Champaign County
Department of
PLANNING &
ZONING

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CASE NO. 144-S-24

SUPPLEMENTAL MEMORANDUM
January 8, 2025

Petitioners: **Little Prairie Solar LLC, c/o BayWa r.e. Solar Projects LLC, 18575 Jamboree Road, Suite 850, Irvine CA 92612, via agent David Holly, Development Manager for BayWa r.e. Solar Projects LLC, and the participating landowners listed in Attachment A**

Request: **Authorize a Utility-Scale PV Solar Farm with a total nameplate capacity of 135 megawatts (MW), including access roads and wiring, and an accessory 135 MW Battery Energy Storage System, in the AG-1 Agriculture Zoning District, and including the following waivers of standard conditions:**

Part A: A waiver for not entering into a Roadway Upgrade and Maintenance Agreement or waiver therefrom with the relevant local highway authority prior to consideration of the Special Use Permit by the Zoning Board of Appeals, per Section 6.1.5 G.(1)

Part B: A waiver for locating the PV Solar Farm less than one and one-half miles from an incorporated municipality per Section 6.1.5 B.(2)a.

Part C: A waiver for locating the PV Solar Farm 65 feet from a non-participating lot that is 10 acres or less in area in lieu of the minimum required separation of 240 feet between the solar farm fencing and the property line, per Section 6.1.5 D.(3)a.

Part D: A waiver for a separation distance of 225 feet between the solar inverters and the perimeter fence in lieu of the minimum required 275 feet, per Section 6.1.5 D.(6)

Other waivers may be necessary.

Location: **In Sidney Township the following sections are included with exceptions as described in Attachment A: Sections 12, 13, 14, 15, 23 and 24, Township 18 North, Range 10 East of the 3rd Principal Meridian.**

Site Area: **PV Solar Farm Special Use Permit Area is approximately 1047 acres**
Fenced solar farm area is approximately 785 acres

Time Schedule for Development**:** **As soon as possible**

Prepared by: **Charlie Campo**
Senior Planner

John Hall
Zoning Administrator

BACKGROUND

The petitioner applied for a Special Use Permit to construct a 135-megawatt (MW) Photovoltaic (PV) utility scale solar farm and an accessory 135 MW Battery Energy Storage System (BESS) on a group of properties southeast of the Village of Sidney. The proposed "Little Prairie Solar" facility would

have 335,634 solar modules and thirty-five (35) inverters along with a 6.8-acre BESS facility with 174 battery modules and 58 inverters, surrounded by an 8 feet tall wire fence with security gates. Access would be from 17 new access points via 20-feet wide native compacted earth or gravel access roads.

STATUS

P&Z Staff has received the following item from the petitioner on August 29, 2024.

- Revised Decommissioning Plan (Attachment O)

P&Z Staff has received the following items from the petitioner since the November 14, 2024, Public Hearing.

- Letter from Tim Richardson, Prairie Solar 1 LLC, regarding grading at Prairie Solar 1 project site and a Grading Heat Map, received 12/6/24 (Attachment A)
- Memo from David Holly BayWa r.e. regarding Responses to Public and ZBA Questions From 11/14/24 Public Hearing, received 12/30/24 (Attachment B)
- A Farmland Drainage Plan pursuant to State siting legislation (55 ILCS 5/5-12020)(j-5) received 12/30/2024 (Attachment C)
- Revised Site Plan showing underground outfall drainage line from Frito-Lay facility, received 12/30/24 (Attachment D)
- Updated Economic Impact Analysis reflecting property tax abatement agreement with Heritage School District, received 12/30/24 (Attachment E)
- Letters from participating landowners regarding their request to not install pattern tile on their land, received 12/30/24 (Attachment F)
- BESS Inverter Specification Sheets received 1/9/24 (Attachment N)

