Special Use Permit Application
Trolley Coach Solar
McHenry, IL

Trolley Coach Solar, LLC

May 2025

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1 APPLICATION SUMMARY

Trolley Coach Solar, LLC (the "Applicant") requests a Conditional Use Permit (CUP) for the construction and operation of Trolley Coach Solar (the "Project"), an approximately 5 MW alternating current ground-mounted solar facility on private land, spanning approximately 32 acres in McHenry County, Illinois ("Trolley Coach Solar Project," the "Project," or "Trolley Coach Solar") in accordance with the McHenry County Unified Development Ordinance ("Zoning Ordinance").

The Applicant respectfully requests approval of the application for a Conditional Use Permit[1] ("Application") by the McHenry County Zoning Board of Appeals and the McHenry County Board. As detailed herein, the Applicant has met all requirements set forth in the McHenry County Unified Development Ordinance, §*16.56.030PP Principal Use Standards – Commercial Solar Energy Facility* and §*16.20.040 Conditional Use Standards.*

1.1 Solar Project Overview

The Applicant is the owner of the proposed Trolley Coach Solar Project. The Project will span two parcels in McHenry County, IL ("Property"), owned by A.D. Land Holdings, LLC, who has leased the Property to the Applicant. The majority of the Project's facilities will be located on parcel PRN# 17-02-300-001 and the interconnection facilities will be located on the adjacent parcel (PRN# 17-02-300-002), subject to Commonwealth Edison's ("ComEd") recommendation for location of the interconnection. The Property is zoned A-1 and is located approximately 1.5 miles from Union, IL, on McCue Road, about a quarter mile north of where it intersects Hemmingsen Road. Land use is predominantly agricultural, consisting of cultivated corn and soybean varietals. The Project will not impact neighboring land uses, nor will it be injurious to the use and enjoyment of nearby properties.

Legal Description: THE SOUTHWEST 1/4 OF SECTION 2, TOWNSHIP 43 NORTH, RANGE 6, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN MCHENRY COUNTY, ILLINOIS.

Approximately 32 acres located within the boundaries of the Property will be utilized for the solar panel area, electrical system components, and encompassing fencing (the "Project Area"). The Project Area is ideal for hosting a community solar farm because:

- The land has previously been cleared and leveled for farming activities, so further tree clearing, grading, and other disturbances for solar will be minimal;
- The flat topography and rural location in combination with deliberate screening which includes the use of existing vegetation, will create little to no impact on public viewsheds;
- ComEd's existing distribution infrastructure nearby can be used for interconnection of the solar project, foregoing the need to build out extensive overhead electrical lines and avoiding additional impacts on the area;
- Throughout its 40-year life, the Project will produce the equivalent of approximately 1,000 homes' worth of clean solar electricity per year, providing cost savings to ComEd customers that elect to participate in a community solar farm

- Though Kishwaukee River runs through the southwest corner of the parcel, precautions have been taken to avoid impacts, including extensive setbacks for all facilities and components and avoidance of the flood hazard area.

The Applicant anticipates that Project construction will commence during the fall of 2026 or later that same year, with operations beginning in the first half of 2027.

[1] Trolley Coach Solar will update this application as approvals are made or documents are revised until the McHenry County Board issues its report of findings and recommendations on the Application.

