

Dane County Conditional Use Permit Application

Application Date	C.U.P Number
09/15/2022	DCPCUP-2022-02577
Public Hearing Date	
11/15/2022	

OWNER INFORMATION	AGENT INFORMATION
-------------------	-------------------

OWNER NAME Attn: Aaron Williams REGENT OF UNIVERSITY OF WISCONSIN	Phone with Area Code (608) 263-3023	AGENT NAME Attn: AMANDA THOMAS ALLIANT ENERGY	Phone with Area Code (815) 708-3313
BILLING ADDRESS (Number, Street) 21 N. Park Street, Floor 600		ADDRESS (Number, Street) 4902 NORTH BILTMORE LANE	
(City, State, Zip) MADISON, WI 53715		(City, State, Zip) Madison, WI 53718	
E-MAIL ADDRESS aaron.williams@wisc.edu		E-MAIL ADDRESS amandathomas@alliantenergy.com	

ADDRESS/LOCATION 1	ADDRESS/LOCATION 2	ADDRESS/LOCATION 3
--------------------	--------------------	--------------------

ADDRESS OR LOCATION OF CUP		ADDRESS OR LOCATION OF CUP		ADDRESS OR LOCATION OF CUP	
3725 Schneider Drive				-	
TOWNSHIP DUNN	SECTION 27	TOWNSHIP	SECTION	TOWNSHIP	SECTION
PARCEL NUMBERS INVOLVED		PARCEL NUMBERS INVOLVED		PARCEL NUMBERS INVOLVED	
0610-271-8000-4		0610-271-9500-7			

CUP DESCRIPTION

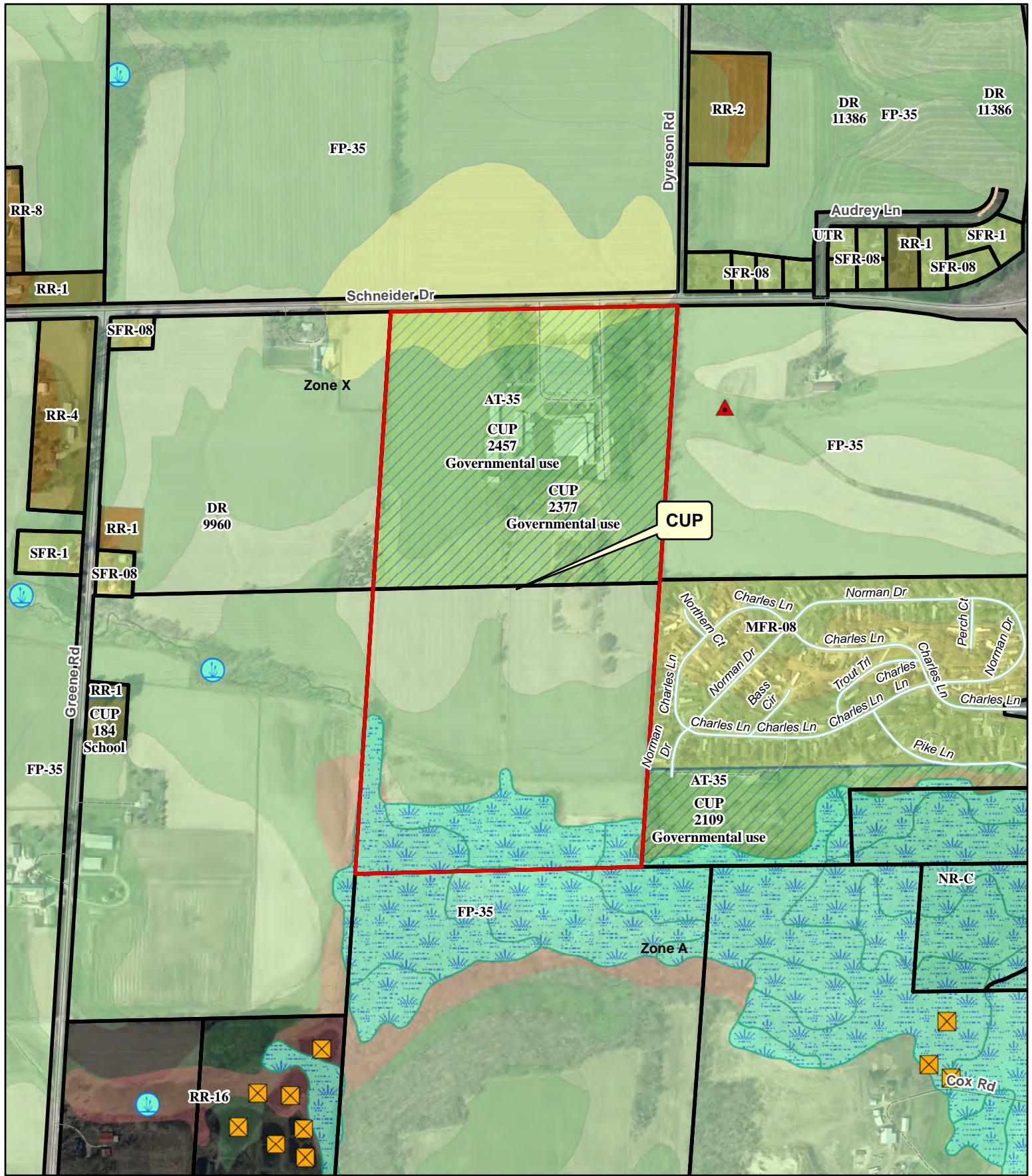
Electric Generating Facility - 15-acre solar array farm

DANE COUNTY CODE OF ORDINANCE SECTION	ACRES
---------------------------------------	-------



10.231(3) Electric Generating Facility	80
--	----

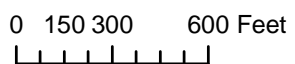
DEED RESTRICTION REQUIRED? <input type="checkbox"/> Yes <input type="checkbox"/> No Applicant Initials _____	Inspectors Initials RWL1	SIGNATURE:(Owner or Agent) <hr/> PRINT NAME: <hr/> DATE: <hr/>
---	---------------------------------	--

COMMENTS: SOLAR ARRAY FIELD CONSISTS OF APPROXIMATELY 15 ACRES.



Legend

- | | | |
|--|------------|---|
|  | Wetland | Significant Soils |
|  | Floodplain |  Class 1 |
| | |  Class 2 |



CUP 02577
REGENT OF UNIV OF WIS
310 PETERSON BLDG



Alliant Energy
4902 North Biltmore Lane
Madison WI 53718-2148

1-800-ALLIANT (800-255-4268)
alliantenergy.com

September 14, 2022

Mr. Roger Lane
Zoning Administrator
Dane County Department of Planning and Development
Zoning Division
Room 116, City-County Building
210 Martin Luther King Jr. Blvd.
Madison, Wisconsin 53703

Subject: Conditional Use Permit Application – Alliant Energy & UW-Madison Kegonsa Research Campus Solar and Agricultural Research Project

Mr. Lane,

Wisconsin Power and Light (WPL), the Wisconsin electric subsidiary of Alliant Energy, respectfully requests review of the attached Conditional Use Permit Application for a 2.25 megawatt AC solar facility in the Town of Dunn, Dane County, Wisconsin at the next available Dane County Zoning and Land Regulation committee meeting. The facility will be developed, operated and maintained by WPL on leased land owned by the Board of Regents of the University of Wisconsin System.

Attached with the Conditional Use Permit Application are the following exhibits of information:

- UW-Madison CUP Support Cover Letter
- Exhibit A Standards for Conditional Use Permits
- Exhibit B Written Statement of Intent and Operations Plan
- Exhibit C Project Boundary Legal Description
- Exhibit D Town of Dunn Solar Ordinance
- Exhibit E Project Activities to Date
- Exhibit F Preliminary Site Plan and Details

Thank you for your consideration of this project application. We look forward to discussing the application materials with you further. If any questions arise please feel free to contact me at any time.

Sincerely,

A handwritten signature in black ink that reads "Amanda Thomas".

Amanda Thomas | Engineer III

Alliant Energy

4902 N. Biltmore Lane | Madison, WI 53718
Office: (608) 458-9316 | Cell: (815) 708-3313
alliantenergy.com | amandathomas@alliantenergy.com

STANDARDS FOR CONDITIONAL USE PERMITS

Applicants must provide adequate evidence demonstrating to the Town and Dane County Zoning & Land Regulation Committee that the proposed conditional use satisfies the following 8 standards for approval, along with any additional standards specific to the applicable zoning district or particular use found in sections [10.220\(1\)](#) and [10.103](#) of the code.

Please explain how the proposed land use will meet the following standards (attach additional pages, if necessary):

- | |
|---|
| 1. The establishment maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety, comfort or general welfare. |
| 2. The uses, values, and enjoyment of other property in the neighborhood for purposes already permitted shall be in no foreseeable manner substantially impaired or diminished by establishment, maintenance or operation of the conditional use. |
| 3. The establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district. |
| 4. Adequate utilities, access roads, drainage and other necessary site improvements have been or are being made to accommodate the conditional use. |
| 5. Adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets. |
| 6. That the conditional use shall conform to all applicable regulations of the district in which it is located. |
| 7. The conditional use is consistent with the adopted town and county comprehensive plans. |
| 8. If the conditional use is located in a Farmland Preservation (FP) Zoning district, the conditional use is subject to the following additional standards found in section 10.220(1). Attach additional pages, if necessary. <ul style="list-style-type: none">• Explain how the use and its location in the Farmland Preservation Zoning District are consistent with the purposes of the district:
• Explain how the use and its location in the Farmland Preservation Zoning district are reasonable and appropriate, considering alternative locations:
• Explain how the use is reasonably designed to minimize the conversion of land from agricultural use or open space use:
• Explain how the use does not substantially impair or limit the current or future agricultural use of surrounding parcels zoned for agricultural use:
• Explain how construction damage to land remaining in agricultural use is minimized and repaired, to the extent feasible: |

WRITTEN STATEMENT OF INTENT AND OPERATIONS PLAN

Applicants must provide a detailed written statement of intent describing the proposed conditional use along with an operational plan that explains how the conditional use will be operated. Please use the form below and provide responses, as applicable, to your proposed conditional use. Attach additional pages, if necessary.

Describe in detail the proposed conditional use. Provide the specific location of the use(s), type of equipment used, planned property improvements, including description / size of existing or proposed new buildings to be used, and any other relevant information. For existing or proposed commercial operations, provide the name of the business and describe the nature and type of business activity.
List the proposed days and hours of operation.
List the number of employees, including both full-time equivalents and maximum number of personnel to be on the premises at any time.
List any anticipated noise, odors, dust, soot, runoff or pollution associated with the conditional use, along with any proposed measures that will be taken to mitigate impacts to neighboring properties.
Describe any materials proposed to be stored outside and any activities, processing or other operations taking place outside an enclosed building.
For proposals involving construction of new facilities and/or infrastructure, describe, as applicable, any measures being taken to ensure compliance with county stormwater and erosion control standards under Chapter 11 of Chapter 14 , Dane County Code.
List and describe existing or proposed sanitary facilities, including adequate private onsite wastewater treatment systems, associated with the proposed conditional use. For uses involving domestic pets or livestock, list and describe measures taken to address manure storage or management.
List and describe any existing or proposed facilities for managing and removal of trash, solid waste and recyclable materials.
Describe anticipated daily traffic, types and weights of vehicles, and any provisions, intersection or road improvements or other measures proposed to accommodate increased traffic.
Provide a listing of any hazardous, toxic or explosive materials to be stored on site, and any spill containment, safety or pollution prevention measures.
Describe any existing or proposed outdoor lighting along with any measures that will be taken to mitigate light-pollution impacts to neighboring properties. The Zoning Administrator may require submittal of a photometric plan for outdoor lighting if deemed necessary to determine potential impacts to neighbors.
Describe any existing or proposed signage, including size, location, and materials, consistent with the county's sign ordinance found in s. 10.800 .
Briefly describe the current use(s) of the property on which the conditional use is proposed.
Briefly describe the current uses of surrounding properties in the neighborhood.