PUBLIC TESTIMONY DURING THE NOVEMBER 14, 2024, ZBA MEETING

(1) The following questions were received during cross-examination of the petitioner:

a. Daniel Herriott asked what kind of access firefighters would have to the site and if they would need keys to the gated entrances. David Holly stated that access would be worked out as part of an Emergency Response Plan that they expect to complete in the next few months. Mr. Herriott asked how long the battery containers could burn if they catch fire. Eric Wood said that a 40 ft. battery container could be expected to burn out in under 8 hours. Mr. Herriott asked about evacuation radius for a fire and Mr. Wood stated that it would be up to the Fire Protection District who responds to the fire. Mr. Herriot also expressed concerns regarding the off-gasses from a BESS fire and Mr. Wood stated that they are no different from what is expected from a residential or commercial structure fire. Mr. Herriott asked what is the most prolonged period that a BESS fire has burned, and Mr. Wood explained that is difficult to answer due to different types and sizes of BESS facilities. Mr. Herriott asked about how an accident would be handled if there was a vehicle accident involving the transportation of BESS equipment. Mr. Wood stated that all BESS equipment would be subject to DOT regulations UN 38.3. Mr. Herriott asked if the Little Prairie Solar project would change the lands topography. Mr. Holly stated that he wasn't sure about that at this point as final design had not been completed. Mr. Herriott asked if they would be installing pattern tile for the project and Mr. Holly stated that they would not. Mr. Herriott asked about putting out a solar panel if it catches on fire. Mr. Holly stated

that all of the solar equipment must meet national electrical codes and putting out the fire would be part of the Emergency Response Plan for the facility. Mr. Herriott asked if they would be following an Agricultural Impact Mitigation Agreement (AIMA). Mr. Holly stated that all projects are now required to have an AIMA before getting Special Use Permit Approval. Mr. Herriott asked about the resting of the soil under the project site, and Mr. Holly said that it would occur during the up to four decades of operation of the site. Mr. Herriott asked if the project would prohibit neighbors from applying aerial applications to their fields. Mr. Holly said that it would not. Mr. Herriott asked if there was a concern about the BESS units leaking hazardous materials into the soil or nearby ditches. Mr. Wood replied that there was no concern.

b. Justin Leerkamp asked about the training, staffing and equipment that would be needed for a fire at the project site. Mr. Wood replied that it would depend on the Emergency Response Plan for the site and the Fire Protection Districts that respond but that it could be possible to handle a fire related incident at the Little Prairie site with 5 firefighters. Mr. Leerkamp asked about traffic control when fighting a fire and Mr. Wood replied that based on the Preliminary Site Plan traffic control did not seem to be a concern but that information would be worked out in the Emergency Response Plan. Mr. Leerkamp asked about the amount of earthwork and fill dirt that would be needed for the Little Prairie project and Mr. Holly replied that final design had not been completed and they would not have that information until they were ready to apply for a Zoning Use Permit. Mr. Leerkamp asked about what the intent was to do with the land once the project was decommissioned. Mr. Holly replied that they would return the land to a pre-construction state based on the requirements of the AIMA and the County Ordinance and that it would be possible to return the land to agricultural production. Mr. Leerkamp asked about the $19 million tax delta over 40 years. Mr. Holly stated that if the project life was shorter than 40 years that amount would be lower and the figures presented tonight did not account for a 10-year 25% tax abatement agreement with the Heritage School District.

c. Ted Hartke asked if the detention basin would be a wet or dry basin. Liam Sawyer stated that final design had not been completed but expected it would be a dry basin. Mr. Hartke asked about the additional access roads shown on the BESS site plan. Mr. Holly said that the addition roads were added at the request of the Department of Planning and Zoning. John Hall stated that they were for firefighter access. Mr. Hartke asked if there was a fire in the BESS units would it be in the battery units or the inverters. Mr. Wood stated that its possible for either component to catch fire. Mr. Hartke asked if Mr. Wood thought the spacing of the BESS components was adequate. Mr. Wood replied that spacing is based on UL tests but wasn't sure what spacing was shown on the Preliminary Site Plan. Mr. Hartke asked how far away first responders should stay from a BESS fire and if they should use breathing apparatus. Mr. Wood replied that typically an Emergency Response Plan would indicate responders to maintain a distance of 100 feet and all responders should use PPE as required by their department guidelines. Mr. Hartke asked if they have been in contact with the Sidney FPD, and Mr. Holly replied that they had been in contact with Chief Happ and his questions regarding the project were technology related and expressed no concerns about the project. Mr. Hartke asked what firefighters should do if they don't use water to put out a fire at a BESS facility. Mr. Wood replied that as part of the Emergency