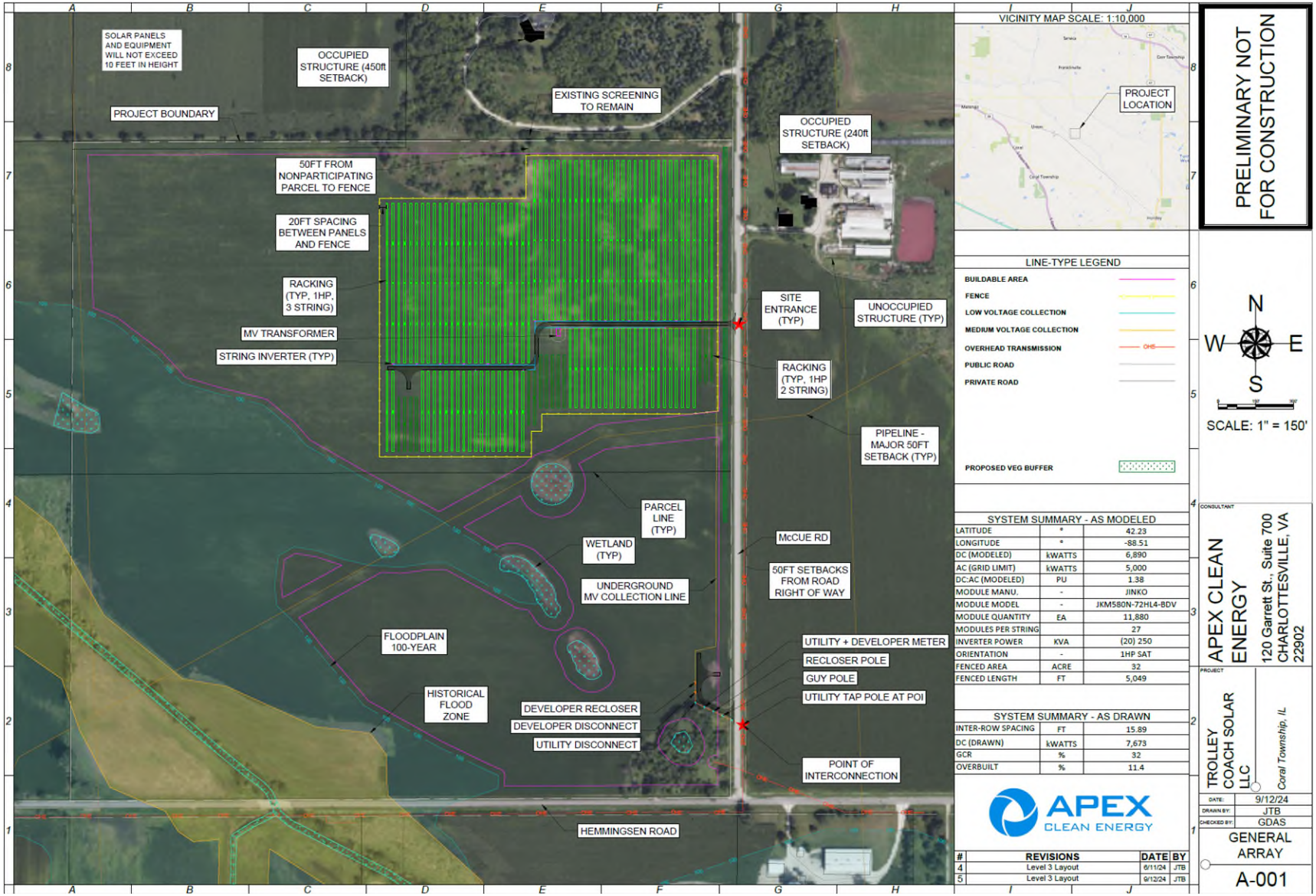

Figure 1. Trolley Coach Solar Preliminary Layout

1.2 Applicant Description and Contact Information

Trolley Coach Solar, LLC is a wholly owned subsidiary of Apex Clean Energy. Apex Clean Energy is a privately held renewable energy company based in Charlottesville, Virginia. Founded in 2009, Apex is a full-service renewable energy company that develops, constructs, and operates utility-scale generation facilities across the United States. Driven by a team of more than 400 professionals and headquartered in Charlottesville, Virginia; Apex has commercialized more than 45 projects totaling over eight (8) gigawatts (GW) of capacity. For example, in 2024, Apex constructed or is currently constructing eight projects across the country: three solar projects, three wind projects, and two energy storage projects. In Illinois alone, Apex currently operates Mulligan Solar, a 70 MW solar facility near Lincoln and over 500 MW of wind facilities across the state.

Trolley Coach Solar, LLC's agents for contact purposes are:

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1.3 Right to Use Property for Proposed Facility

The Applicant's affiliate, Trolley Coach Solar, LLC, is the Lessee of the Property, as evidenced by the recorded Memorandum of Ground Lease for Solar Energy System included in this Application.

1.4 Project Facilities Overview

Overview

The Project will consist of a 32-acre, 5MWac solar facility situated on two adjacent parcels of private land within McHenry County. The facility will deliver electricity to a single point of interconnection on the existing ComEd distribution system, providing the opportunity for the utility's customers locally and statewide to subscribe to the project.

The Project access road is located approximately 0.4 miles north of the intersection of Hemmingsen Rd and McCue Rd. A (preliminary) Site Plan has been prepared in accordance with the requirements of the McHenry County Commercial Solar Energy Facility Site Plan Checklist and Zoning Ordinance and is included with this application. The Project's layout will be finalized after field surveys, wetland delineations, and other permitting requirements are completed and will be submitted to the County along with any required construction and vegetation plans as a part of the full building and zoning approval process.

The Project is expected to bring significant economic benefits to McHenry County and the Applicant has designed the Project with the following considerations:

- To preserve of the rural character of the area by providing significant setbacks from and minimal impacts to neighboring parcels;
- To qualify as a community solar facility and participate in one of the Illinois Power Agency's incentive programs (e.g. Illinois Shines or Illinois Solar For All);
- To produce the equivalent of over 1000 homes' worth of clean electricity per year, based on average home electricity consumption in the U.S.;
- To comply with the agreed upon terms of Commonwealth Edison's Standard Agreement for Interconnection of Distributed Energy Resources Facilities;
- To provide local economic stimulus via increased tax revenue (estimated at approximately $1.4 million over its 40 years of operation);
- To deconstruct (or decommission) the Project at the end of its operational life in accordance with state law, the McHenry-Lake County Soil and Water Conservation District, and the Illinois Department of Agriculture's Standard Agriculture Impact Mitigation Agreement (AIMA) (see Section 3.4 below). The Applicant will provide financial security to McHenry County pursuant to state law and the AIMA to ensure that the County has financial resources available to deconstruct the Project in the unlikely event that Apex fails to. A Deconstruction Plan has been prepared and will be provided in this application.

Design

The Project has been designed to comply with all State setback requirements, as defined by 55 ILCS § 5/5-12020. These setbacks are shown in the Site Plan and detailed in Section 3.6 of this Application. These requirements are set forth in 55 ILCS § 5/5-12020(e)(3).

While the Applicant has not yet finalized the selection of panel model or manufacturer, the location, layout, and capacity of the Project will not materially change from what is depicted in the Site Plan. This application contains specification sheets for an example of the type of technology that may be used. The final Project layout and technology selection will comply with all applicable Federal, State, and County Code requirements and final designs will be submitted for approval as part of the building and zoning review process prior to construction.

Solar Facility Configuration

Solar facilities consist of three major components: the panels, the inverters, and the racking. The solar panels used will operate photovoltaic technology to convert sunlight into direct current (DC) energy. Each solar panel is comprised of several cells that are connected via semiconductors. These cells absorb photons from the sun, releasing electrons that flow through the semiconductors and system wiring to the inverters which convert this DC energy into alternating current (AC). A pole-mounted transformer then increases the voltage of the AC energy to make it compatible with the electric grid.

Steel piles for the racking are driven into the ground, then solar panels and string inverters are mounted to the racking. If sufficient depths cannot be achieved, or if larger central inverters are used, then concrete foundations will be poured to provide structural support and mounting for these components.

Solar Panels: Each solar panel, also known as a “solar module,” typically contains 72 or 96 photovoltaic cells. These photovoltaic cells are made of silicon and connected via semiconductors made from commonplace metals like aluminum and copper. These cells are encapsulated by a non-toxic, rubber-like adhesive film, and secured between a front layer of glass and a durable plastic back sheet. A junction box that houses the panel’s wiring is mounted to the underside of the panel, and everything is secured by an aluminum frame. Multiple interconnected solar panels are called a “string” and multiple strings form an “array”. A solar facility can be composed of multiple solar arrays.

Based on current technology, the Project’s site could contain around 10,000-14,000 photovoltaic solar panels in total and, with the scale at which the technology is improving, the number of panels needed for the Project may be reduced due to increases in the energy output per panel. Any changes to the model or manufacturer will be submitted for review to the County prior to construction.