APPLICATION CHECKLIST FOR A CONDITIONAL USE PERMIT

A scaled site plan and detailed operations plan must be submitted with your Conditional Use Permit application. Please use the checklist below to ensure you are submitting all required information applicable to your request. Please attach to your application form the required maps and plans listed below, along with any additional pages.

SCALED SITE PLAN. Show sufficient detail on 11" x 17" paper. Include the following information, as applicable:

- Scale and north arrow.
- Date the site plan was created.
- Existing subject property lot lines and dimensions.
- Existing and proposed wastewater treatment systems and wells.
- All buildings and all outdoor use and/or storage areas, existing and proposed, including provisions for water and sewer.
- All dimension and required setbacks, side yards and rear yards.
- Location and width of all existing and proposed driveway entrances onto public and private roadways, and of all interior roads or driveways.
- Location and dimensions of any existing utilities, easements or rights-of-way.
- Parking lot layout in compliance with s. [10.102\(8\)](#).
- Proposed loading/unloading areas.
- Zoning district boundaries in the immediate area. All districts on the property and on all neighboring properties must be clearly labeled.
- All relevant natural features, including navigable and non-navigable waters, floodplain boundaries, delineated wetland areas, natural drainage patterns, archeological features, and slopes over 12% grade.
- Location and type of proposed screening, landscaping, berms or buffer areas if adjacent to a residential area.
- Any lighting, signs, refuse dumpsters, and possible future expansion areas.

NEIGHBORHOOD CHARACTERISTICS. Describe existing land uses on the subject and surrounding properties:

- Provide a brief written statement describing the current use(s) of the property on which the conditional use is proposed.
- Provide a brief written statement documenting the current uses of surrounding properties in the neighborhood.

OPERATIONS PLAN AND NARRATIVE. Describe in detail the following characteristics of the operation, as applicable:

- Hours of operation.
- Number of employees, including both full-time equivalents and maximum number of personnel to be on the premises at any time.
- Anticipated noise, odors, dust, soot, runoff or pollution and measures taken to mitigate impacts to neighboring properties.
- Descriptions of any materials stored outside and any activities, processing or other operations taking place outside an enclosed building.
- Compliance with county stormwater and erosion control standards under [Chapter 11](#) of [Chapter 14](#), Dane County Code.
- Sanitary facilities, including adequate private onsite wastewater treatment systems and any manure storage or management plans approved by the Madison and Dane County Public Health Agency and/or the Dane County Land and Water Resources Department.
- Facilities for managing and removal of trash, solid waste and recyclable materials.
- Anticipated daily traffic, types and weights of vehicles, and any provisions, intersection or road improvements or other measures proposed to accommodate increased traffic.
- A listing of hazardous, toxic or explosive materials stored on site, and any spill containment, safety or pollution prevention measures taken.
- Outdoor lighting and measures taken to mitigate light-pollution impacts to neighboring properties.
- Signage, consistent with section [10.800](#).

ADDITIONAL MATERIALS. Additional information is required for certain conditional uses listed in s. [10.103](#):

- Agricultural entertainment, special events, or outdoor assembly activities anticipating over 200 attendees must file an [event plan](#).
- [Domestic pet](#) or [large animal boarding](#) must provide additional information in site and operations plans.
- Communication towers must submit additional information as required in s. [10.103\(9\)](#).
- Farm residences proposed in the FP-35 district must submit additional information as required in s. [10.103\(11\)](#).
- Mineral extraction proposals must submit additional information as required in s. [10.103\(15\)](#).



September 14, 2022

Dane County Department of Planning and Development
Zoning Division
Room 116, City-County Building
210 Martin Luther King Jr. Blvd.
Madison, Wisconsin 53703

**Subject: Conditional Use Permit Application – 3725 Schneider Drive, Stoughton, Wisconsin
Alliant Energy & UW-Madison Kegonsa Research Campus Solar and Agricultural Research Project**

Dear Members of the Department of Planning and Development,

We are writing to share our support for the application for conditional use at the Kegonsa Research Campus. The University of Wisconsin-Madison (UW-Madison) Offices of Sustainability and Campus Planning and Landscape Architecture have been collaborating with Wisconsin Power and Light (WPL), to plan for the above referenced project. The proposed facility will be developed, operated and maintained by WPL on leased land owned by the Board of Regents of the University of Wisconsin System.

The University of Wisconsin-Madison works toward the development and implementation of sustainable practices under the Chancellor's Second Nature Resilience Commitment and the Sustainability Tracking, Assessment and Rating System, both of which build from a rich legacy of resource stewardship. The proposed solar facility, to be co-located with agricultural research and education, would provide valuable opportunities for UW-Madison faculty, staff and students. We believe it would be an excellent example of the Wisconsin Idea at work.

Please contact either of us if you have any questions or would like further information.

Sincerely,

Josh Arnold, JD, MBA, LEED AP
Campus Energy Advisor
UW-Madison Office of Sustainability
josh.arnold@wisc.edu
608-870-0766

Aaron Williams, PLA, ASLA
Interim Director
Campus Planning & Landscape Architecture
aaron.williams@wisc.edu
608-263-3023

Exhibit A

Standards for Conditional Use Permits

- 1. The establishment maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety, comfort or general welfare.**

The solar facility will not have a negative effect or be detrimental to, or endanger public health, safety, comfort or general welfare. The facility will have a positive impact by providing clean energy to the surrounding area, hosting agricultural research to advance understanding of how installing a small solar facility impacts land, water, air, plants and wildlife in the area. The inclusion of agricultural research at the facility will benefit both the University and the community by offering an educational opportunity for UW-Madison faculty and students and to raise awareness for the general public, solar developers and agricultural landowners about how solar and agriculture can be located together to create multiple value streams for stakeholders.

The facility will advance UW-Madison renewable energy and climate goals and will provide renewable energy to Alliant Energy customers. An Environmental Impact Assessment (EIA) was completed in March/April 2022 resulting in a Finding of No Significant Impact (FONSI). The full report can be found on the UW-Madison Office of Sustainability project website (<https://sustainability.wisc.edu/strategic-initiatives/renewable-energy/kegonsa-research-campus/>).

- 2. The uses, values, and enjoyment of other property in the neighborhood for purposes already permitted shall be in no foreseeable manner substantially impaired or diminished by establishment, maintenance or operation of the conditional use.**

The solar facility will not substantially impair or diminish the uses, values, and enjoyment of other property in the neighborhood. The facility location was chosen in part to create the lowest impact to the surrounding neighborhoods and roads. The facility is set back over ~~800 feet~~ from Schneider Drive for low visibility from surrounding neighbors and drivers on Schneider Drive or Greene Road. The facility is located to avoid impacting wetlands and natural areas to the south. Surrounding land, currently used for agricultural production, will continue as such.

See revised plans

- 3. The establishment of the conditional use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.**

The solar facility will not impede the normal and orderly development and improvement of the surrounding property. The proposed project site is zoned Transitional Agriculture (AT-35) and General Farmland Preservation (FP-35). Activities at the UW-Madison Physical Sciences Lab (PSL) would not be adversely impacted by the solar facility. The solar facility would create a synergy with work conducted at PSL. Surrounding land currently used for agricultural production, will continue as such.

4. Adequate utilities, access roads, drainage and other necessary site improvements have been or are being made to accommodate the conditional use.

See revised plans

The project will include construction of an approximately ~~1,000-foot-long~~ gravel access road from Schneider Drive to the solar facility. Employees will not be stationed at the facility full-time. When employees are at the facility, they will park vehicles within the facility fence. UW-Madison personnel who will access the facility will do so from the existing PSL parking lot on Schneider Drive. Any necessary improvements for site drainage will be included in the project scope. Public water and sanitary sewer are not required for the facility. An 8-foot woven wire and wooden post deer exclusion fence will be installed surrounding the perimeter of the facility for security.

5. Adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.

See revised plans

The solar facility will include adequate measures for ingress and egress. All ingress and egress will be from the 15-foot wide gravel access road ~~from Schneider Drive~~. Vehicle traffic will be at its most during the construction phase. Water trucks for dust and street sweepers for tracking debris will be used on an as-needed basis to keep the public streets clean.

6. That the conditional use shall conform to all applicable regulations of the district in which it is located.

The solar facility is located in zoning districts Agricultural Transition (AT-35) and General Farmland Preservation (FP-35), which renewable energy electricity generators are an approved conditional use under Section 10.231(3) and 10.222(3) respectively. All requirements for setbacks, height, and any accessory buildings or structures will be met.

7. The conditional use is consistent with the adopted town and county comprehensive plans.

The solar facility is consistent with the Town of Dunn comprehensive plan and the Town of Dunn Solar Ordinance (Ordinance No. 11-25, An Ordinance for Regulating Solar Panels) supports the use of land for electric generating facilities. All criteria of the Solar Ordinance will be met. See Exhibit D for more information.

8. If the conditional use is located in a Farmland Preservation (FP) Zoning district, the conditional use is subject to the following additional standards found in section 10.220(1). Attach additional pages, if necessary.

- Explain how the use and its location in the Farmland Preservation Zoning District are consistent with the purposes of the district:

Renewable energy electricity generation is an approved conditional use in the General Farmland Preservation (FP-35) Zoning district. The location will meet setback requirements, height limits and other requirements of the district. The facility will support agricultural research at the location, including monitoring soil and groundwater impacts, pollinator activities and measuring impacts of different ground cover on soil quality. Surrounding areas currently used for commercial agricultural production, will continue as such.

- Explain how the use and its location in the Farmland Preservation Zoning district are reasonable and appropriate, considering alternative locations:

The proposed location is well suited for a solar facility due to its proximity to existing electrical distribution on Schneider Drive and a south-facing slope to optimize electricity production. The location is set back in the interior of the property to have limited visibility from neighbors and from drivers along Schneider Drive or Greene Road. The facility avoids impacting prime agricultural lands, wetlands and natural areas to the south. The facility will be co-located with agricultural research with researchers from the UW-Madison. The facility will positively impact sustainability goals of the UW-Madison and Alliant Energy.

- Explain how the use is reasonably designed to minimize the conversion of land from agricultural use or open space use:

The solar facility is designed as an efficient use of land while still allowing access to the surrounding area for commercial agricultural production. The facility location was coordinated with UW-Madison and included feedback from the existing commercial agriculture tenant. At the end of the lease, equipment will be decommissioned, removed and the site returned to pre-development conditions to the extent practicable.

- Explain how the use does not substantially impair or limit the current or future agricultural use of surrounding parcels zoned for agricultural use:

As stated above, the solar facility was located to maximize the access and use of the surrounding agricultural land for crop production. The use of pollinator-friendly habitat will contribute to healthy crop production.

- Explain how construction damage to land remaining in agricultural use is minimized and repaired, to the extent feasible:

The solar facility will have a gravel access road for ingress and egress reducing the impact to the surrounding active agricultural land. A designated laydown area will be used to store all equipment and materials and returned to previous agricultural use once the facility is operational. At the end of the lease, equipment will be decommissioned, removed and the site returned to pre-development conditions to the extent practicable.

Exhibit B

Written Statement of Intent and Operations Plan

Project Team and Summary

The project development team consists of Wisconsin Power and Light Company (WPL), a subsidiary of Alliant Energy, in partnership with the University of Wisconsin System Administration (UWSA), the University of Wisconsin Madison (UW-Madison), and the Board of Regents of the University of Wisconsin System, as the property owner. WPL is proposing to develop, operate and maintain a 2.25-megawatt AC photovoltaic solar facility in the Town of Dunn, Wisconsin. The project team plans to co-locate the solar array with agricultural research conducted by researchers at the UW-Madison. Proposed research may include areas related to monitoring soil and water quality, groundwater runoff, pollinators and pollinator habitats, and energy production, among others. Additionally, the site will be used for educational purposes for UW-Madison students and faculty.