Response Plan they would follow an incident action plan in dealing with a fire. Mr. Hartke asked if people nearby should evacuate in the case of a fire at the BESS. Mr. Wood said that there is no reason that nearby residents need to evacuate but that it would be up to the responding Fire Protection District. Mr. Hartke asked about damage to panels from a grass fire or hail storm. Mr. Holly replied that the panels are warrantied by the manufacturer and would also be insured against damage. Mr. Hartke asked about what would happen to the panels at the end of the project. Mr. Holly stated that they could be sold for re-use, recycled, or disposed of in a landfill, the decommissioning plan has requirements for removal and transportation but what happens to them next is not in their control. Mr. Hartke asked if there was a noise contour map for the project that showed the 40 dBA line. Mr. Sawyer stated they did not have a map showing that but there was one location at the project boundary that showed 41 dBA, and everywhere else it was 40 dBA. Mr. Holly stated that the project meets Illinois Pollution Control Board and County requirements, and any further questions regarding noise could be sent to him.

d. Kent Krukewitt asked how close the BESS site is to the drainage ditch on the property and if they expected flooding on the BESS site. Mr. Holly said there was a 50-foot setback from the centerline of the ditch, and the BESS equipment would be further away than that. Mr. Krukewitt asked if there was going to be pattern tiling installed on the project site. Mr. Holly replied that it was not required and would be overkill for the site.

e. Sean O'Brien asked if the data link for the remote management system for the site was redundant. Mr. Holly said that he was unsure of the answer and would have to confirm with the engineering team for an answer. Mr. O'Brien asked if the system could operate independently without communication to the remote management system. Mr. Wood replied that it could. Mr. O'Brien asked how many controls in the NFP 855 are audited and how often. Mr. Wood replied that NFP 855 gets updated every three years.

f. Jan Carter Niccum asked if the Illinois Fire Safety Institute (IFSI) could be included as part of the training for the Emergency Response Plan. Mr. Holly said that they would not preclude anyone who wants to join the training.

(2) The following testimony was received at the November 14, 2024, ZBA meeting:

a. Ted Hartke, 1183 CR 2300E, Sidney noted that a 39dba noise limit at property lines was imposed by the Board for the first phase of the solar project and hoped they would impose a similar noise limit on this project. He expressed concerns regarding the replacement of topsoil and mixing fill dirt with topsoil at the project site as well as setback requirements for the BESS.

b. Don Wauthier, 1831 Tahoe Ct. Champaign, serves as the engineer for Drainage District 1 of the Town of Sidney, asked the board to consider a requirement for a secondary agricultural use on the land such as vegetable crops or grazing for animals. He also noted that some of the proposed improvements were in the easement area for Drainage District ditches and explained that unless solar panels are properly spaced that they can increase stormwater runoff and asked the Board to consider panel spacing in their review of the project.

c. Kent Krukewitt, 116 Sunflower St, Savoy, had concerns regarding drainage tiles that carry water from outside of the project area to the Drainage District ditch on the project site in addition to the proximity of the BESS site to the ditch and the possibility of chemicals making their way into the water.

d. Daniel Herriot, 30 Dunlap Woods, Sidney, had concerns regarding changes to the topography of the project site. He asked the Board to encourage the developer to install pattern tiling on the project site and to consider holding off on approving this case until after the Prairie Solar 1 project was completed to see the impacts on surrounding properties. He expressed concerns regarding fire in the area of the solar arrays as well as the risk of fire in BESS area and stated that he believed that when fill dirt is brought in and it is mixed with topsoil the soil structure is destroyed.

e. Justin Leerkamp, 548 CR 1900E Sidney, stated that fill dirt that was stockpiled on a property near his was being used at the Prairie Solar 1 project site and that if the fill dirt was mixed with the topsoil, it would no longer be useful for agriculture and was concerned that this could happen on the Little Prairie solar project site.

f. Janet Smith, 863 CR 2300E, Homer, stated that she lives less than 1 mile from the proposed BESS location and has concerns regarding fire and hazardous materials. She also stated that she will have solar panels surrounding three sides of her property and was concerned with the heat and noise from the panels in addition to the disturbance of the underlying soil.