The solar panel industry is moving away from toxic panel components, and the Applicant will not use solar panels that contain cadmium telluride, lead, or any other toxic substances. For more details on these types of panels, an example specification sheet has been provided with the submission of this application.

Racking: The structural support for a solar array is called the racking. Racking is made of high-grade

aluminum and steel and can take the form of either fixed-tilt or single-axis trackers depending on the available space and contour of the land. As the name implies, single-axis trackers track the sun's path across the sky from east to west throughout the day along a horizontal axis with nearly imperceptible movement. A fixed-tilt racking system will be oriented towards the south pole (in the northern hemisphere) and tilted at an angle that matches the latitude of the facility's location.

A single axis tracking system is currently proposed for the Project racking. This system is designed to withstand wind speeds of 145mph and will not exceed 20ft at maximum height when combined with the solar arrays. Measurements for this system type are included on the Preliminary Site Plan with specifications from a potential product manufacturer on the provided specification sheets. Final racking selection, details, and design will be submitted to the County for approval prior to construction.

Inverters: The inverter converts DC energy to AC energy that is ready to be transmitted to the local distribution grid. Two types of inverters are used in solar facilities: string inverters and central inverters. String inverters, the most common for projects of this size, are proposed for this Project and typically have the following dimensions: (W x H x D): 26.4" x 35.5" x 11.7". If central inverters are used, cabling from the solar arrays will be routed underground to the concrete pad on which the inverter is mounted. Central inverters typically have the following dimensions (W x H x D): 22' x 13' x 7'. A sample string inverter specification sheet has been provided for reference on the specification sheets. The final inverter selection will not substantially change the facility size or location but will be approved by the utility and submitted to the County for approvals prior to construction.

Most of the sound produced by the system is due to the inverter's low-level hum and only occurs during the day when energy is being produced. This hum has been described as roughly equivalent to the sound of a dishwasher. At night, there will be no noise emanating from the solar facility audible at the property line.

Access Roads

Two new gravel access roads, both with a single point of entry/exit will be sited on the Property along McCue Rd with the goal of minimizing impervious impact and traffic hazards. One on the northeastern edge of the Property, and an additional smaller access road on the southeastern edge of the Property. If necessary, any existing roads on the Property will be utilized and improved. The new access road will be gravel surfaced and 20 feet in width. During construction, the access road may be temporarily widened to accommodate movement of the larger system components or construction equipment, generally not exceeding 50 feet. Following construction, the access road will be reduced back to 20 feet and the area temporarily used will be restored, to the extent practicable. The exact routing of both of the project access roads is shown in detail in the Site Plan and is preliminary in nature and subject to the completion of further engineering analysis prior to construction.

Electrical Collector Lines

The Project will utilize underground electrical collector lines to the extent practicable to connect all Project facilities to each other and to the equipment needed for interconnection with the utility. The collector system will be designed for operation at 34.5 kV. The collector lines will be installed in a trench at a depth of at least 18 inches within the fenced Project area and a minimum of five feet outside of the fenced area. The location of collector lines installed underground outside of the fenced area will be reviewed by the landowner to minimize disturbance to the existing agricultural use of the Property. A fiber-optic cable and an additional separate ground wire will also be installed with the collector system. The fiber-optic cable will be used for Project-specific telemetry, control, and communication purposes. Above-ground junction boxes will be installed, as required, for connections or splices.

Transformer and Interconnection

Due to the Project's small size, which will not exceed 5 MWac of generating capacity, no substations or ancillary structures will be constructed or permanently installed. Instead, the Project will be interconnected to ComEd's existing three-phase distribution system via step-up transformer, circuit reclosers, switches and metering equipment. All of which are mounted to the tops of telephone poles close to the point of interconnection. The point of interconnection is on the electrical circuit adjacent to the Property which runs north to south along McCue Road. These 34.5kV lines connect to the Marengo substation. The electricity generated by this system will be utilized locally by all ComEd customers that the substation services. *Please note: while this project is intended to be a community solar facility, ComEd customers in the project's vicinity will need to elect to subscribe to the project to experience the cost savings on their monthly electric bills.*

The Project has completed Commonwealth Edison's interconnection study process and executed an Interconnection Agreement with the utility (*Section 466.Appendix D: Levels 1 to 4 Contract*).

At this time, the scope of this Project does not include Energy Storage or any equipment and facilities other than those described herein and planned for on the preliminary Site Plan.

1.5 Project Construction

Upon approval of the Application and issuance of a Conditional Use Permit, and as other state and federal approvals are obtained, the Applicant will complete engineering-scale designs of the access roads, construction areas, array layout, and the electrical components.

Consistent with the AIMA (see Section 3.4), the Applicant will take measures to minimize impacts to drainage infrastructure on the Property. Prior to Construction, the Applicant will work with the Landowner to identify drainage tile lines traversing the Property to the extent reasonably practicable, depicting all identified tile lines on the Construction and Deconstruction Plans, and recording their locations using GPS technology. The Applicant will repair and/or install new drainage tile lines as needed and will compile “as built” drawings showing the locations of all encountered drainage tile lines and repair locations for distribution to the Landowner, the Illinois Department of Agriculture (IDOA), and the McHenry County Stormwater Management Commission.

Under the AIMA, the Applicant will also maintain soil quality at the Property utilizing industry best practices which include a planting and maintenance plan to ensure that noxious weeds are controlled, and native plantings are properly installed and managed. For trenching of underground electrical collector lines during construction, topsoil will be stripped prior to trenching and then restored as close as reasonably practicable to the original depth and contour once trenching is completed. Best efforts shall be made to store the topsoil near the excavation site in a manner so as not to cause mixing with subsoil materials.

Safety will be a top priority during all aspects of construction activities, especially on public roads. The total estimated timeframe for solar farm construction is approximately 6-8 months. Subject to receipt of the necessary permits and any weather delays, the Project is slated to commence commercial operations during the first half of 2027.

