in non-compliance or default due to non-payment, the County shall have the right to call said bond, or other financial security, and use it for decommissioning purposes. Should there be any remaining balance; the County shall have the right to withhold payment of any refund until the decommissioning process is completed to the County's satisfaction.

II. Addition to the Zoning Regulations. The Text Amendments made by this Resolution shall be as a supplement to the Zoning Regulations, as codified in Chapter 12, Article 3 of the Douglas County Code.

III. Invalidity. If any section, clause, sentence or phrase of Resolution of the Text Amendments adopted hereby is found to be unconstitutional or is otherwise held invalid by any court of competent jurisdiction, it shall not affect the validity of any remaining parts of this Resolution or the Text Amendments adopted hereby, as the case may be.

IV. Repeal. The Zoning Regulations heretofore adopted that are in conflict with this Text Amendments are amended, repealed, or replaced, as the case may be, to be consistent with the Text Amendments adopted hereby.

V. Effective Date. This Resolution shall be in full force and effect from and after its adoption by the Board and its publication once in the official County newspaper.

ADOPTED this 4th day of May, 2022.

BOARD OF COUNTY COMMISSIONERS
OF DOUGLAS COUNTY, KANSAS

Shannon Reid, Chair

Patrick Kelly, Vice Chair

Shannon Portillo, Member

ATTEST:

Jameson D. Shew, County Clerk