PUBLIC COMMENTS RECEIVED

(1) The following comments were received after the packets for the 11/14/24 Public Hearing were distributed:

a. Email and news article from Ted Hartke received 9/6/24 and included as a handout to the Board at the 9/12/24 meeting. (Meeting Cancelled) (Attachment G)

b. Email from Linda Jo Mazik received 9/6/24 and included as a handout to the Board at the 9/12/24 meeting. (Meeting Cancelled) (Attachment H)

c. Email from Kurt Fischer received 9/9/24 and included as a handout to the Board at the 9/12/24 meeting. (Meeting Cancelled) (Attachment I)

d. Email from Steven Herriott received 9/12/24 and included as a handout to the Board at the 9/12/24 meeting. (Meeting Cancelled) (Attachment J)

e. Email from Ted Hartke received 11/15/24. (Attachment K)

f. Email and news article from Ted Hartke received 12/30/25. (Attachment L)

SEPERATION DISTANCES

Section 6.1.5 D.(3)a.(b) of the Zoning Ordinance states that any lot that is bordered on more than two sides by the PV SOLAR FARM, the separation shall exceed 240 feet as deemed necessary by the BOARD. The home located at 863 CR 2300E is bordered on three sides by the PV SOLAR FARM. The fence to the east of the home is the nearest improvement and is approximately 260 feet away. A landscape buffer is proposed between the home and the fence.

PROPOSED SPECIAL CONDITIONS

Changes made after the November 14, 2024, Public Hearing are noted in red.

The following special conditions, combined with the requested waivers, would ensure that the proposed solar farm is in compliance with the Zoning Ordinance.

A. **The approved site plan consists of the following documents:**

- **Sheet SDP 100 of the Site Plan received December 30, 2024.**
- **Sheets SDP 101-110 of the Site Plan received December 30, 2024**
- **Sheet BSDP 100 of the Site Plan received August 5, 2024**
- **Sheets L 101-107 of the Landscape Plan and sheets L 200-201 of the Maintenance and Monitoring plan received June 17, 2024.**

The special condition stated above is required to ensure the following:

The constructed PV SOLAR FARM is consistent with the special use permit approval.

B. **The Zoning Administrator shall not authorize a Zoning Use Permit Application or issue a Zoning Compliance Certificate on the subject property until the lighting specifications in Paragraph 6.1.2.A. of the Zoning Ordinance have been met.**

The special condition stated above is required to ensure the following:

That exterior lighting for the proposed Special Use meets the requirements established for Special Uses in the Zoning Ordinance.

C. **The Zoning Administrator shall not issue a Zoning Compliance Certificate for the proposed PV SOLAR FARM until the petitioner has demonstrated that the proposed Special Use complies with the Illinois Accessibility Code, if necessary.**

The special condition stated above is necessary to ensure the following:

That the proposed Special Use meets applicable state requirements for accessibility.

D. **A signed Decommissioning and Site Reclamation Plan that has been approved by ELUC is required at the time of application for a Zoning Use Permit that complies with Section 6.1.1 A. and Section 6.1.5 Q. of the Zoning Ordinance, including a decommissioning cost estimate prepared by an Illinois Professional Engineer.**

The special condition stated above is required to ensure the following:

That the Special Use Permit complies with Ordinance requirements and as authorized by waiver.

E. **Roadway Upgrade and Maintenance Agreements signed by the County Highway Engineer Sidney Township Highway Commissioner and any other relevant highway jurisdiction, and approved by the Environment and Land Use Committee, shall be submitted at the time of application for a Zoning Use Permit.**

The special condition stated above is required to ensure the following:

To ensure full compliance with the intent of the Zoning Ordinance in a timely manner that meets the needs of the applicant.

F. **Underground drainage tile shall be investigated and identified with any necessary changes made to the solar array as follows:**

1. **A qualified Drain Tile Contractor with experience in Illinois shall be employed to investigate, repair, and install any underground drain tile.**

2. **Desktop mapping and field reconnaissance shall identify all areas where drain tile are expected to be located based on soils, topographic elevations, ground surface channels and/or depressions, wetlands, natural drainage ingress and egress locations, and knowledge of current owners and/or current farmers.**

3. **Slit trenching shall be used to investigate the presence of mutual drainage tiles that serve upland areas under different ownership. All existing drain tiles encountered shall be logged on field mapping and repaired to the original state according to Illinois Department of Agriculture Impact Mitigation Agreement (AIMA) standards.**