1.6 Economic Benefits

The Trolley Coach Solar project in McHenry County will provide tangible economic benefits to the local community, further reinforcing its positive impact on property values. The project involves an initial $18 million capital investment and is expected to create approximately 25 full-time-equivalent (FTE) jobs during construction.

Over its 25-year operational life, the project will generate approximately $1.4 million in local tax revenue based on the Illinois Department of Revenue’s Commercial Solar Energy System Valuation method. This revenue, with a 2% annual escalator, will directly benefit ten local taxing bodies, including:

- McHenry County
- Coral Township & Coral Township Road & Bridge
- Marengo-Union Library
- McHenry County Conservation District
- Marengo Rescue Squad

- Union Fire District
- School District 154 & School District 165
- College District 528 (McHenry County College)

This increased tax revenue can be used to support local schools, emergency services, libraries, and infrastructure improvements, helping to maintain strong public services that make the area more attractive to homebuyers.

Impact of Solar Projects on Property Values

The impact of solar energy projects on nearby property values has been studied extensively across the United States, and research consistently shows that utility-scale solar farms do not have a significant negative effect on property values. In some cases, they may even contribute to stabilizing or increasing home values by generating local tax revenue and economic benefits.

A 2024 study completed by researchers at Loyola University examined property values near 70 utility-scale solar projects in the Midwest and found that nearby property values increased by 0.5% to 2.0% following the installation of a solar facility. This positive impact was particularly evident for smaller projects under 20MW, such as the Trolley Coach Solar project, which provide economic benefits without significant visual or land use concerns.

Similarly, a 2023 study by the Lawrence Berkeley National Laboratory (LBNL) analyzed over 1.8 million home sales near 1,500 large-scale solar projects in six U.S. states and found no measurable negative impact on property values beyond one mile. While a minor price adjustment (approximately 1.5%) was observed for homes within 0.5 miles of a large-scale project, this effect was statistically insignificant beyond that range. Moreover, the study found that solar farms built on agricultural land—like Trolley Coach Solar—had less impact on nearby properties compared to solar installations in more densely populated areas.

Why Solar Farms Do Not Reduce Property Values

Several key factors explain why solar projects do not negatively impact property values:

1. Minimal Disruptions – Unlike industrial developments, solar farms produce no emissions, minimal noise, and generate little traffic, making them one of the least disruptive land uses.
2. Vegetative Buffers and Visual Screening – Many solar projects, including Trolley Coach Solar, incorporate landscape buffering, fencing, and setbacks to minimize visibility and integrate seamlessly into the surrounding area.
3. Local Economic Benefits – Solar farms contribute significant tax revenue to counties and municipalities, which can fund schools, emergency services, and infrastructure improvements—all of which positively influence property values.
4. No Environmental Hazards – Unlike landfills, factories, or fossil fuel plants, solar farms do not produce pollution, hazardous waste, or odors that could negatively affect home values.
5. Growing Public Acceptance – Surveys indicate that most residents support solar energy in their communities, and concerns about property value impacts tend to decline once projects are operational.

1.7 Compliance with Federal, State, and Local Requirements

As detailed below in Sections 2, 3, and 5, the Project will comply with all Federal, State, and Local requirements prior to commencement of construction activities. All studies, permitting milestones, and coordination activities required in the Zoning Ordinance have been initiated or completed.

2 FEDERAL COMPLIANCE AND NOTIFICATIONS

The Project submitted applications to, entered into agreements with, or otherwise conferred with the following federal regulatory agencies:

2.1 Federal Aviation Administration

The Federal Aviation Administration (FAA) has the regulatory authority to evaluate and permit structures which may pose a hazard to aviation.

The closest airport to the Project is the Casa De Aero Park-68IS, located approximately 6.1 miles from the project site. To confirm that the Project will meet the standards and regulations of the FAA, the Applicant utilized the FAA's online Notice Criteria Tool, entering in the coordinates of the Project Area, the anticipated maximum height of the panels, and the site elevation to evaluate the potential to affect airspace or cause glare for aircraft. The Project does not exceed Notice Criteria and no further coordination with the FAA is required.

As of 2021, the FAA no longer requires guidance or assessment for potential glare associated with off-airport solar facilities and does not require submission of a Form 7460-2 (86 Fed. Reg. 25801 (May 11, 2021).

2.2 United States Army Corps of Engineers

The United States Army Corps of Engineers (USACE) is responsible for regulating the discharge of dredged or fill material into waters of the United States (WOTUS), including wetlands, under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act (RHA).

The Applicant retained Tetra Tech, Inc.—a U.S.-based environmental consulting and engineering firm—to conduct a desktop survey for aquatic resources that could potentially be considered waters of the United States (WOTUS) within the property, to inform project design and ensure compliance with Section 404 of the Clean Water Act (CWA). Based on the survey results, one potential jurisdictional feature was identified within the parcel: the Kishwaukee River. However, the Project has been designed to avoid potential impacts to potential WOTUS, and a Section 404 permit is therefore not required. Field wetland surveys will be conducted to verify the results of the desktop report and delineate boundaries of potentially jurisdictional aquatic resources for avoidance as Project designs are finalized prior to construction.

2.3 United States Environmental Protection Agency (US EPA)

Determining the potential presence of environmental conditions is necessary for financing, siting, and Project construction. As such, the Applicant retained Tetra Tech, Inc. to perform a Due Diligence Environmental Review (DDER). The purpose of the DDER was to evaluate the Property for indications of recognized environmental conditions (RECs). The information provided in the DDER included a review of historical and current environmental records and followed the "approximate minimum search distance" defined in the ASTM International (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E1527-

21). The approximate minimum search distance included research of standard federal, state, and tribal environmental record sources (as defined by ASTM E1527-21) in a 0.5 to 1.0-mile buffer around the Project Area. The review found no RECs, historical recognized environmental conditions (HRECs), controlled recognized environmental conditions (CRECs), or other potential issues.

Prior to Construction, a Phase I Environmental Site Assessment ("Phase I ESA") will be conducted to comply with US EPA requirements for environmental liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

2.4 United States Fish and Wildlife Service

Given the Property's prior use as cleared agricultural land, adverse impacts to federally protected species are not anticipated, and no action is required under the Endangered Species Act (ESA). Even so, the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) online tool was used to review the potential presence of listed species and critical habitats.