The project is part of Alliant Energy's Customer Hosted Renewables Program which enables customers with available land to host solar facilities and receive lease payments and renewable energy credits. The project also furthers Alliant Energy's goals to achieve net-zero carbon dioxide emissions from the electricity it generates by 2050. The initial lease is for 25 years, with options to renew for up to three (3) five-year terms. The project team is seeking approval of its Conditional Use Permit application for the maximum lease term of 40 years.

The University of Wisconsin-Madison works toward the development and implementation of sustainable practices under the Second Nature Resilience Commitment and the Sustainability Tracking Assessment and Rating System, both of which build from a rich legacy of resource stewardship. This proposed project supports the institution's mission and planning principles by guiding campus development in a way that gives physical form to the university's mission, vision, and programs through the effective use of human, environmental, and financial resources. Creating a solar photovoltaic site for agricultural research and education would promote studies in the co-location of agricultural activities and renewable energy (i.e., "agrivoltaics") by providing research and educational opportunities for UW-Madison faculty and students. The proximity of the Physical Sciences Lab to the site provides an opportunity to advance goals beneficial for both parties. Programming elements of the facility would integrate with cross-disciplinary research and academic programs at UW-Madison, including through the College of Agricultural and Life Sciences (CALS), College of Engineering, Nelson Institute for Environmental Studies, UW-Extension, Office of Sustainability. Annual lease payments received by UW-Madison from this proposed project are planned to be reinvested in UW-Madison renewable energy and sustainability initiatives. Renewable Energy Credits (RECs) generated at the site would be retired by UW-Madison in lieu of some lease payments.

Project Location

The UW Board of Regents own approximately 280-acres of land along both the northern and southern sides of Schneider Drive in the Town of Dunn, approximately ½ mile west of Lake Kegonsa. Most of this land is leased for private commercial agricultural production. The proposed project site is located on property referred to as UW Kegonsa Research Campus (KRC), near 3725 Schneider Drive, west of Highway Hwy 51 and Lake Kegonsa between McFarland and Stoughton in the Town of Dunn, Dane County, Wisconsin. The overall KRC site includes the Physical Sciences Lab (PSL), a research and development laboratory that specializes in the design, engineering, and construction of equipment used all over the world, as well as several other university research buildings and uses. The PSL employs approximately 45 employees. Adjacent to the PSL is the property that is currently leased for private commercial agricultural use by a regional farmer, who has planted and harvested corn or soybeans (rotating crop seasons) for the last 20 years on this site. Currently, no collaborative uses exist along with this private commercial agriculture use with mission-driven research at the UW. This use is consistent with the other UW-owned properties on both the south and north sides of Schneider Drive. A residential development, the Bay View Heights neighborhood, is located on an adjacent parcel to the east.

The proposed project area (up to 15-acres) that would contain the solar facility is south-facing and provides an optimum orientation for maximizing solar energy capture. The northernmost boundary of this area is approximately 800-feet south of Schneider Drive, providing low visibility from surrounding neighbors and drivers on Schneider Drive or Greene Road. The northern portion and other areas of the property not included in this development would continue as currently used. The facility is located to avoid impacting prime agricultural lands, wetlands and natural areas to the south. The surrounding area is mixed agricultural and residential with agricultural cropland to the north, west, and east of the project area.

Project Site Improvements

The solar facility will consist of ground mounted photovoltaic solar panels on a racking system comprising of driven steel piles. The project will include an extended electrical distribution line to be located underground to a connection point on a three-phase power pole owned by the UW at the corner of Dyreson Road and County Highway B. A new three-phase electrical line and fiber optics line to an interconnection point along US Highway 51 is incidental to this project and will be paid for by Alliant Energy. The perimeter of the facility will be surrounded by an 8-foot woven wire and wooden post deer exclusion fence for security. An approximately ~~1,000-foot-long~~ gravel access road ~~from Schneider Drive~~ will be constructed to access the facility and major equipment. Final design and equipment selections have not yet been made but will include inverters, switchgear, controls/monitoring cabinets and main power transformer. The site will be vegetated with pollinator friendly, low growth native species.

See revised plans

The Town of Dunn adopted a Solar Ordinance (Ordinance No. 11-25, An Ordinance for Regulating Solar Panels) on February 21, 2022. The Project development team has been in communication with Town of

Dunn Staff to ensure the design of the facility is consistent with the criteria therein. Further details on the Ordinance are described in Exhibit D.

Erosion Control and Stormwater Management

Surface water runoff from the proposed site work will be controlled during the construction phase. Silt fences and other runoff/siltation devices will be utilized during construction activities per construction best management practices (Wisconsin Administration Code Chapter NR 151 Runoff Management and NR 216 Stormwater Discharge Permits) to minimize environmental impacts of the project. A complete Storm Water Management Report and Storm Water Pollution Prevention Plan will be submitted.

Lighting and Signage

No outdoor lighting is planned for the facility. Electrical warning signs will be placed along the security fence and at the facility entrance. Additional signage will be placed at the facility entrance indicating ownership by WPL and that the facility should not be entered by unauthorized personnel.

Operations and Maintenance

The facility will not have any permanent onsite employees. Operations will be during daylight hours and monitored remotely utilizing WPL's supervisory control and data acquisition (SCADA) system. Access for inspections and maintenance will be performed periodically as required. Photovoltaic solar arrays are relatively quiet and do not produce any odors, dust, soot, runoff or other pollutions. UW-Madison will maintain research equipment at or near the site and coordinate research and/or educational visits with WPL. There will not be any enclosed buildings at the site, nor are sanitary facilities or onsite wastewater treatment required.

Decommissioning

At the end of the lease, the facility and associated components will be decommissioned and removed from the project site. This includes the photovoltaic panels, above ground wiring, piles, racking system, underground electric cabling and conduit, electrical equipment and access road. The project site vegetation will be restored to pre-development conditions to the extent practicable.

Exhibit C

See revised
Exhibit C

Project Boundary Legal Description

Parcel Numbers:

028/0610-271-8000-4

028/0610-271-9500-7

The land is described as follows:

The East One Half of the Northeast One Quarter (E ½ of the NE ¼) of Section Twenty-Seven (27), Town Six (6) North, Range Ten (10) East; Town of Dunn, Dane County, Wisconsin

Subject to the existing highways, easements, and restrictions of record and applicable zoning laws and ordinances.



Exhibit D
Town of Dunn Solar Ordinance

Town of Dunn Solar Ordinance (Ordinance No. 11-25, An Ordinance for Regulating Solar Panels) was adopted February 21, 2022. Prior to construction of the facility, the project team will apply for a solar license. Requirements for applying for a solar license are outlined on the Town of Dunn website (<https://dunn.civicweb.net/document/21038/Ordinance%2011-25%20v.%2010-15-21.docx?handle=41999747B9B040B9B1AB30AD5B890AA3>).

The criteria developed by the Town of Dunn to evaluate a solar production facility application (like that being proposed here) is noted below.

Criteria	How Proposed Project Meets Criteria	Reference
Post-construction vegetative ground cover to allow storm water filtration	Vegetative ground cover is planned for the site after construction is complete	Sec 11-25-7 Criteria for Review (a)(1)
Comply with local, state and federal environmental requirements including storm water management	The project will comply with local, state and federal environmental requirements; an Erosion Control and Stormwater Management Plan/Permit will be filed with Dane County.	Sec 11-25-7 Criteria for Review (a)(2)
Project equipment removal at end of project	Upon project decommissioning, site will be returned to pre-development conditions to the extent practicable.	Sec 11-25-7 Criteria for Review (a)(3)
Buffered and screened from public view	Proposed location minimizes views from surrounding roads such as Schneider Drive and Greene Road. Surrounding crops and trees will screen most views from neighbors.	Sec 11-25-7 Criteria for Review (c)(1)
On 5 or more total acres of Group I or Group II soils Land Evaluation and Site Assessment (LESA)	The site location avoids most prime agricultural soils.	Sec 11-25-7 Criteria for Review (c)(2)
System and supportive infrastructure meets the siting standards of Town of Dunn Comprehensive Plan	Interconnection will be underground to existing distribution grid along Schneider Drive. Access will be through a driveway off of Schneider Drive	Sec 11-25-7 Criteria for Review (c)(3)
Construction and operation avoid adverse impacts to town roads	Vehicle traffic will be at its most during the construction period. Water trucks for dust and street sweepers for tracking debris will be used on an as-needed basis to keep the public streets clean	Sec 11-25-7 Criteria for Review (c)(4)

Operations refrain from causing excessive light onto neighboring property	No outdoor lighting is planned for the facility	Sec 11-25-7 Criteria for Review (c)(5)
Night lighting for security and worker safety	Operations and maintenance of the facility will take place during daylight hours	Sec 11-25-7 Criteria for Review (c)(6)
Control off-site noise levels during construction and during operations	Construction noise will be controlled with primary hours of construction within 7am – 7 pm. Facility components will make less than 60 dBA at 1 meter while operating.	Sec 11-25-7 Criteria for Review (c)(7)
Hazardous chemicals or materials	No hazardous chemicals or materials are planned for the facility	Sec 11-25-7 Criteria for Review (c)(8)
Avoid negative impacts on environmental, wildlife habitat, architectural, archeological, cultural or other resources	Environmental Impact Assessment conducted in March/April 2022; resulted in Finding of No Significant Impact	Sec 11-25-7 Criteria for Review (c)(9)
Plant pollinator-friendly vegetation as ground cover	Pollinator-friendly vegetation ground cover is planned after construction is complete	Sec 11-25-7 Criteria for Review (c)(10)
Avoid areas used for crop production or the large-scale removal of topsoil, mature trees and woodlands	Minimal site grading is expected in construction of the facility	Sec 11-25-7 Criteria for Review (c)(11)
Utility wires located underground	Interconnection will be underground to existing distribution grid along Schneider Drive	Sec 11-25-7 Criteria for Review (c)(12)

Exhibit E

Project Activities to Date

Informal Communications with Stakeholders (2020 – Today)

Initial planning for this project started in 2020, project representatives from UW-Madison and Alliant Energy have shared informal project updates with interested parties, including staff from the Town of Dunn, Dane County Zoning and Land Regulation staff, local and statewide nonprofit organizations and individuals and neighbors near the proposed project site.

Public Information Meeting – March 10, 2022

UW-Madison hosted a public information meeting online via zoom. The meeting was recorded and is available along with other information and archived materials on the UW-Madison Office of Sustainability project website (<https://sustainability.wisc.edu/strategic-initiatives/renewable-energy/kegonsa-research-campus/>).

Environmental Impact Assessment and Finding of No Significant Impact – March/April 2022

University of Wisconsin System Administration assessed the environmental impacts of the proposed development of a 2.25 megawatt (MW) solar array co-located with agricultural research on the Kegonsa Research Campus (KRC), located in the Town of Dunn, Dane County, Wisconsin, pursuant to Wisconsin Statutes 1.11, and the University of Wisconsin System Administration's (UWSA) guidelines (Board of Regents' Resolution 2508, November 6, 1981). The Wisconsin Department of Natural Resources, State Historical Society, and U.S. Fish and Wildlife Agency among others, did not identify any key issues for their specific agency in the immediate vicinity of the project site. An Environmental Impact Assessment (EIA) addressed the direct, indirect, and cumulative impacts that would result from implementing the proposed action and compared to alternatives including the 'no action' alternative. A scoping letter detailing the project was sent to public and public agencies prior to development of the EIA on February 10, 2022; and the EIA was made available to interested public agencies and members of the public affected by the proposed action on March 10, 2022. Copies of the EIA were made available for review at the E.D. Lock Public Library, Stoughton Public Library and online and by request from Ayres Associates, 5201 E. Terrace Drive, Suite 200, Madison, WI 53718. Comments received during the 15-day public availability of the EIA were incorporated into the Final EIA. The key areas of potential concern that were addressed included physical and biological impacts to air quality, noise, ecology, as well as, socioeconomics, archaeological and historical, and visual resources in the region of interest. The potential risks and benefits from the proposed action and alternatives were weighed in making this decision. The EIA included the necessary supporting information for a determination that adoption of the proposed action would not constitute a major action that would significantly affect the quality of the human environment, considering the context and intensity of impacts, resulting in a Finding of No Significant Impact (FONSI). A public meeting was held on March 24, 2022, to receive public input. The FONSI and EIA documents are available on the project website.