4. **Drain tile routes shall be located by surface probing or electronic detection and field staked at 20 feet intervals.**

5. **All existing drain tile that are found shall be located in the field using GPS location systems and recorded on as-built plans. Record mapping shall be completed according to typical civil engineering mapping and AIMA standards.**

6. **Any tile found shall be protected from disturbance.**

7. **All mutual drain tiles shall be protected from construction disturbance and a 40-feet wide no construction area shall be centered on all mutual drain tiles.**

8. **A Drain Tile Investigation Survey including a map of all identified drain tile and a revised site plan to reflect any changes to the layout of the solar array shall be submitted to the Zoning Administrator prior to Zoning Use Permit Approval.**

9. **Future access shall be guaranteed for maintenance of all mutual drain tiles.**

The special condition stated above is required to ensure the following:

The identification and protection of existing underground drainage tile and to allow ongoing maintenance of mutual drain tiles.

G. **The following submittals are required prior to the approval of any Zoning Use Permit for a PV SOLAR FARM:**

1. **Documentation of the solar module's unlimited 10-year warranty and the 25-year limited power warranty.**

2. **A Storm Water Management Plan which conforms to the Champaign County Storm Water Management and Erosion Control Ordinance.**

3. **Certification by an Illinois Professional Engineer that any relocation of drainage district tile conforms to the Champaign County Storm Water Management and Erosion Control Ordinance.**

4. **An irrevocable letter of credit to be drawn upon a federally insured financial institution with a minimum acceptable long term corporate debt (credit) rating of the proposed financial institution shall be a rating of "A" by S&P or a rating of "A2" by Moody's within 200 miles of Urbana or reasonable anticipated travel costs shall be added to the amount of the letter of credit.**

5. **A permanent soil erosion and sedimentation plan for the PV SOLAR FARM including any access road that conforms to the relevant Natural Resources Conservation Service guidelines and that is prepared by an Illinois Licensed Professional Engineer**.

6. **Documentation regarding the seed to be used for the pollinator planting, per 6.1.5 F.(9).**

7. **A Transportation Impact Analysis provided by the applicant that is mutually acceptable to the Applicant and the County Engineer and State's Attorney; or Township Highway Commissioner; or municipality where relevant, as required by 6.1.5 G. 2.**

8. **The telephone number for the complaint hotline required by 6.1.5 S.**

9. **Any updates to the approved Site Plan from Case 144-S-24 per the Site Plan requirements provided in Section 6.1.5 U.1.c.**

The special condition stated above is required to ensure the following:

That the PV SOLAR FARM is constructed consistent with the Special Use Permit approval and in compliance with the Ordinance requirements.

H. **A Zoning Compliance Certificate shall be required for the PV SOLAR FARM prior to going into commercial production of energy. Approval of a Zoning Compliance Certificate shall require the following:**

1. **An as-built site plan of the PV SOLAR FARM including structures, property lines (including identification of adjoining properties), as-built separations, public access road and turnout locations, substation(s), electrical cabling from the PV SOLAR FARM to the substations(s), and layout of all structures within the geographical boundaries of any applicable setback.**

2. **As-built documentation of all permanent soil erosion and sedimentation improvements for all PV SOLAR FARM including any access road prepared by an Illinois Licensed Professional Engineer.**

3. **An executed interconnection agreement with the appropriate electric utility as required by Section 6.1.5 B.(3)b.**

The special condition stated above is required to ensure the following:

That the PV SOLAR FARM is constructed consistent with the special use permit approval and in compliance with the Ordinance requirements.

I. **The Applicant or Owner or Operator of the PV SOLAR FARM shall comply with the following specific requirements that apply even after the PV SOLAR FARM goes into commercial operation:**

1. **Maintain the pollinator plantings and required visual screening in perpetuity.**

2. **Cooperate with local Fire Protection District to develop the District's emergency response plan as required by 6.1.5 H.(2).**

3. **Cooperate fully with Champaign County and in resolving any noise complaints including reimbursing Champaign County any costs for the services of a qualified noise consultant pursuant to any proven violation of the I.P.C.B. noise regulations as required by 6.1.5 I.(4).**

4. **Maintain a current general liability policy as required by 6.1.5 O.**

5. **Submit annual summary of operation and maintenance reports to the Environment and Land Use Committee as required by 6.1.5 P.(1)a.**

6. **Maintain compliance with the approved Decommissioning and Site Reclamation Plan including financial assurances.**

7. **Submit to the Zoning Administrator copies of all complaints to the telephone hotline on a monthly basis and take all necessary actions to resolve all legitimate complaints as required by 6.1.5 S.**

The special condition stated above is required to ensure the following:

That future requirements are clearly identified for all successors of title, lessees, any operator and/or owner of the PV SOLAR FARM.