The USFWS also administers the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), which prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or golden eagles, including their parts (including feathers), nests, or eggs. The Migratory Bird Treaty Act also prohibits the take (including killing, capturing, selling, trading, and transport) of migratory birds. Because the Property and surrounding areas have been previously cleared for agricultural purposes, there is no suitable habitat for nesting eagles and limited suitable breeding habitat for migratory birds, in general. Thus, construction and operation of the Project will comply with these federal statutes.

2.5 Federal Emergency Management Agency (FEMA) - Flood Plain Designations

A desktop review of the FEMA Flood Hazard maps determined that there is FEMA Flood Zone A within the parcel boundary. Flood zone A are areas with a 1% annual chance of flooding. The FEMA National Flood Hazard Layer FIRMette can be found in the application submission. The Applicant intends to avoid placing any structures within all such flood zones.

3 STATE OF ILLINOIS COMPLIANCE AND NOTIFICATIONS

Compliance with State of Illinois rules and regulations involved permit applications, consultations and/or agreements with the following agencies:

3.1 Illinois Department of Natural Resources (IDNR)

State-listed Threatened and Endangered Species

Under 520 ILCS §§ 10/11, 30/17, issuers of local or state permits must consider the potential adverse effects of proposed actions on Illinois endangered and threatened species and nature preserves. To ensure compliance with state threatened and endangered species regulations, the Applicant requested a formal Ecological Compliance Assessment Tool (EcoCAT) review by the Illinois Department of Natural Resources (IDNR) for the Property on October 19th, 2023. The review indicated that a few state-listed threatened or endangered species and an Illinois Natural Area Inventory sites may be in the vicinity of the Property. However, this review was evaluated by IDNR staff, who concluded that adverse effects to Illinois endangered and threatened species and nature preserves are unlikely. Consultation with IDNR is complete. The EcoCAT report and IDNR letter can be found in the submission of this application.

Illinois Pollinator-Friendly Solar Site Act

The Project plans to implement a strategy for vegetation management at the site that is compliant with the Illinois Pollinator-Friendly Solar Site Act of 2018 (525 Illinois Compiled Statues [ILCS] 55; IDNR 2023a, 2023b). The vegetation strategy will be consistent with the intent of the IDNR and will 1) provide native perennial vegetation and foraging habitat for game birds, songbirds, and pollinators; 2) reduce storm water runoff and erosion, and 3) prevent establishment of noxious weeds.

3.2 Illinois Historic Preservation Division (IHPD)

Under the Illinois State Agency Historic Resources Protection Act, the Illinois State Preservation Office (SHPO) division at IDNR is responsible for studying possible Project effects on archaeological and/or architectural (cultural) resources. Agencies requiring SHPO evaluation concurrent with their review include the Illinois Environmental Protection Agency, IDNR, and the USACE.

Since the Project will require a National Pollutant Discharge Elimination System (NPDES) Permit from the Illinois Environmental Protection Agency (IEPA), SHPO review and concurrence is required to ensure impacts to cultural resources are avoided and/or minimized. Further, if human remains, or archaeological resources are uncovered during construction, an Unanticipated Discoveries Plan will be developed to inform appropriate response.

Archaeological/Architectural Desktop Study

The Applicant retained Tetra Tech, Inc. to complete a desktop review of the Property and a 1-mile buffer (archaeological resource buffer) to inform Project design. The desktop review included a site

file search and literature review through the Illinois State Archaeological Survey (ISAS) Cultural Resource management (CRM) Report Archive and Illinois Historic Preservation Agency (IHPA) Historic Architectural Resources Geographic Information System (HARGIS). Results of the desktop review indicated the presence of one potential historic resource (a General Land Office, "GLO" site) and an Archaeological Resource Potential Area ("RPA") on the Property. No impacts to the RPA are expected.

Phase 1 Archaeological Reconnaissance Survey

Due to the potential for impact, further reconnaissance of the GLO site was performed by Tetra Tech, Inc. in accordance with Illinois Guidelines for archaeological survey. The field study located no archaeological material and clearance will be recommended to SHPO.

Based on current project design, no additional archaeological field surveys are necessary for regulatory compliance. If Project design changes such that the areas with higher potential for cultural resources cannot be avoided, then additional field surveys will be conducted, and the results will be provided to the IHPD for concurrence.

Architectural Resource Survey

An Architectural Resource Survey (Phase 1 Survey) based on requirements of the Illinois State Agency Historic Resources Protection Act (IHRPA) will be required pursuant to the issuance of an IEPA Storm Water Industrial Activity permit. The Phase 1 Survey will identify previously recorded cultural resources as well as identify any potential historic resources within the Area of Potential Effect (APE; 0.5-mile buffer on the Property in compliance with IHPA guidelines). This survey will be performed prior to issuance of a construction permit for the Project.

3.3 Illinois Environmental Protection Agency (IEPA)

The IEPA Division of Water Pollution Control is responsible for regulating wastewater discharges to Illinois streams and lakes, which includes issuance of stormwater permits under the NPDES program.

The Project will obtain coverage under the Illinois General NPDES Permit for Storm Water Discharges from Construction Site Activities (ILR10) prior to the initiation of Project construction. To satisfy all standards for obtaining a NPDES permit, the Project will design a Stormwater Pollution Prevention Plan (SWPPP) which includes both structural and non-structural best management practices (BMPs) that will be implemented to minimize the potential discharge of pollutants during construction activities. Examples of structural BMPs may include the installation of silt fences and/or other physical controls to divert flows from exposed soils, or otherwise limit runoff and pollutants from exposed areas of the site. Examples of non-structural BMPs include implementation of materials handling, disposal requirements, and spill prevention methods.

Before the commencement of construction on the Project, the Applicant will file a notice of intent and accompanying SWPPP for a general permit to discharge relating to storm water discharges during Project construction.