Agriculture and Solar Symposium – April 18, 2022

UW-Madison Office of Sustainability hosted a research symposium to bring students, faculty and community organizations together to learn about the project from the project team. Over 100 people attended the event held in person and online. Information and a video from the meeting are available on the project website.

PV SYSTEM DETAILS

ARRAY TYPE:	GROUND MOUNT FIXED TILT
DC SYSTEM SIZE:	2.843 MW DC
DC SYSTEM VOLTAGE:	1500 V
AC SYSTEM SIZE:	2.25 MW AC
MODULES	(4,374) CANADIAN SOLAR CS7N-650MB-AG
INVERTERS:	(18) SUNNY HIGHPOWER PEAK3 125-US
OPTIMIZERS:	N/A
RACKING:	RBI SOLAR
CLAMPS:	N/A
AZIMUTH:	180°
ARRAY PITCH:	32'-3"
ARRAY TILT:	25°

ALLIANT UW KEGONSA (42.95762, -89.29236)

INSPECTION ITEMS

CONTRACTOR SHALL STRICTLY ADHERE TO THE FOLLOWING CODE STANDARDS UNLESS OTHERWISE NOTED WITHIN THE DRAWING; NEC. 2017, IBC. 2015, IFC. 2015 AND APPLICABLE LOCAL CODES.

PROGRESS INSPECTIONS:

ROUGH ELECTRIC:	<input type="checkbox"/> REQUIRED	<input type="checkbox"/> NOT REQUIRED
ROUGH BUILDING:	<input type="checkbox"/> REQUIRED	<input type="checkbox"/> NOT REQUIRED

FINAL INSPECTIONS:

ELECTRIC:	<input type="checkbox"/> REQUIRED	<input type="checkbox"/> NOT REQUIRED
BUILDING:	<input type="checkbox"/> REQUIRED	<input type="checkbox"/> NOT REQUIRED
OTHER:	<input type="checkbox"/> REQUIRED	<input type="checkbox"/> NOT REQUIRED

CONTRACTOR SHALL BE KNOWLEDGEABLE OF ANY LOCAL AHJ INSPECTIONS REQUIRED NOT LISTED.



Developing • Renewable • Relationships
 (262) 547-1200 www.sunvest.com
N27 W24025 PAUL CT. SUITE 100
PEWAUKEE, WI 53072
PHONE: (262)-547-1200
WWW.SUNVEST.COM

SCOPE OF WORK

- CONTRACTOR SHALL ACCEPT, VERIFY AND INSTALL ALL MATERIAL AS LISTED ABOVE AND ON THE B.O.M. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DEVELOPER IMMEDIATELY.
- ALL EQUIPMENT AND MATERIAL SHALL BE INSTALLED AS PER MANUFACTURES GUIDELINES SET FORTH IN THE INSTRUCTION MANUAL AND AS PER NEC. 110.
- CONTRACTOR SHALL PROVIDE PROTECTIVE MATERIALS TO PREVENT DAMAGE TO EXISTING BUILDINGS OR EQUIPMENT AND PROPOSED BUILDINGS OR EQUIPMENT.
- CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SITE WALK AT LEAST 5 DAYS PRIOR TO MOBILIZATION TO CONFIRM SITE CONDITIONS, STAGING AREAS AND ANY OTHER SITE SPECIFIC DETAILS REQUIRED. ANY ISSUES SHALL BE PHOTO DOCUMENTED ALONG WITH A WRITTEN REPORT AND PROVIDED IMMEDIATELY TO THE NECESSARY PARTIES.
- IF DEVELOPER IS NOT CALLED, CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL TESTING/INSPECTION REQUIRED TO APPROVE SITE AT ENGINEERS DISCRETION.
- PRIOR TO FINAL SIGN-OFF THE CONTRACTOR SHALL PROVIDE A LETTER OF COMPLIANCE FOR THE WORK DONE. THE LETTER MUST REFERENCE THAT THE WORK WAS DONE IN ACCORDANCE TO THE DRAWINGS AND IN COMPLIANCE WITH THE CODE OF THE APPLICABLE AUTHORITY HAVING JURISDICTION.

LOCATION MAP



NOTES

- THE APPLICANT PROPOSES TO INSTALL PV MODULES AND WEATHER PROOF EQUIPMENT FOR AN UNMANNED FACILITY.
- EQUIPMENT IS UNMANNED AND NOT FOR HUMAN HABITATION, HANDICAP ACCESS IS THEREFORE NOT REQUIRED.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. NON-CONFORMING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND DEVELOPER FOR REMEDIAL OR CORRECTIVE ACTION.
- DEVELOPMENT AND USE OF THE SITE WILL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.

DISCLAIMER

IT IS A VIOLATION OF THE LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT. UNLESS EXPLICITLY AGREED TO BY THE ENGINEER IN WRITING, THE ENGINEER DISCLAIMS ALL LIABILITY ASSOCIATED WITH THE REUSE, ALTERATION OR MODIFICATION OF THE CONTENTS HEREIN.

LICENSED ELECTRICAL ENGINEER certifies that they prepared all the electrical "E" sheets in this drawing set.
 LICENSED STRUCTURAL ENGINEER certifies that they prepared all of the structural "S" sheets in this drawing set.
 LICENSED CIVIL ENGINEER certifies that they prepared all of the civil "C" sheets in this drawing set.
 It should be noted that any plan sheets not identified above have been prepared and certified by others and have been included herein for informational purposes only.

SITE INFORMATION

PROPERTY OWNER:	
POWER COMPANY:	
PROJECT MANAGER:	PHONE:
APPROX LEASED SQ FT:	
TAX ID:	

AERIAL MAP



DWG NO: DRAWING INDEX SHEET TITLE

T-1.00	TITLE SHEET
GN-1.00	GENERAL NOTES
GN-2.00	GENERAL NOTES
PV-1.00	ARRAY LAYOUT
E-1.00	ONE-LINE DIAGRAM
E-4.00	SPEC SHEETS
E-5.00	NEC LABELS

10		20	
9		19	
8		18	
7		17	
6		16	
5		15	
4		14	
3		13	
2		12	
1	09/13/2022	11	
REV	SET/DATE	REV	SET/DATE
DRAWN BY: SR		CHECKED BY: RA	
SCALE: AS NOTED		JOB NO: JOB_NO	

ALLIANT
 UW KEGONSA
 (42.957620,-89.292360)

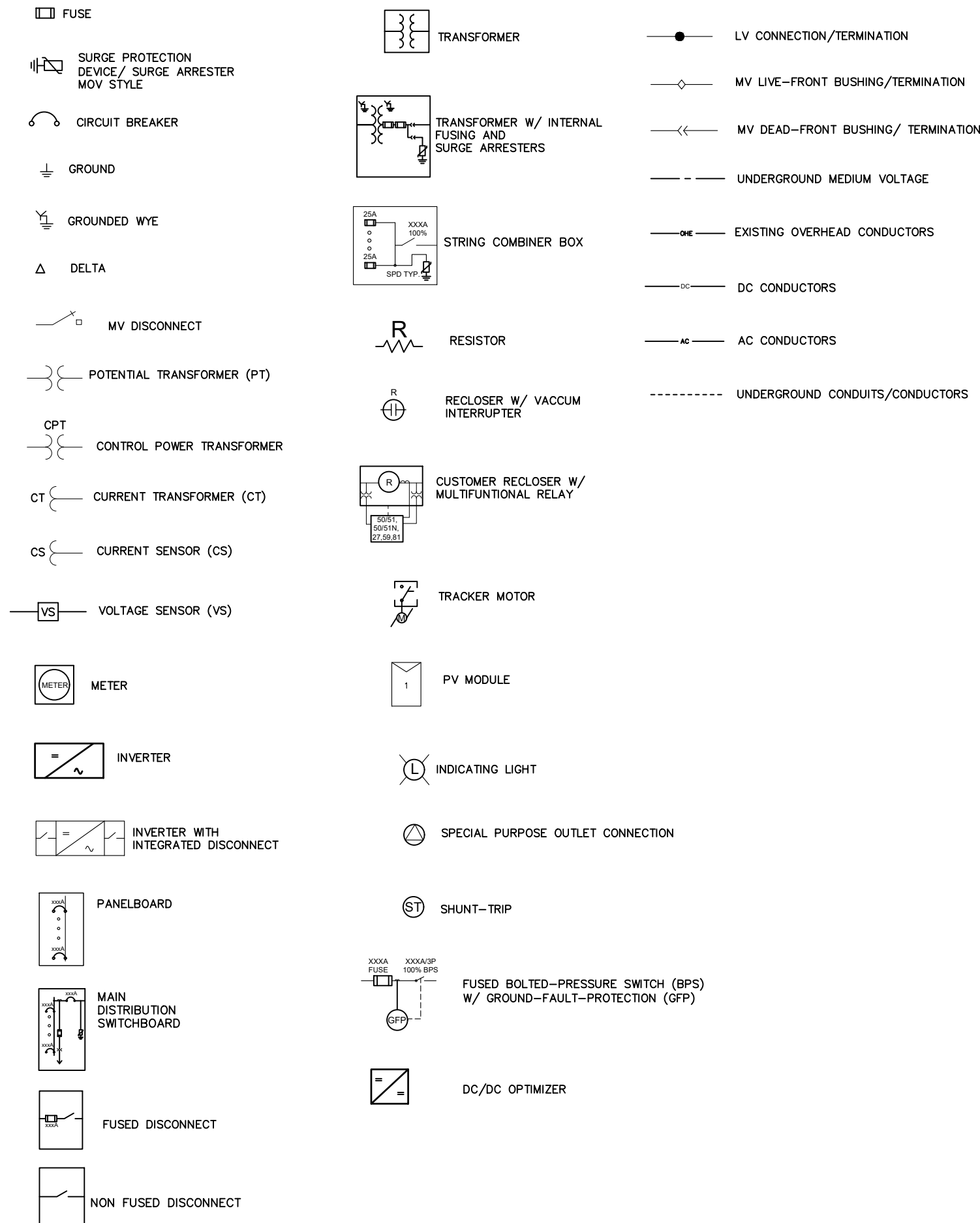
SHEET TITLE
 TITLE SHEET

DWG. NO.
T-1.00

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE DEVELOPER OR ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SYMBOL LEGEND:



GENERAL NOTES:

1. GENERAL REQUIREMENTS:

- 1.1 THE WORK TO BE DONE UNDER THIS PROJECT INCLUDES PROVIDING ALL EQUIPMENT, MATERIALS, LABOR AND SERVICES NOT INCLUDED IN THE B.O.M, AND PERFORMING ALL OPERATIONS FOR COMPLETE AND OPERATING SYSTEMS. ANY WORK NOT SPECIFICALLY COVERED BUT NECESSARY TO COMPLETE THIS INSTALLATION, SHALL BE PROVIDED. ALL EQUIPMENT AND WIRING TO BE NEW AND PROVIDED UNDER THIS CONTRACT UNLESS OTHERWISE NOTED.
- 1.2 ENTIRE INSTALLATION, INCLUDING MATERIALS, EQUIPMENT AND WORKMANSHIP, SHALL CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC CODE (NEC) AS WELL AS ALL APPLICABLE LAWS AND REGULATIONS AND REGULATORY BODIES HAVING JURISDICTION OVER THIS WORK:
- 1.3 THE TERM "FURNISH" SHALL MEAN TO OBTAIN AND SUPPLY TO THE JOB SITE. THE TERM "INSTALL" SHALL MEAN TO FIX IN POSITION AND CONNECT FOR USE. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL. THE TERM "CONTRACTOR" SHALL MEAN ELECTRICAL CONTRACTOR.
- 1.4 ONLY WRITTEN CHANGES AND/OR MODIFICATIONS APPROVED BY THE ENGINEER, CONSULTING ENGINEER OR OWNER'S REPRESENTATIVE WILL BE RECOGNIZED.
- 1.5 THE ELECTRICAL CONTRACTOR SHALL SUBMIT, FOR THE ENGINEER'S APPROVAL, DETAILED SHOP DRAWINGS OF ALL EQUIPMENT SPECIFIED.
- 1.6 CONTRACTOR SHALL COORDINATE WITH SPECIFICATIONS PROVIDED BY OTHER TRADES.
- 1.7 PROVIDE OPERATING AND MAINTENANCE MANUALS, PER SPECIFICATIONS, AND GIVE INSTRUCTIONS TO USER FOR ALL EQUIPMENT AND SYSTEMS PROVIDED UNDER THIS CONTRACT AFTER ALL ARE CLEANED AND OPERATING.
- 1.8 KEEP PREMISES FREE FROM RUBBISH. REMOVE ALL ELECTRICAL RUBBISH FROM SITE.
- 1.9 ALL WORK SHALL BE INSTALLED CONCEALED UNLESS OTHERWISE NOTED.
- 1.10 THE WORK SHALL INCLUDE ALL PANELS, DEVICES, FEEDERS AND BRANCH CIRCUIT WIRING AS REQUIRED FOR THE DISTRIBUTION SYSTEM INDICATED AND CALLED FOR ON THE DRAWINGS, REQUIRED BY SPECIFICATIONS AND AS NECESSARY FOR COMPLETE FUNCTIONAL SYSTEMS PRESENTED AND INTENDED.
- 1.11 THE CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR, TOOLS, EQUIPMENT, CONSUMABLES AND SERVICES REQUIRED FOR OBTAINING, DELIVERY, INSTALLATION, CONNECTION, DISCONNECTION, REMOVAL, RELOCATION, REPAIR, REPLACEMENT, TESTING AND COMMISSIONING OF ALL EQUIPMENT AND DEVICES INCLUDED IN OR NECESSARY FOR THE WORK, AS APPLICABLE. THIS INCLUDES SCAFFOLDING, LADDERS, RIGGING, HOISTING, ETC.
- 1.12 ELECTRICAL WORK SHALL INCLUDE ALL REQUIRED CUTTING, PATCHING AND THE FULL RESTORATION OF WALL AND FLOOR STRUCTURE AND SURFACES. ALL EQUIPMENT, WALLS, FLOORS, ETC., DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER, AT THE CONTRACTORS EXPENSE.
- 1.13 BEFORE SUBMITTING HIS BID, THE CONTRACTOR SHALL FULLY AQUAINT HIMSELF/HERSELF WITH THE JOB CONDITIONS AND DIFFICULTIES THAT WILL PERTAIN TO THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE. LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED, WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.
- 1.14 THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING UTILITIES.
- 1.15 UPON COMPLETION OF THE ELECTRICAL WORK, THE CONTRACTOR SHALL TEST THE COMPLETE ELECTRICAL SYSTEM FOR SHORTS, GROUNDS, AND PROPER OPERATION, IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
- 1.16 UPON COMPLETION OF WORK, THE CONTRACTOR SHALL CLEAN AND ADJUST ALL EQUIPMENT AND LIGHTING AND TEST SYSTEMS TO THE SATISFACTION OF OWNER AND ENGINEER. RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- 1.17 THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS OF FINISHED CONSTRUCTION PRIOR TO FABRICATION AND INSTALLATION OF FIXTURES AND EQUIPMENT.
- 1.18 EXACT ROUTING OF CONDUITS AND "MC" CABLES SHALL BE DETERMINED IN THE FIELD.
- 1.19 IF THE OWNER AND/OR HIS REPRESENTATIVE CONSIDERS ANY WORK TO BE INFERIOR, THE RESPECTIVE CONTRACTOR SHALL REPLACE SAME WITH CONTRACT STANDARD WORK WITHOUT ADDITIONAL CHARGE. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE MANNER, LEFT CLEAN AND FREE FROM DEFECTS, AND COMPLETELY OPERABLE.
- 1.20 THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AS SHOWN ON THE DRAWINGS AND/OR AS SPECIFIED. ALL MATERIALS SHALL BE NEW, AND BEAR THE UL LABEL. ALL WORK SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER.
- 1.21 DRAWINGS ARE TO BE CONSIDERED DIAGRAMMATIC, AND SHALL BE FOLLOWED AS CLOSELY AS CONDITIONS ALLOW TO COMPLETE THE INTENT OF THE CONTRACT. THE DRAWINGS AND SPECIFICATIONS COMPLIMENT ONE ANOTHER, AND WHAT IS SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS, AND VICE VERSA, IS TO BE INCLUDED IN THE SCOPE OF WORK.
- 1.22 ALL EQUIPMENT CONNECTIONS SHALL BE INSTALLED PER APPLICABLE SEISMIC REQUIRMENTS.
- 1.23 ENGINEER WILL MAKE A FINAL INSPECTION WITH THE OWNER AND CONTRACTOR AND WILL NOTIFY THE CONTRACTOR IN WRITING OF ALL PARTICULARS IN WHICH THIS INSPECTION REVEALS THAT THE WORK IS INCOMPLETE OR DEFECTIVE. THE CONTRACTOR SHALL IMMEDIATELY TAKE SUCH MEASURES AS ARE NECESSARY TO COMPLETE SUCH WORK OR REMEDY SUCH DEFICIENCIES.
- 1.24 THE CONTRACTOR SHALL PERFORM ALL EXCAVATION, TRENCHING AND BACKFILL REQUIRED FOR ELECTRICAL WORK. BACKFILL SHALL BE SUITABLE MATERIAL PROPERLY COMPACTED TO 95% DENSITY IN EACH LAYER OF SIX (6) INCH DEPTH. CONDUIT SHALL BE MINIMUM 30" BELOW FINISHED GRADE.

Developing • Renewable • Relationships
609.547.1900 www.sunvest.com

N27 W24025 PAUL CT. SUITE 100
PEWAUKEE, WI 53072
PHONE: (262)-547-1200
WWW.SUNVEST.COM

LICENSED ELECTRICAL ENGINEER certifies that they prepared all the electrical "E" sheets in this drawing set.
 LICENSED STRUCTURAL ENGINEER certifies that they prepared all of the structural "S" sheets in this drawing set.
 LICENSED CIVIL ENGINEER certifies that they prepared all of the civil "C" sheets in this drawing set.
 It should be noted that any plan sheets not identified above have been prepared and certified by others and have been included herein for informational purposes only.

10		20	
9		19	
8		18	
7		17	
6		16	
5		15	
4		14	
3		13	
2		12	
1	09/13/2022	11	
REV	SET/DATE	REV	SET/DATE
DRAWN BY: SR		CHECKED BY: RA	
SCALE: AS NOTED		JOB NO: JOB_NO	

ALLIANT
 UW KEGONSA
 (42.957620,-89.292360)

SHEET TITLE
 GENERAL NOTES
 AND SYMBOLS

DWG. NO.
GN-1.00

GENERAL NOTES:

2. PROJECT COORDINATION:

- 2.1 THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS AT THE SITE AND NOTIFY THE OWNER OF ANY DISCREPANCIES, PRIOR TO COMMENCING WITH THE WORK.
- 2.2 THE CONTRACTOR SHALL REVIEW AND COORDINATE WITH THE DOCUMENTS OF ALL TRADES.
- 2.3 THE CONTRACTOR SHALL FURNISH A SCHEDULE INDICATING HIS PORTION OF TIME, WITHIN THE OVERALL SCHEDULE, REQUIRED TO COMPLETE THE WORK, IN CONJUNCTION WITH ALL TRADES. ALL WORK THAT MAY AFFECT OPERATION OF BUILDING SYSTEMS SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE.
- 2.4 SHUT DOWN OF POWER SHALL BE COORDINATED WITH THE OWNER, ARCHITECT AND PROJECT MANAGER AT LEAST 14 WORKING DAYS PRIOR TO SHUT DOWN. SHUT DOWNS LONGER THAN 2 DAYS SHALL BE COORDINATED WITH THE ABOVE PERSONNEL AT LEAST ONE MONTH IN ADVANCE. TEMPORARY POWER FOR CONSTRUCTION SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR FOR SHUT DOWNS OVER 2 DAYS.
- 2.5 ALL CONDUITS AND DEVICE BOXES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR, INCLUDING ALL TECHNOLOGY CONDUITS AND BOXES.
- 2.6 EXACT LOCATIONS OF OUTLETS AND EQUIPMENT SHALL BE COORDINATED WITH ARCHITECTURAL AND MILLWORK PLANS. ALL OUTLET AND EQUIPMENT LAYOUTS SHALL BE VERIFIED AND COORDINATED WITH WORK OF OTHER TRADES.
- 2.7 PROVIDE TEMPORARY LIGHTING AND POWER IN ACCORDANCE WITH ARTICLE 305 OF THE NEC. TEMPORARY LIGHTING FIXTURES IN UNFINISHED AREAS SHALL REMAIN CONNECTED UNTIL REMOVAL IS REQUESTED BY THE CONTRACTOR.
- 2.8 THE CONTRACTOR SHALL CONTACT THE BUILDING MANAGER TO OBTAIN A COPY OF THE GENERAL REQUIREMENTS AND/OR CONDITIONS TO BE USED FOR THIS PROJECT.

3. PROTECTION OF WORK:

- 3.1 EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE ITEMS DAMAGED.

4. WARRANTIES:

- 4.1 ALL MATERIALS AND EQUIPMENT SHALL BE GUARANTEED IN WRITING FOR A MINIMUM OF ONE YEAR AFTER FINAL ACCEPTANCE BY OWNER.
- 4.2 WORKMANSHIP SHALL BE GUARANTEED IN WRITING FOR A MINIMUM OF 5 YEARS AFTER FINAL ACCEPTANCE BY OWNER
- 4.3 OBTAIN AND DELIVER TO THE OWNER'S REPRESENTATIVE ALL GUARANTEES AND CERTIFICATES OF COMPLIANCE.

5. PERMITS:

- 5.1 CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTION FEES FOR ELECTRICAL WORK.