J. **Regarding the proposed BESS that is included as an accessory use:**

1. **The Battery Energy Storage System (BESS) proposed as an accessory use is a 135-megawatt (MW) lithium-ion system that will occupy 6.8 acres (not including any required stormwater detention area.**

2. **The following submittals are required prior to the approval of any Zoning Use Permit for a PV SOLAR FARM in addition to any other required submittals:**

a. **A Hazard Mitigation Analysis for the proposed BESS that meets the requirements of NFPA 855 and a written approval of the Hazard Mitigation Analysis by the Sidney Fire Protection District.**

b. **Documentation of any smoke and fire detection systems that are required by the Sidney Fire Protection District and a written approval of the smoke and fire detection systems by the Sidney Fire Protection District.**

c. **Documentation of any fire control and suppression systems that are required by the Sidney Fire Protection District and a written approval of the fire control and suppression systems by the Sidney Fire Protection District.**

d. **Documentation of explosion control per NFPA 69 or deflagration venting per NFP68 shall be provided if explosion control or deflagration venting is required by the approved Hazard Mitigation Analysis and a written approval of the explosion control or deflagration venting by the Sidney Fire Protection District.**

e. **The owner hereby commits to provide Authorized Service Personnel per NFPA 855 to be dispatched to assist emergency first responders to mitigate the hazard or remove damaged equipment from the premises within a response time approved by the Sidney Fire Protection District.**

f. **Documentation of a requirement of the owner to provide Hazard Support Personnel that may be required by the Sidney Fire Protection District per NFPA 855 and a written approval of the plan to provide Hazard Support Personnel by the Sidney Fire Protection District.**

3. **The following BESS submittals are required prior to the approval of the Zoning Compliance Certificate that authorizes operation in addition to any other required submittals:**

a. **A Commissioning Report for the BESS that meets the requirements of NFPA 855 and documentation that a copy of the Commissioning Report has been provided to and accepted by the Sidney Fire Protection District.**

The special condition stated above is required to ensure the following:

That future requirements are clearly identified for all successors of title, lessees, any operator and/or owner of the PV SOLAR FARM and to ensure consistency with Zoning Case 130-AT-24.

ATTACHMENTS

A Letter from Tim Richardson and Grading Heat Map received 12/6/24
B Memo from David Holly received 12/30/24
C Farmland Drainage received 12/30/2024
D Revised Site Plan received 12/30/24
E Updated Economic Impact Analysis received 12/30/24
F Letters from participating landowners regarding pattern tile received 12/30/24

G Email and news article from Ted Hartke received 9/6/24
H Email from Linda Jo Mazik received 9/6/24
I Email from Kurt Fischer received 9/9/24
J Email from Steven Herriott received 9/12/24
K Email from Ted Hartke received 11/15/24
L Email and news article from Ted Hartke received 12/30/25
M PowerPoint Presentation by BayWa r.e. from Public Hearing on 11/14/24
N Specification Sheet for BESS Inverters received 1/9/24
O Revised Decommissioning Plan received 8/29/24

December 6, 2024

John Hall
Champaign County Department of Planning and Zoning
Director
Zoning Administrator

RE: Earthwork practices at Prairie Solar 1 under Zoning Use Permit No. 211-24-01

Dear John Hall,

This letter is in response to the letter received by the Champaign County Department of Planning and Zoning (the "County") on November 20, 2024, regarding the civil construction activities currently ongoing at the Project site. Below are responses to the complaints summarized in the aforementioned letter. The numbered list below corresponds to the numbered complaint in the letter.