3.4 Illinois Department of Agriculture (IDOA)

The Project will be located on a site that is currently zoned A-1, Agriculture District, and used for agricultural purposes. Because of this, the Applicant is required to follow the IDOA's minimum requirements related to construction and deconstruction of a renewable energy facility, including topsoil segregation, rock removal, weed control, and repair of damages. The Applicant has submitted an Agricultural Impact Mitigation Agreement (AIMA) with the Illinois Department of Agriculture, per the Renewable Energy Facilities Agricultural Impact Mitigation Act (505 ILCS § 147/15) and the requirements of state statute 55 ILCS § 5/5-12020. A copy of the AIMA has been provided to the landowner and can be found in the submission of this Application.

3.5 Illinois Department of Transportation (IDOT)

IDOT considers solar energy access roads as low- to moderate-volume commercial entrances. The Project will have one access road/entrance from McCue Road, which is not an IDOT right-of-way. Regardless, the Applicant will comply with any Illinois Department of Transportation (IDOT) guidelines and requirements of state statute 55 ILCS § 5/5-12020 as applicable.

3.6 State Statute 55 ILCS § 5/5-12020 Commercial Solar Energy Facilities

The Applicant will comply with all requirements described in Illinois State Statute 55 ILCS § 5/5-12020, regulating Solar Energy Facilities.

[55 ILCS § 5/5-12020(e)(3)] Setbacks*.*

The Project has been designed so as not to exceed setbacks of 150 feet from the nearest point on the outside walls of dwellings on nonparticipating properties, 50 feet from the nearest edge of public road rights-of-way, and 50 feet from the nearest point on the property lines of nonparticipating properties.

[55 ILCS § 5/5-12020(e)(4)] Fencing*.*

The perimeter of the Project will be enclosed by fencing that is at least 6 feet but no more than 25 feet in height.

[55 ILCS § 5/5-12020(e)(5)] Facility Height.

The height of the components of the Project will not exceed more than 20 feet above ground when the solar arrays are at full tilt.

[55 ILCS § 5/5-12020(j)] Construction and deconstruction standards.

At the end of the Project life, the Project will be deconstructed in accordance with a deconstruction plan that is prepared and stamped by a Professional Engineer. This plan will be prepared prior to application for building permits, and after the final site plan design and will be provided to the County. As part of the deconstruction, all Project facilities will be dismantled and removed, and the land will return to agricultural uses, or another use permitted by the Zoning Ordinance and as

desired by the property owner. If it is agreed upon with the County and the landowner, the Project access roads may be kept in place for continued use. The Applicant shall file an updated Deconstruction Plan with the County on or before the tenth year of project operations. A draft Deconstruction Plan is included in the submission of this application.

In accordance with the guidelines of Section 17.D. of the Standard Solar AIMA (see Section 3.4 above), the Applicant will provide the County with financial assurance to cover the estimated costs of deconstruction of the Project. The estimated deconstruction cost will be based upon the final site plan, prepared by a Professional Engineer, and provided via bond, letter of credit, or other form of financial assurance that is phased in over the first 11 years of the Project's operation. Most of the Project's components will still have significant market value and are able to be reused or recycled. Despite this, the salvage value will not be used to reduce the estimated costs of deconstruction unless the County agrees to this subordination.

[55 ILCS § 5/5-12020(s)] Road Use Agreements.

As shown in the Site Plan, the Property will be accessed via a section of McCue Road that is a Coral Township right-of-way. Prior to delivery of the solar facility components and construction vehicles, the Applicant will comply with the Coral Township Highway Department's requirements, including application for permit and submittal of a bond to cover potential culvert and road damage resulting from construction of the Project. If necessary, any Road Use Agreement with the Coral Township Highway Authority shall place responsibility on the Applicant to cover costs of improving and/or repairing roads that are used to construct the Project so that those roads are restored to safe conditions for public utilization when construction is complete.

The level of permitting and further coordination with Coral Township will be better defined as the final engineering designs progress.

4 MCHENRY COUNTY PERMITS, APPROVALS, AGREEMENTS, AND NOTIFICATIONS

This section summarizes how the Conditional Use Permit application and the project comply with the McHenry County Unified Development Ordinance.

4.1 McHenry County Unified Development Code

§ 16.20.040(E) Approval Standards for Conditional Use Permits

The following section details how the project complies with the approval standards for conditional use permits as listed in Section E of McHenry County's UDO, § 16.20.040.

(1) The project is designed to meet requirements outlined in the Site Development Standards described in Chapter 16.60 of the county code of ordinances. The contents of this application and site plan demonstrate compliance with general development standards, exterior lighting requirements, and permitted encroachments. Additionally, consultations with the appropriate environmental authorities have been performed to ensure compliance with the County's environmental performance standards, likewise outlined in § 16.60. The site was selected and the project designed to meet the use standards described in § 16.56 of the County's code of ordinances.

(2) Agriculture is the designated future land use for the Property. The project is compatible with this designation because solar is a low-density development which preserves the land within the project area so that it may be returned to agricultural use at the end of the Project's operational life.

(3) Measures have been taken to ensure that the project maintains a low-profile and to protect the general welfare of the neighboring vicinity. This is achieved through vegetative screening and the implementation of setbacks which meet or exceed local requirements. All safety measures will be considered during construction, operation, and decommissioning to ensure that the project will not be detrimental to or endanger public health.

(4) A community solar farm is a quiet, clean neighbor that will not disrupt the uses of neighboring properties. As described above, measures such as vegetative screening and proper setbacks have been put in place to ensure properties in the immediate vicinity are not impacted.

(5) Solar farms do not emit sound, produce odor, or utilize hazardous materials. They are designed with anti-glare technology and are completely dark at night. Vegetative screening reduces visibility, and the panels, at maximum tilt, do not exceed 20 feet in height. Studies consistently show that solar farms do not harm the value of adjoining or nearby properties, especially where the aforementioned measures are put in place.

(6) Necessary facilities for the proper construction and maintenance of the project, including access roads, transmission lines for interconnection, and any other facilities shown on the site plan will be provided in coordination with ComEd and relevant County and State authorities.

(7) The construction of a gravel access roads to the project area will be created with the approval of the necessary transportation authorities, including the Coral Township Highway Department. During construction these access roads will provide ingress and egress, designed to minimize traffic congestion and hazard on public streets. During operation, vehicles will occasionally be at the site for maintenance and operation.