6. RACEWAYS:

- 6.1 ALL CONDUIT SHALL BE MINIMUM SIZE OF 1/2" FOR POWER CIRCUITS AND CONTROL CIRCUITS EXCEPT WHERE FLEXIBLE CONDUIT IS CALLED FOR ON PROJECT DOCUMENTS. ALL EXTERIOR EXPOSED CONDUIT SHALL BE PVC. ALL UNDERGROUND, IN SLAB OR UNDER SLAB SHALL BE SCH. 40 PVC. CHANGE TO SCH. 80 PVC CONDUIT BEFORE EXITING OUT OF UNDERGROUND SECTIONS. EMT IS ALLOWED IN INTERIOR DRY LOCATIONS WHERE NOT SUBJECT TO DAMAGE.
- 6.2 ALL FLEXIBLE CONDUIT IN WET OR DRY AREAS SHALL BE LIQUID TIGHT CONDUIT. NONMETALLIC FLEXIBLE CONDUIT IS SPECIFICALLY PROHIBITED.
- 6.3 CONDUIT SHALL BE RUN AT RIGHT ANGLES AND PARALLEL TO BUILDING LINES, SHALL BE NEATLY RACKED AND SECURELY FASTENED. JUNCTION BOXES SHALL BE PROVIDED WHERE REQUIRED TO FACILITATE INSTALLATION OF WIRES.
- 6.4 ALL CONDUIT AND ELECTRICAL EQUIPMENT SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN AN APPROVED MANNER.
- 6.5 ALL EMPTY RACEWAYS SHALL BE FURNISHED WITH A 200 LB. TEST NYLON DRAG LINE.
- 6.6 ARRANGEMENT OF CONDUIT AND EQUIPMENT SHALL BE AS INDICATED, UNLESS MODIFICATION IS REQUIRED TO AVOID INTERFERENCES.
- 6.7 ALL RACEWAY AND WRING SHALL BE CONCEALED IN FINISHED AREAS. RACEWAY IN MECHANICAL ROOMS, BASEMENTS AND CRAWL SPACES MAY BE SURFACE MOUNTED.
- 6.8 FOR CONDUITS CROSSING EXPANSION JOINTS, PROVIDE EXPANSION FITTINGS FOR SIZE 1-1/4", AND LARGER. PROVIDE SECTIONS OF FLEXIBLE CONDUIT WITH GROUNDING JUMPERS FOR SIZES 1" AND SMALLER.
- 6.9 THE CONTRACTOR SHALL SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS WITH APPROVED FIRE RATED SEALANT. ALL PENETRATIONS THROUGH ALL WALLS AND FLOORS SHALL BE SEALED. FOR ALL SLAB PENETRATIONS THE METHOD, DEPTHS AND LOCATIONS SHALL BE PRE-APPROVED BY THE BUILDING ENGINEER PRIOR TO THE START OF WORK.
- 6.10 THE CONTRACTOR SHALL INSTALL DETECTABLE UNDERGROUND TAPES FOR THE PROTECTION, LOCATION AND IDENTIFICATION OF UNDERGROUND CONDUIT INSTALLATION.
- 6.11 EXACT ROUTING OF CONDUITS AND CABLES SHALL BE DETERMINED IN FIELD.
- 6.12 ALL PENETRATIONS THROUGH FLOORS SHALL BE FIRE STOPPED AND SEALED WITH APPROVED SEALANT.
- 6.13 ELECTRICAL RACEWAY CONNECTIONS TO VIBRATING EQUIPMENT AND MACHINERY, SHALL BE MADE WITH FLEXIBLE LIQUID TIGHT METALLIC CONDUIT.
- 6.14 SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS IN HOLLOW MASONRY, EXPANSION SHIELDS OR INSERTS IN CONCRETE AND BRICK. MACHINE SCREWS IN METAL, BEAM CLAMPS IN FRAMEWORK AND WOOD SCREWS IN WOOD. NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO BUILDING LINES.
- 6.15 DO NOT RUN RACEWAYS CLOSER THAN 6 INCHES WHEN PARALLEL TO HOT WATER OR STEAM PIPES. WHEN CROSSING WATER OR STEAM PIPES CROSS A MINIMUM OF 3 INCHES ABOVE. IF CROSSING BELOW IS UNAVOIDABLE, PROVIDE DRIP SHIELDS EXTENDING 6 INCHES BEYOND THE WATER OR STEAMPIPE. BOXES INSTALLED IN PROXIMITY TO WATER OR STEAM PIPE SHALL BE RATED NEMA 4X.

7. BOXES:

- 7.1 INTERIOR JUNCTION BOXES SHALL BE SHEET STEEL. EXTERIOR JUNCTION BOXES SHALL BE NONMETALLIC, WITH SCREW COVERS. BOXES SHALL BE SUPPORTED INDEPENDENTLY OF CONDUITS.

8. WIRING:

- 8.1 ALL WIRE SHALL BE MADE OF COPPER WITH INSULATION SUITABLE FOR THE APPLICABLE ENVIROMENT AND VOLTAGE. CONTRACTOR SHALL GET APPROVAL FOR ANY OTHER WIRE TYPE.
- 8.2 UNDER NO CIRCUMSTANCES SHALL FEEDERS BE SPLICED.
- 8.3 ALL ELECTRICAL TERMINAL TEMPERATURE RATINGS ASSUMED TO BE 75° C UNLESS SITE CONDITIONS REQUIRE OTHERWISE.
- 8.4 WIRE SIZES SHALL BE INCREASED WHERE NECESSARY TO LIMIT AC VOLTAGE DROP TO 1.5% TOTAL FROM INVERTER TO POINT OF COMMON COUPLING

9. GROUNDING:

- 9.1 PROVIDE A COMPLETE EQUIPMENT GROUND SYSTEM FOR THE ELECTRICAL SYSTEM AS REQUIRED BY ARTICLE 250 AND 690, OF THE NEC, AND AS SPECIFIED HEREIN.
- 9.2 ALL BRANCH CIRCUITS AND FEEDERS FOR POWER WIRING SHALL CONTAIN A COPPER GROUND WIRE. NO FLEXIBLE METAL CONDUIT OF ANY KIND OR LENGTH SHALL BE USED AS THE EQUIPMENT GROUNDING CONDUCTOR.

10. MECHANICAL SYSTEMS POWER:

- 10.1 DISCONNECT SWITCHES SHALL BE HEAVY DUTY, QUICK MAKE, QUICK BREAK TYPE, ENCLOSED IN A HEAVY SHEET METAL ENCLOSURE WITH HINGED INTERLOCKING COVER, IN PROPER NEMA RATED ENCLOSURES. FUSED OR NON-FUSED AS REQUIRED. DISCONNECT SWITCHES SHALL BE PROVIDED BY CONTRACTOR, EXCEPT AS NOTED ON DRAWINGS.
- 10.2 THE RATING FOR DISCONNECT SWITCHES SHALL BE THE SAME AS, OR GREATER THAN, THE PROTECTIVE DEVICE SERVING THE EQUIPMENT.
- 10.3 A STRUT FRAME SHALL BE PROVIDED AT ALL LOCATIONS WHERE STRUCTURE WILL NOT ADEQUATELY SUPPORT EQUIPMENT, OR FOR FREESTANDING EQUIPMENT.

11. PANEL BOARDS:

- 11.1 PANELBOARDS: SWITCHING UNITS SHALL BE 3 PHASE, 4 WIRE CIRCUIT BREAKER TYPE UNLESS OTHERWISE NOTED. BUS BARS SHALL BE HARD DRAWN COPPER, MINIMUM 98% CONDUCTIVITY, AND SILVER OR TIN-PLATED JOINTS. CABINETS SHALL BE GALVANIZED SHEET STEEL BACK BOX, WITH DOOR AND TRIM AND LAPPED AND WELDED CORNERS. HARDWARE SHALL BE CHROME-PLATED WITH FLUSH LOCK/LATCH HANDLE ASSEMBLY (UP TO 48 IN. HIGH DOORS) OR VAULT HANDLE, LOCK AND 3-POINT CATCH (LARGER THAN 48 IN. HIGH DOORS). HINGES SHALL BE SEMI-CONCEALED, 5-KNUCKLE STEEL WITH NONFRERROUS PINS, 180-DEG OPENING, LOCATED A MAXIMUM 26 IN. ON CENTERS. PROVIDE DOOR-IN-DOOR CONSTRUCTION. MINIMUM GUTTER SPACES FOR LIGHTING PANELS SHALL BE 5- BOTTOM. DIRECTORY HOLDER SHALL BE METAL FRAME WITH CLEAR PLASTIC, TRANSPARENT COVER.
- 11.2 PROVIDE A NEW TYPE WRITTEN CIRCUIT DIRECTORY FOR EACH PANEL AFFECTED BY THIS PROJECT.
- 11.3 WHEREVER POSSIBLE, PANELBOARDS SHALL BE RECESSED IN WALL. SURFACE MOUNTED PANELBOARDS SHALL BE MOUNTED ON A PLYWOOD BACKBOARD. PLYWOOD SHALL BE MOUNTED ON TOP OF GYMPSUM BOARD. PLYWOOD SHALL BE PAINTED ON ALL SIDES AND EDGES. COORDINATE WITH OWNER FOR COLOR.
- 11.4 PROVIDE LIGHTNING SURGE PROTECTION FOR MAIN SWITCHBOARD OR MAIN SERVICE PANEL BOAR. PROVIDE GROUNDING OF SURGE DEVICE PER THE NEC.
- 11.5 CONTRACTOR IS RESPONSIBLE FOR BALANCING LOADS ON ALL PHASES AND MAY ALTER ASSIGNMENT OF CIRCUITS FOR BALANCING PHASES.
- 11.6 CIRCUIT SCHEDULES ARE INTENDED TO REPRESENT THE GENERAL WIRING NEEDS OF THE EQUIPMENT SERVICED FROM THE PANEL. THE EXACT CIRCUIT ARRANGEMENT WILL BE DETERMINED BY PANEL SHOP DRAWING AND ARRANGEMENT WILL BE DETERMINED BY PANEL SHOP DRAWING AND PANELS ACTUALLY FURNISHED.

12. IDENTIFICATION:

- 12.1 REFER TO NEC LABELS DRAWING FOR LABELING REQUIREMENTS
- 12.2 INSTALL NAMEPLATES ON ALL MAJOR EQUIPMENT, INCLUDE STARTERS, TRANSFORMERS, PANELBOARDS, DISCONNECT SWITCHES AND OTHER ELECTRICAL BOXES AND CABINETS INSTALLED UNDER THIS CONTRACT.
- 12.3 APPLY CABLE/CONDUCTOR IDENTIFICATION MARKERS ON EACH CABLE AND CONDUCTOR IN EACH BOX, ENCLOSURE OR CABINET.

13. RECORD DRAWINGS:

- 13.1 THE CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF SHOP DRAWINGS. THE APPROVAL OF SHOP DRAWINGS SHALL ONLY BE CONSTRUED TO APPLY TO THE GENERAL LAYOUT AND CONFORMANCE TO THE DESIGN CONCEPT OF THE PROJECT AND FOR THE COMPLIANCE WITH THE GENERAL REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL RETAIN THE RESPONSIBILITY FOR ANY DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- 13.2 PROVIDE SHOP DRAWINGS FOR THE LIGHTING FIXTURES, PANEL BOARDS, CIRCUIT BREAKERS, WIRING DEVICES, FIRE ALARM DEVICES AND SEALS FOR FIRE AND WATER STOPPING.
- 13.3 DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A RECORD SET OF INSTALLATION PRINTS. HE SHALL NEATLY AND CLEARLY RECORD ON THESE PRINTS ALL DEVIATIONS FROM THE CONTRACT DRAWINGS IN SIZES, LOCATIONS AND DETAILS.
- 13.4 UPON PROJECT COMPLETION, THE CONTRACTOR SHALL COMPLETE THE MARK UP OF ALL PROJECT DRAWINGS TO RECORD INSTALLED CONDITIONS.
- 13.5 REPRODUCIBLE "RECORD" DRAWINGS PREPARED IN CAD FORMAT SHALL BE PROVIDED AS INSTALLED CONDITIONS OF THE WORK. A FULL SIZE PRINT OUT OF THE "RECORD" DRAWING FILE SHALL BE PROVIDED AFTER COMPLETION OF THE INSTALLATION.
- 13.6 UPON COMPLETION AND ACCEPTANCE OF WORK, THE CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE THE PROPER OPERATIONS AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.



Developing • Renewable • Relationships
608.547.9000 www.sunvest.com

N27 W24025 PAUL CT. SUITE 100
PEWAUKEE, WI 53072
PHONE: (262)-547-1200
WWW.SUNVEST.COM

LICENSED ELECTRICAL ENGINEER certifies that they prepared all the electrical "E" sheets in this drawing set.
LICENSED STRUCTURAL ENGINEER certifies that they prepared all of the structural "S" sheets in this drawing set.
LICENSED CIVIL ENGINEER certifies that they prepared all of the civil "C" sheets in this drawing set.
It should be noted that any plan sheets not identified above have been prepared and certified by others and have been included herein for informational purposes only.

10		20	
9		19	
8		18	
7		17	
6		16	
5		15	
4		14	
3		13	
2		12	
1	09/13/2022	11	
REV	SET/DATE	REV	SET/DATE
DRAWN BY: SR		CHECKED BY: RA	
SCALE: AS NOTED		JOB NO: JOB_NO	

ALLIANT
UW KEGONSA
(42.957620,-89.292360)

SHEET TITLE

GENERAL NOTES
AND SYMBOLS

DWG. NO.
GN-2.00

*See revised plans
for updated layout
and driveway
information*

LICENSED ELECTRICAL ENGINEER certifies that they prepared all the electrical "E" sheets in this drawing set.
LICENSED STRUCTURAL ENGINEER certifies that they prepared all of the structural "S" sheets in this drawing set.
LICENSED CIVIL ENGINEER certifies that they prepared all of the civil "C" sheets in this drawing set.
It should be noted that any plan sheets not identified above have been prepared and certified by others and have been included herein for informational purposes only.