1. Regarding the quantity of earthwork onsite – Prairie Solar 1, LLC ("Prairie Solar") has not historically made any claims that there would be no earthwork during construction and concurs there is no evidence to support that claim. As the County is aware, Prairie Solar has an obligation per the AIMA to preserve and protect topsoil. From a practical perspective this means that topsoil must be stripped and stockpiled prior to performing any grading activities that result in a change in a topography. As an example, let's assume that an area of the site contains 12" of topsoil and requires a 2" "cut" to bring the site into tolerances acceptable for the tracker system. In order to cut the 2", we must first strip and stockpile the first 12" of topsoil in order to ensure it's not mixed in with the subsurface soil. Once the 2" cut is made, the topsoil will then be placed and re-spread on top of the subsurface material. We suspect this is resulting in the appearance of large quantities of earthwork, however, this process must be followed to protect the topsoil.

2. Regarding the alleged change in surface water flow patterns – Prairie Solar does not believe this complaint has any merit. Per the Project's General NPDES Permit for Stormwater Discharges issued by the EPA, the Project has a requirement to inspect all erosion control BMPs on a weekly basis and within 24 hours after a 0.5" rain event. No observations have been made during these inspections that support this complaint. A further investigation could be conducted if a specific claim with details has been made.

3. Regarding the use of broken concrete – The broken concrete referenced in this complaint is actually a rip-rap material (it may appear as a pile of broken concrete if observed from a distance). Rip-rap is commonly used as an erosion control method to slow down the flow of water. It can also be used to construct a construction entrance or an area of road that is expected to encounter wetter conditions. Rip-rap is not being used as structural fill onsite. Use of rip-rap is called out on the plan sets shared with the County.

4. Regarding the use of "blue clay" – As mentioned above in point #1, great care is being taken onsite to preserve and protect topsoil. A clay material has been imported to utilize as structural fill but it is under no circumstances being mixed in with, or placed on top of, topsoil. This complaint has no merit.

5. Regarding rutting onsite – Prairie Solar is taking precautions to avoid working on parts of the site that are waterlogged. Due to wet soil conditions, no soil disturbance work was performed on 11/11/2024, 11/14/2024, 11/15/2024, and 11/18/2024. Section 9 of the AIMA calls out two scenarios for wet weather. The first is for prepared surfaces, where no restrictions apply. The second is for unprepared surfaces where the restriction is rutting that results in mixing of subsoil and topsoil, it does not explicitly forbid rutting. Prairie Solar's position is that no mixing of subsoil and topsoil has occurred, and this complaint has no merit.

The above concludes responses to the complaints summarized by the County. Two additional points are made below for consideration.

1. Per the County Ordinance and the Project's Special Use Permit, a complaint hotline has been established and posted at the Project site. Prairie Solar can confirm no complaints have been made via this hotline.

2. Similar complaints have been made to the Illinois EPA. These complaints resulted in impromptu site visits from the EPA on 10/25/2024 and 11/15/2024. In both cases, the EPA was pleased with the status of BMPs and general conditions of the site.