(8) According to the McHenry County Unified Development Ordinance Table 16.32-1: Zoning District Uses, commercial solar energy facilities are a conditionally permitted principal use in A-1 and A-2 zoning districts. The selected property is within the Agricultural zoning district of McHenry County and thus conforms to the standards outlined in the ordinance. Further, because solar farms are a low impact land use, they preserve the property during operation, allowing it to return to an agricultural use when the project is decommissioned.

(9) The project is designed with public welfare in mind. In addition to providing a clean and renewable energy supply, its construction will create local jobs, stimulate economic growth, and provide increased tax revenues. Community solar farms, like the proposed project, allow utility customers to subscribe and reduce their utility bills. They also contribute to replacing fossil fuels, reducing air pollution, combatting climate change, and promoting a healthy environment.

(10) The Project falls within a Sensitive Aquifer Recharge Area (SARA) district. However, the amount of disturbed area will not exceed 1-acre and all County regulations for development of impervious surface within this district will be followed. Additionally, all standards set forth in the McHenry County Stormwater Management Ordinance to safeguard groundwater resources and prevent any adverse effects on groundwater quality will be followed. The Applicant will obtain a Stormwater Management Permit prior to construction.

§ **16.56.030PP Principal Use Standards**

This section addresses compliance with each of the items listed in § 16.56.030PP as principal use standards for commercial solar energy facilities in the order those items are listed in the UDO.

(1) Application.

a. EcoCAT. To ensure compliance with state threatened and endangered species regulations, the Applicant requested a formal Ecological Compliance Assessment Tool (EcoCAT) review by the Illinois Department of Natural Resources (IDNR). The results of the EcoCAT request can be found in the submission of this application.

b. Site Plan. A site plan has been provided that shows all improvements, including structures, fencing, power lines (above and below ground), lighting, and landscaping, at a detail sufficient to understand the location, height, appearance, and area.

c. Application Packet. The Applicant shall comply with all other application submittal requirements outlined on the Conditional Use Permit Application Portal, through the McHenry County Website.

(2) Site Design.

a. Facilities. The solar panels, structures, and electrical equipment that comprise the Project Area have been designed to meet or exceed the listed setbacks: at least fifty (50) feet from any lot line and one hundred (150) feet from any non-participating residence.

b. Height. No structures, excluding power lines for interconnection, will exceed twenty (20) feet in height. Power lines will be buried to the extent practicable

c. Lighting. The exterior lighting on the Project shall comply with § 16.60.020.

d. Anti-glare. The Project will produce no hazardous glare. Anti-reflective coatings and anti-glare technology are inherent to solar panel design. This combined with the remote location of the Project will significantly inhibit glare on neighboring properties and public roads.

e. Drainage. Multiple desktop studies have been conducted to ensure the Project minimizes impacts to woodlands, savannas, wetlands, drainage tiles, and encroachment into flood plains. The Project will obtain coverage under the Illinois General NPDES Permit for Storm Water Discharges from Construction Site Activities (ILR10) prior to the initiation of Project construction. Any damaged drainage tiles shall be repaired in accordance with the AIMA. Regulations for impervious surface coverage in SARA districts will be followed.

f. Groundcover. The Applicant will implement ground cover that is consistent IDNR standards, specifically the Pollinator Friendly Solar Site Scorecard for Illinois (525 ILCS 55).

g. Fence. The Applicant shall install a security fence around the Solar Equipment that is a minimum six (6) feet in height accompanied with anti-climbing fixed to the top of the fence. Fencing will be installed on the interior of the vegetative buffer and shall always be maintained while the facility is in operation.

h. Screening. The use of vegetative screening will also be utilized to further limit visibility from public rights-of-way and non-participating residences within 500 feet along the northern and eastern project boundaries. This vegetative screening would be maintained within the setbacks and consist of landscaped native shrubs or existing vegetation boosted with new planting where needed, all subject to approval by the County Board.

i. Landscaping. Prior to building permit issuance, the Applicant will prepare a landscape monitoring and maintenance plan that details the methods of site preparation, sustainable vegetation establishment, and maintenance of installed and existing vegetative screening.

j. AIMA. The Applicant has executed an AIMA with the IDOA (included in application submission).

k. Road Use. The Applicant will comply with the requirements of the Coral Township Highway Authority and the Illinois Department of Transportation (IDOT) guidelines and requirements of state statute 55 ILCS § 5/5-12020 prior to delivery of the solar facility components and construction vehicles needed to construct the Project. Any road use agreements shall be provided to the County as part of the building permit process.

(3) Safety.

The Applicant will prepare an emergency management plan acceptable to the County and the local fire district prior to construction. The Project will not pose increased security or safety risks. Once the Project is constructed, a permanent perimeter/boundary fence will surround the entire Project. The fence will be posted with security signage and will be metal chain-link fence with a minimum height of six (6) feet and topped with one (1) foot of barbed wire, therefore inaccessible to unauthorized personnel. The Project will be monitored remotely on a 24/7 basis to ensure the Project is operating properly. If any emergency arises, it will be noted by the remote operator who will contact and coordinate with the appropriate local emergency and security personnel and will be able to remotely de-energize the Project. Existing County fire fighting services and equipment are suitable to handle any issues that may arise at the Project, and training will be provided to local emergency services on how to access the Project in case of emergency. The Project's access road will be maintained in good condition to continue to allow easy access to the Project through all phases of its life.

(4) Abandonment.

The Applicant acknowledges the standards for Abandonment as outlined in this section of the ordinance.

(5) Decommissioning.

The Applicant has provided a Decommissioning Plan that complies with all standards set forth in this section of the County's ordinance as well as those outlined in the executed AIMA. The Plan can be found included in the submission of this application.

4.2 McHenry County 2010-2030 Comprehensive Plan

The following sections of this narrative explain the Project's relationship to the significant elements

of the Comprehensive Plan and how the project will complement and support the community's vision.