10		20	
9		19	
8		18	
7		17	
6		16	
5		15	
4		14	
3		13	
2		12	
1	09/13/2022	11	
REV	SET/DATE	REV	SET/DATE
DRAWN BY: SR		CHECKED BY: RA	
SCALE: AS NOTED		JOB NO: JOB_NO	

ALLIANT
UW KEGONSA
(42.957620,-89.292360)

SHEET TITLE
ARRAY LAYOUT

DWG. NO.

PV-1.00

SCHNEIDER DR

ACCESS TO PUBLIC ROADWAY:
TWO-WAY TRAFFIC

UNDERGROUND FIBER FROM
SCHNEIDER DR. TO
DYERSON TO POI ON B

PHYSICAL SCIENCES LAB

NOTE:

PV ARRAY LAYOUT AND LOCATION IS CONCEPTUAL

1. HEIGHT OF SOLAR ENERGY SYSTEM AND ASSOCIATED STRUCTURES WILL NOT EXCEED A HEIGHT OF 14 FEET.

2. NO NEW PERMANENT PARKING ADDED

3. NO BUILDINGS ON PARCEL WHERE SOLAR WILL BE SITED.

DC COMBINERS TO BE PLACED
STRATEGICALLY IN THE ARRAY FIELD

- 15FT ACCESS ROAD
- 15FT ACCESS GATE
- PROPOSED TEMPORARY
LOADING/UNLOADING AREA
- EQUIPMENT PAD
- (1) MAIN SWITCHBOARD
- RELAY
- METER
- (1) TRANSFORMER
- INVERTERS DC DISCONNECTS
- RESEARCH EQUIPMENT STORAGE

LOCATION OF AGRICULTURE
EQUIPMENT CROSSING ACCESS

18'-0" INTER ROW SPACING TYP.

32'-3" INTER ROW SPACING TYP.

25'-0" FENCE SETBACK TYP.

ZONING DISTRICT AT-35
PARCEL ID. 028/0610-271-8000-4

ZONING DISTRICT FP-35
PARCEL ID. 028/0610-271-9500-7

PARCEL BOUNDARY

FENCE

150'-0" WETLAND,
STREAM BUFFER
TO PROJECT

ZONE A
FLOODPLAIN

Dane County

Unincorporated Areas

SCALE: 3/8" - 1'



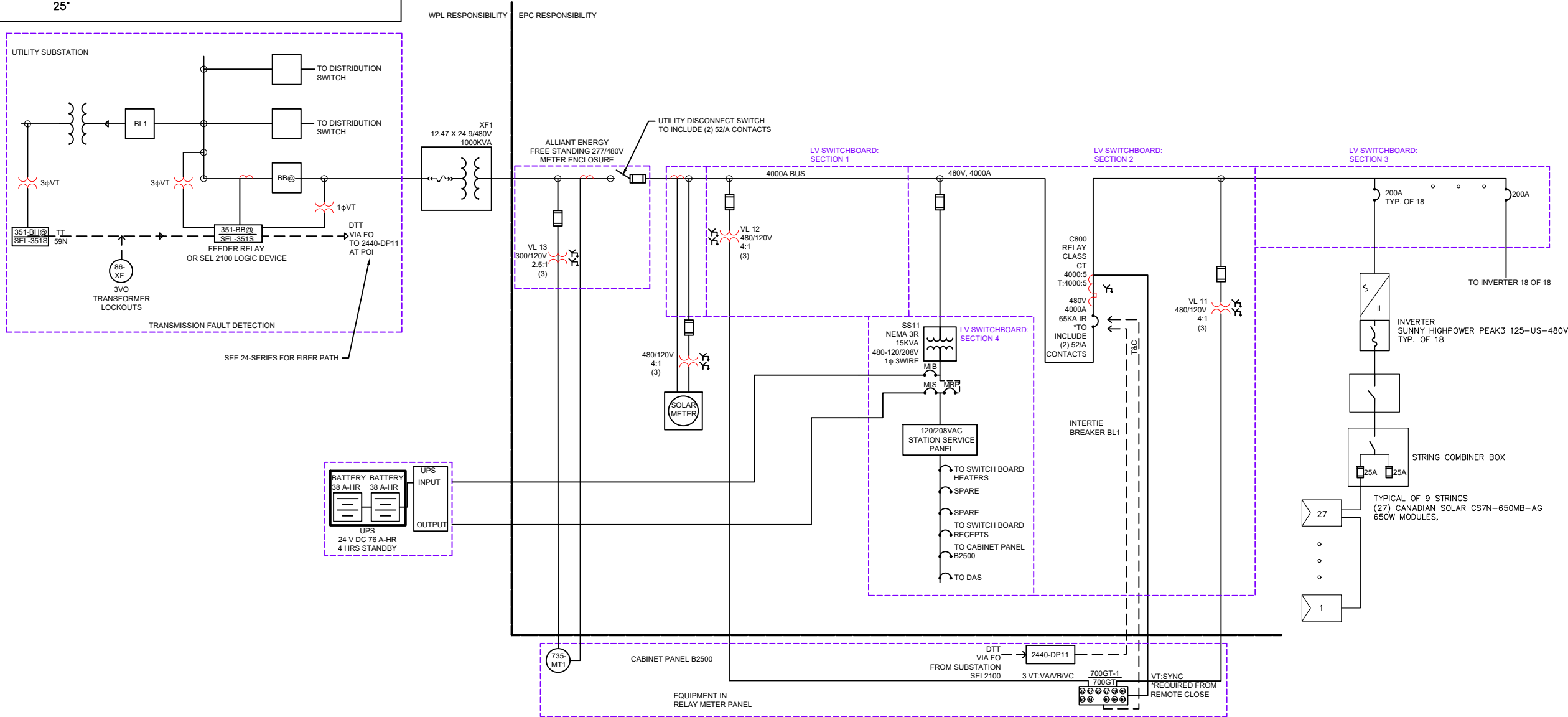
PV SYSTEM DETAILS

ARRAY TYPE:	GROUND MOUNT FIXED TILT
DC SYSTEM SIZE:	2.843 MW DC
DC SYSTEM VOLTAGE:	1500 V
AC SYSTEM SIZE:	2.25 MW AC
MODULES:	(4,374) CANADIAN SOLAR CS7N-650MB-AG
INVERTERS:	(18) SUNNY HIGHPOWER PEAK3 125-US
OPTIMIZERS:	N/A
RACKING:	RBI SOLAR
CLAMPS:	N/A
AZIMUTH:	180°
ARRAY PITCH:	32'-3"
ARRAY TILT:	25°



Developing • Renewable • Relationships
609.547.9001 www.sunvest.com

**N27 W24025 PAUL CT. SUITE 100
PEWAUKEE, WI 53072
PHONE: (262)-547-1200
WWW.SUNVEST.COM**



WPL RESPONSIBILITY | EPC RESPONSIBILITY

LICENSED ELECTRICAL ENGINEER certifies that they prepared all the electrical "E" sheets in this drawing set.
 LICENSED STRUCTURAL ENGINEER certifies that they prepared all of the structural "S" sheets in this drawing set.
 LICENSED CIVIL ENGINEER certifies that they prepared all of the civil "C" sheets in this drawing set.
 It should be noted that any plan sheets not identified above have been prepared and certified by others and have been included herein for informational purposes only.

10		20	
9		19	
8		18	
7		17	
6		16	
5		15	
4		14	
3		13	
2		12	
1	09/13/2022	11	
REV	SET/DATE	REV	SET/DATE
DRAWN BY: SR		CHECKED BY: RA	
SCALE: AS NOTED		JOB NO: JOB_NO	

ALLIANT
UW KEGONSA
(42.957620,-89.292360)

SHEET TITLE
ONE LINE DIAGRAM

DWG. NO.
E-1.00

NEW

CanadianSolar



BiHiKu7 BIFACIAL MONO PERC 635 W ~ 660 W CS7N-635 | 640 | 645 | 650 | 655 | 660MB-AG

MORE POWER

- 660 W Module power up to 660 W Module efficiency up to 21.2 %
Up to 8.9 % lower LCOE
Up to 4.6 % lower system cost
Comprehensive LID / LeTID mitigation technology, up to 50% lower degradation
Compatible with mainstream trackers, cost effective product for utility power plant
Better shading tolerance
40 °C lower hot spot temperature, greatly reduce module failure rate
Minimizes micro-crack impacts
Heavy snow load up to 5400 Pa, wind load up to 2400 Pa*

12 Years Enhanced Product Warranty on Materials and Workmanship*
30 Years Linear Power Performance Warranty**
1st year power degradation no more than 2% Subsequent annual power degradation no more than 0.45%

MANAGEMENT SYSTEM CERTIFICATES*
ISO 9001:2015 / Quality management system
ISO 14001:2015 / Standards for environmental management system
ISO 45001:2018 / International standards for occupational health & safety

PRODUCT CERTIFICATES*
IEC 61215 / IEC 61730 / INMETRO / UNCA
UL 61730 / IEC 61701 / IEC 62716 / IEC 60068-2-68 Table-eway

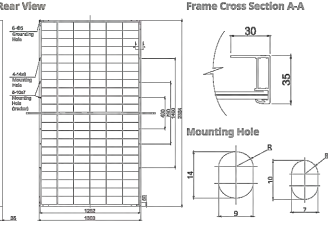
THE SPECIFIC CERTIFICATES APPLICABLE TO DIFFERENT MODULE TYPES AND MARKETS WILL VARY, AND THEREFORE NOT ALL OF THE CERTIFICATIONS LISTED HEREIN WILL SIMULTANEOUSLY APPLY TO THE PRODUCTS YOU ORDER OR USE.

CANADIAN SOLAR (USA), INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world.

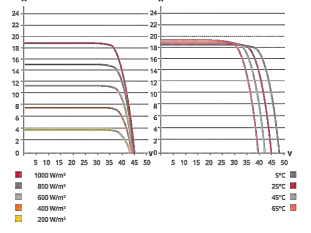
* For detailed information, please refer to the Installation Manual.

CANADIAN SOLAR (USA), INC. 3000 Oak Road, Suite 400, Walnut Creek, CA 94597, USA | www.csisolar.com/na | service.ca@csisolar.com

ENGINEERING DRAWING (mm)



CS7N-650MB-AG / I-V CURVES



ELECTRICAL DATA | STC*

Table with columns: Nominal Power (Pmax), Opt. Voltage (Vmp), Opt. Current (Imp), Open Voltage (Voc), Short Current (Isc), Module Efficiency. Rows include CS7N-635MB-AG, Bifacial GaiN99, CS7N-640MB-AG, Bifacial GaiN99, CS7N-645MB-AG, Bifacial GaiN99, CS7N-650MB-AG, Bifacial GaiN99, CS7N-655MB-AG, Bifacial GaiN99, CS7N-660MB-AG, Bifacial GaiN99.

ELECTRICAL DATA | NMOT**

Table with columns: Nominal Power (Pmax), Opt. Voltage (Vmp), Opt. Current (Imp), Open Voltage (Voc), Short Current (Isc), Module Efficiency. Rows include CS7N-635MB-AG, CS7N-640MB-AG, CS7N-645MB-AG, CS7N-650MB-AG, CS7N-655MB-AG, CS7N-660MB-AG.

MECHANICAL DATA

Table with columns: Specification, Data. Rows include Cell Type (Mono-crystalline), Cell Arrangement (132 [2 x (11 x 6)]), Dimensions (2384 x 1303 x 35 mm), Weight (37.9 kg), Front / Back Glass (2.0 mm heat strengthened glass), Frame (Anodized aluminum alloy), J-Box (IP68, 3 diodes), Cable (4.0 mm² (IEC), 10 AWG (UL)), Cable Length (460 mm), Connector (14 series, MC4 or EVO2).

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.
** Bifacial Gain: The additional gain from the back side compared to the power of the front side at the standard test condition. It depends on mounting structure, height, tilt angle etc. and albedo of the ground.

Table with columns: Specification, Data. Rows include Operating Temperature (-40°C ~ +85°C), Max. System Voltage (1500 V), Module Fire Performance (TYPE 29), Max. Series Fuse Rating (35 A), Application Classification (Class A), Power Tolerance (0 ~ +10 W), Power Bifaciality* (70 %).

Table with columns: Specification, Data. Rows include Temperature Coefficient (Pmax) (-0.34 % / °C), Temperature Coefficient (Voc) (-0.26 % / °C), Temperature Coefficient (Isc) (0.05 % / °C), Nominal Module Operating Temperature (41 ± 3°C).

PARTNER SECTION

SUNNY HIGHPOWER PEAK3 125-US / 150-US



- Cost effective: Modular architecture reduces BOS and maximizes system uptime. Compact design and high power density maximize transportation and logistical efficiency.
Maximum flexibility: Scalable 1,500 VDC building block with best-in-class performance. Flexible architecture creates scalability while maximizing land usage.
Simple install, commissioning: Ergonomic handling and simple connections enable quick installation. Centralized commissioning and control with SMA Data Manager.
Highly innovative: SMA Smart Connected reduces O&M costs and simplifies field service. Powered by award winning ennexOS cross sector energy management platform.

SUNNY HIGHPOWER PEAK3 125-US / 150-US

A superior modular solution for large-scale power plants

The PEAK3 1,500 VDC inverter offers high power density in a modular architecture that achieves a cost-optimized solution for large-scale PV integrators. With fast, simple installation and commissioning, the Sunny Highpower PEAK3 is accelerating the path to energization.

Technical Data table comparing Sunny Highpower PEAK3 125US and Sunny Highpower PEAK3 150US. Columns include Input (DC), Output (AC), Efficiency, Protection and safety features, and Additional information.

NOTES:

THESE SPEC SHEETS ARE REPRESENTATIVE



Developing • Renewable • Relationships 9203 547-1900 www.sunvest.com

N27 W24025 PAUL CT. SUITE 100 PEWAUKEE, WI 53072 PHONE: (262)-547-1200 WWW.SUNVEST.COM

LICENSED ELECTRICAL ENGINEER certifies that they prepared all of the electrical "E" sheets in this drawing set. LICENSED STRUCTURAL ENGINEER certifies that they prepared all of the structural "S" sheets in this drawing set. LICENSED CIVIL ENGINEER certifies that they prepared all of the civil "C" sheets in this drawing set.

Revision table with columns: REV, SET/DATE, REV, SET/DATE. Rows show revisions 1 through 10.

DRAWN BY: SR CHECKED BY: RA SCALE: AS NOTED JOB NO: JOB_NO

ALLIANT UW KEGONSA (42.957620,-89.292360)

SHEET TITLE SPEC SHEETS

DWG. NO. E-4.00

⚠ WARNING

THIS PANEL HAS SECONDARY POWER SOURCE FROM PHOTOVOLTAIC SYSTEM
TURN-OFF PHOTOVOLTAIC SYSTEM BREAKER PRIOR TO SERVICING PANEL.

MAX AC OUTPUT CURRENT: AMPS

MAX AC OUTPUT VOLTAGE: VOLTS

LABEL #1 PLACE AT POINT OF INTERCONNECTION

⚠ WARNING

DUAL POWER SUPPLY

SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

LABEL #2 PLACE AT POINT OF INTERCONNECTION

⚠ WARNING

SOLAR GENERATOR UTILITY LOCKABLE AC DISCONNECT SWITCH

AUTHORIZED PERSONNEL ONLY
HIGH VOLTAGE- KEEP AWAY

LABEL #3 PLACE AT UTILITY LOCKABLE DISCONNECT

⚠ WARNING

POTENTIAL ARC FLASH HAZARD

LABEL #4 PLACE AT PV SWITCHBOARD

⚠ WARNING

TURN OFF AC DISCONNECT PRIOR TO WORKING INSIDE PANEL

AUTHORIZED PERSONNEL ONLY
HIGH VOLTAGE- KEEP AWAY

LABEL #5 PLACE AT AC COMBINER PANEL

⚠ WARNING

POWER METER AND AC DISCONNECT
TURN OFF INVERTER PRIOR TO OPERATING AC DISCONNECT

AUTHORIZED PERSONNEL ONLY
HIGH VOLTAGE- KEEP AWAY

LABEL #6 PLACE AT AC DISCONNECT

⚠ WARNING

ELECTRIC SHOCK HAZARD

IF GROUND FAULT IS INDICATED ALL NORMALLY GROUNDED CONDUCTORS MAY BE UNGROUNDED AND ENERGIZED

LABEL #7 PLACE AT INVERTERS

CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED

LABEL #8 PLACE ON DC DISCONNECTS AND INVERTERS

CAUTION: SOLAR CIRCUIT

LABEL #9 PLACE ON CONDUIT, JUNCTION BOXES AND COMBINER BOXES AT EVERY 10'

⚠ WARNING

DC JUNCTION BOX

LABEL #10 PLACE ON DC JUNCTION BOXES

⚠ WARNING

PV ARRAY DC DISCONNECT

-ELECTRICAL SHOCK HAZARD-
-DO NOT TOUCH TERMINALS-

TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

MAXIMUM CURRENT: A
OPERATING VOLTAGE: V_{dc}

LABEL #11 PLACE ON DC DISCONNECTS

⚠ WARNING

ELECTRIC SHOCK HAZARD

DO NOT TOUCH TERMINALS
TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL #12 PLACE ON DC DISCONNECTS AND AC DISCONNECTS

⚠ WARNING

PULL BOX

AUTHORIZED PERSONNEL ONLY
HIGH VOLTAGE- KEEP AWAY

LABEL #13 PLACE AT PULL BOXES

INV-1

LABEL #14 PLACE AT INVERTERS

D-01

LABEL #15 PLACE AT SYSTEM DISCONNECT

CB-1

LABEL #16 PLACE AT DC COMBINER BOXES

MDP M-01

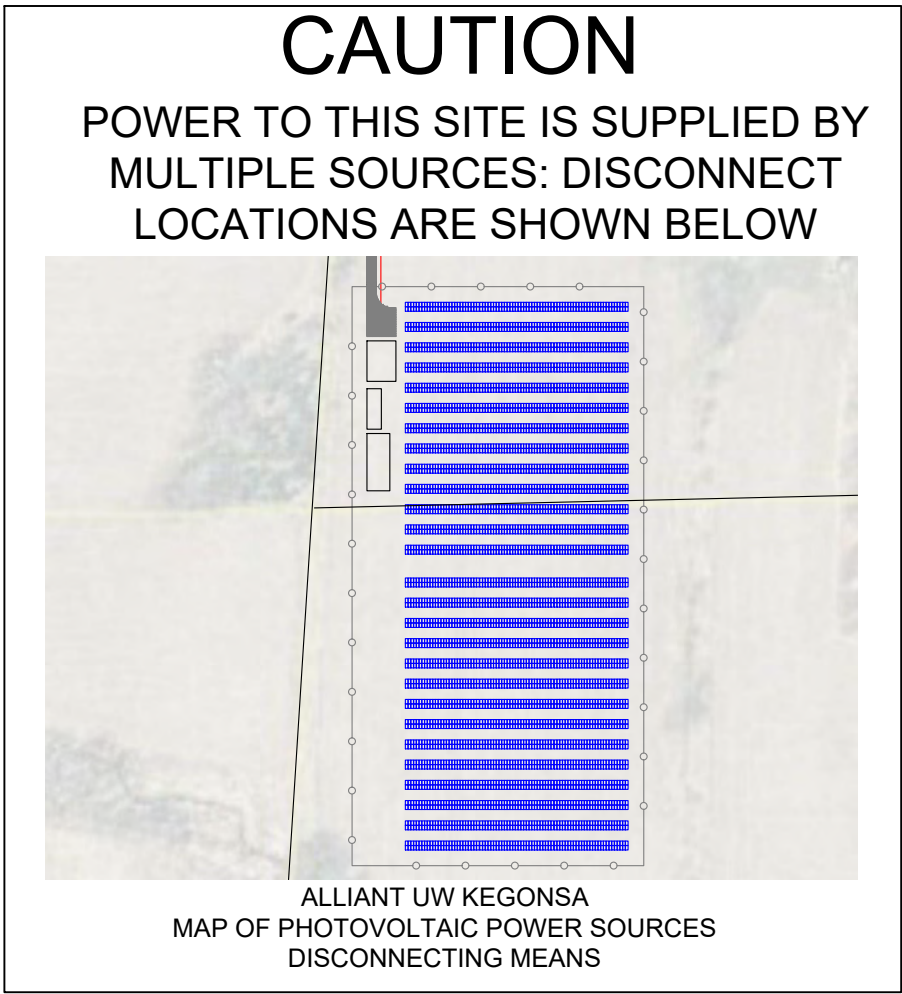
LABEL #17 PLACE AT SWITCHBOARDS

XFMR T-1

LABEL #18 PLACE AT MAIN TRANSFORMERS

PNL- P1

LABEL #18 PLACE AT PANELS



SHEET NOTES:

1. SYSTEM LABELS SHALL BE PERMANENTLY ATTACHED BY MECHANICAL MEANS OR SECURED WITH UV-RESISTANT ADHESIVE.
2. MATERIALS USED IN THE CONSTRUCTION OF THE LABELS SHALL BE UV RESISTANT.
3. ELECTRICAL EQUIPMENT, SUCH AS SWITCHBOARDS, PANELBOARDS, INDUSTRIAL CONTROL PANELS, METER SOCKET ENCLOSURES, AND MOTOR CONTROL CENTERS, THAT ARE IN OTHER THAN DWELLING OCCUPANCIES, AND ARE LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT. (NEC 110.16)
4. ALL INTERACTIVE SYSTEM(S) POINTS OF INTERCONNECTION WITH OTHER SOURCES SHALL BE MARKED AT AN ACCESSIBLE LOCATION AT THE DISCONNECTING MEANS AS A POWER SOURCE AND WITH THE RATED AC OUTPUT CURRENT AND THE NOMINAL OPERATING AC VOLTAGE. (NEC 690.54)
5. DIRECT-CURRENT PV POWER SOURCES SHALL BE PERMANENTLY LABELED PER NEC 690.53
6. PROVIDE ALL ADDITIONAL LABELS AS REQUIRED PER NEC, NESC, AND OTHER APPLICABLE CODES AND STANDARDS

KEYED NOTES:

1. PROVIDE 9"X3" ENGLISH/SPANISH ELECTRICAL WARNING SIGN AT EACH OF THE SITE ENTRANCES AND EVERY 200' ALONG THE FENCE.
2. PROVIDE SITE DISCONNECT LOCATION PLACECARD AT EACH OF THE SITE ENTRANCES. MARK "YOU ARE HERE" AT EACH OF THE LOCATIONS ON THE MAP

LICENSED ELECTRICAL ENGINEER certifies that they prepared all the electrical "E" sheets in this drawing set.
LICENSED STRUCTURAL ENGINEER certifies that they prepared all of the structural "S" sheets in this drawing set.
LICENSED CIVIL ENGINEER certifies that they prepared all of the civil "C" sheets in this drawing set.
It should be noted that any plan sheets not identified above have been prepared and certified by others and have been included herein for informational purposes only.

10		20	
9		19	
8		18	
7		17	
6		16	
5		15	
4		14	
3		13	
2		12	
1	09/13/2022	11	
REV	SET/DATE	REV	SET/DATE
DRAWN BY: SR		CHECKED BY: RA	
SCALE: AS NOTED		JOB NO: JOB_NO	

ALLIANT
UW KEGONSA
(42.957620,-89.292360)

SHEET TITLE
NEC LABELS

DWG. NO.
E-5.00