Community Character and Housing

The Applicant has considered the community from the onset of the Project's design process, ensuring it does not adversely affect the health, safety, or general welfare of nearby residents or impair the character of the district and surrounding property values. With the current adjoining uses, setbacks, and planned vegetative buffers, the Project will be inconspicuous and have minimal viewshed impact, thus preserving the rural character of the surrounding area.

The Project will produce no hazardous glare. Solar panels, by design, absorb as much light as possible, and panels reflect/refract very little light – often less than two percent. This is comparable to the reflectivity of water, and significantly less reflective than standard glass. Anti-reflective coatings and anti-glare technology are inherent to solar panel design. This combined with the remote location of the Project will significantly inhibit glare on neighboring properties and public roads.

Agricultural Resources

The Project has been sited to allow continued farming on the remaining 130 acres of the Property. The ground-mounted solar facility will be located on the northern portion of the Property, and the landowner will continue farming the western and southern portions. The Applicant will develop a planting and maintenance plan that includes pollinator-friendly groundcover which will serve to promote productive yields for the landowner and neighboring farmers. The conversion of the Property to a non-agricultural use is temporary since solar is a low-intensity development that allows for land to be restored at the end of the solar farm's useful life.

Greenways, Open Spaces, and Natural Resources

Once installed, a solar array can produce energy undisturbed for a minimum of 35 years with minimal upkeep. Native grasses and vegetation can thrive within the Project boundary, helping to improve the soil's composition over time. These reasons combined with close coordination with IDNR, IDOA, and other regulatory agencies means that the Project will preserve environmentally sensitive corridors and be minimally impactful to the rural landscape during construction and operations.

The Comprehensive Plan recognizes the need for minimizing the impact of development by protecting sensitive environmental areas, wildlife habitats, and rural vistas. The results of studies have demonstrated that natural features such as wetlands, floodplains, forests, steep slopes, and scenic vistas are not impacted by the Project.

By aligning with sustainable development principles, the Project will reduce the county's carbon footprint and reliance on external energy sources, ensuring that future growth enhances McHenry County's unique identity and balances modern advancements with the preservation of natural and cultural heritage.

Water Resources

The Project is designed to have no negative impacts on wetlands, groundwater, or community water facilities. Unlike traditional energy sources that require water for operation and risk contamination, solar energy generation does not, thus eliminating these concerns. Appropriate measures to mitigate impacts to stormwater and sensitive aquifers will be taken per the guidelines of the County's Stormwater Ordinance.

When wetland determinations are complete prior to construction, the Applicant will obtain all necessary permits from relevant federal, state, and local agencies as required, including a Stormwater Management Permit, accounting for all impervious areas such as piles, access drives, and equipment pads.

Economic Development

The Project's assessed value is higher than that of agricultural land, therefore providing a boost to local tax revenues without adding a demand to local, supportive services and infrastructure.

Infrastructure

Upgrades to existing electrical infrastructure will be needed to support the Project, which will improve the reliability of the surrounding electric distribution system that powers nearby homes and businesses.

Land Use

Solar is a low-impact land use, with minimal to no impact on the County's resources. Other forms of development (commercial, residential housing, etc.) would require additional services such as roads, utilities, schools, and law enforcement. This Project will not place any material burden on the County's resources but will increase the County's tax base and associated revenues which could be utilized for the expansion of affordable housing.

The Project is designed to minimize land disturbance and provide environmental benefits like reduced greenhouse gas emissions. It will also promote low-density development by utilizing existing land for renewable energy generation, thus supporting sustainable land use practices while enhancing economic viability and environmental sustainability in agricultural areas.

5 PROPOSED PERMIT CONDITIONS

1. **Expiration**. Per Section 5.4.H (Expiration of Approved Conditional Use Permits), Trolley Coach Solar respectfully requests that the Conditional Use Permit for the proposed solar energy project be approved for a duration of up to 40 years. This requested term reflects the anticipated operational life of the proposed solar equipment and is consistent with the lease agreement secured for the project site, which spans up to 40 years. The extended term will ensure alignment between the County's approval and the project's technical and financial expectations. Upon the conclusion of operations, the project will be decommissioned in accordance with the AIMA, and the land will be returned to agricultural use or another permissible use in accordance with the County's regulations.

2. **Transfer**. This Special Use is granted for a 5MW scale solar energy facility use to Trolley Coach Solar, LLC and is located on Tax Map ID# 17-02-300-002 and 17-02-300-001 (the "Solar Energy Facility"). This Conditional Use may be transferred so long as the transferee agrees to be bound by the terms and conditions of this Conditional Use Permit.

3. **Binding Obligation.** This SUP shall be binding on the Applicant or any successors, assignees, current of future lessee, sub-lessee, or owner of the solar energy facility.

4. **Sound.** The Solar Energy Facility shall not emanate sound exceeding the limits established by the Illinois Pollution Control Board under 35 Ill. Adm. Code Parts 900, 901 and 910.

5. **Lighting.** Any outdoor lighting associated with the Solar Energy Facility will be positioned to reasonably avoid disturbance to neighboring properties and rights-of-ways and comply with Chapter 16.60 *Site Development Standards*.

6. **Panel Height.** Solar panels within the Solar Energy Facility, will not exceed twenty (20) feet in height at full tilt.

7. **Fencing.** The Applicant shall install a security fence around the Solar Equipment that is a minimum six (6) feet in height accompanied with anti-climbing fixed to the top of the fence. Fencing must be installed on the interior of the vegetative buffer. The fencing shall always be maintained while the facility is in operation.

8. **Compliance with Laws.** The Solar Energy Facility shall be designed, constructed, and tested to meet relevant local, state, and federal standards as applicable.

9. **General Plan.** The construction of the Project shall be in substantial conformance with these conditions and in general conformance with the Special Use Preliminary Site Plan prepared by Apex Clean Energy dated October 11th, 2024 (the "General Plan"). Modifications to the General Plan shall be permitted at the time of building permit based on state and federal approvals and final engineering and design requirements that comply with these conditions.

10. **Deconstruction and Financial Assurance:** The Applicant will decommission the project at the

end of project operations consistent with the included Decommissioning Plan, and financial assurance shall be provided as described in Section 17D of the AIMA.