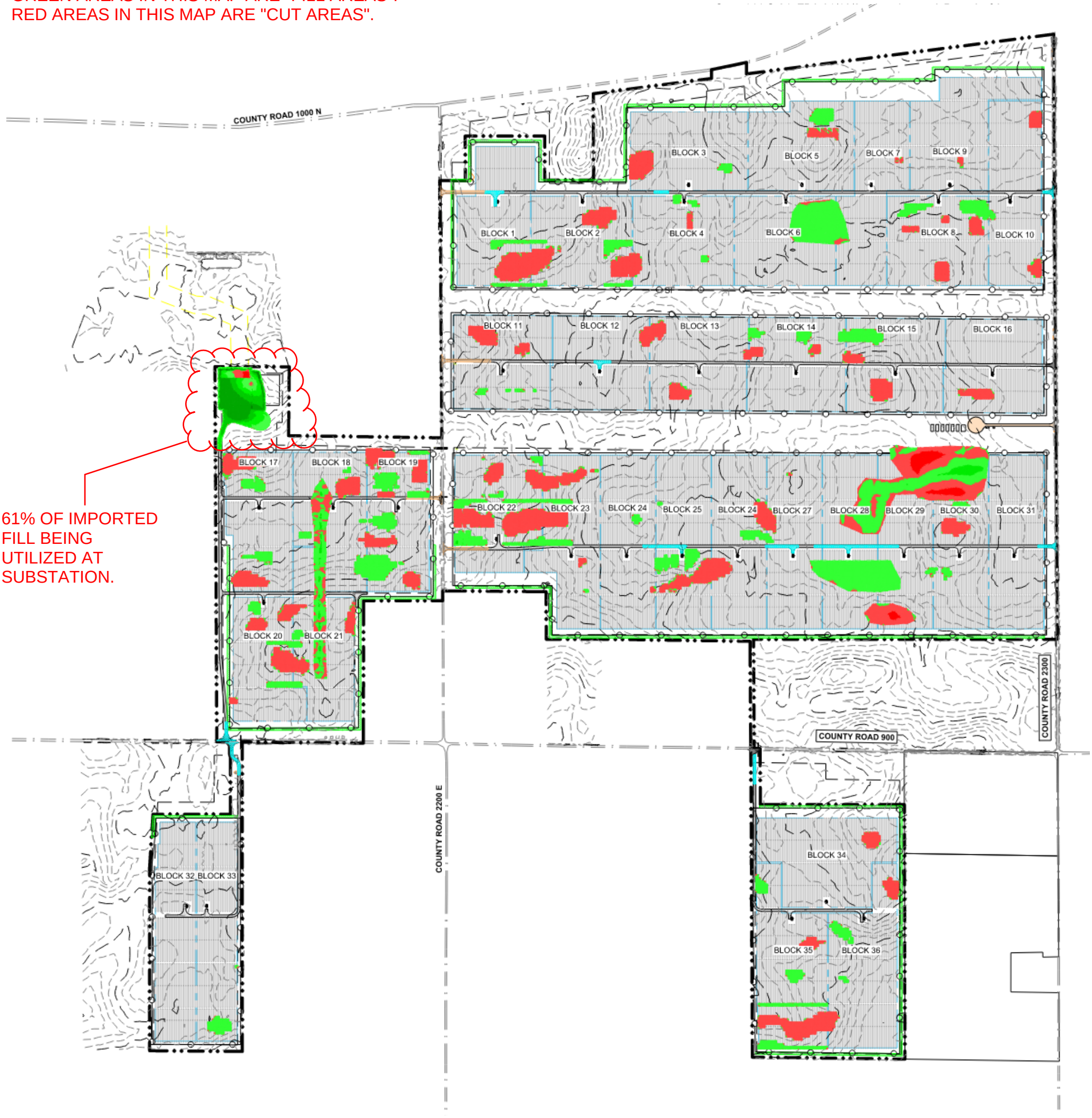
It is Prairie Solar's position that the Project is in compliance with applicable permits and these complaints do not have any merit. That said, these complaints are taken seriously and the Project team is available to discuss further, if needed.

Thank you,

Tim Richardson

Prairie Solar 1, LLC
Authorized Representative

GREEN AREAS IN THIS MAP ARE "FILL AREAS".
RED AREAS IN THIS MAP ARE "CUT AREAS".



61% OF IMPORTED FILL BEING UTILIZED AT SUBSTATION.

BayWa r.e.

Memo

RECEIVED
DEC 30, 2024
CHAMPAIGN COUNTY
PLANNING & ZONING

Recipient: Champaign County, IL - Planning Staff
Reference: Little Prairie Solar LLC - Special Use Permit
Phone: 949-880-1210
Email: david.holly@baywa-re.com
Date: 12/30/24
Subject: Responses to Public & ZBA Board Questions from 11/14/24 ZBA Hearing

To whom it may concern,

Little Prairie Solar LLC (Applicant) is pleased to present this response to questions and concerns that were both shared by the public and the members of the Champaign County Zoning Board of Appeals (ZBA) during the November 14, 2024, ZBA Public Hearing. Little Prairie Solar LLC submits the following attachments:

1. Q&A document with responses to questions and concerns that were both shared by the public and members of the ZBA Board during the 11/14/24 ZBA public hearing
2. A Farmland Drainage Plan for the Project, pursuant to state siting legislation (55 ILCS 5/5-12020)(j-5)
3. Letters from participating project landowners regarding their request and preference to not redesign their existing drain tile systems with new pattern drain tile system on their personal property
4. Updated preliminary site plan for the project, incorporating evidence of an underground outfall drainage line from Frito-Lay, received by the drainage district on 11/14 (post-ZBA hearing)
5. Updated Economic Impact Analysis report incorporating an executed tax abatement agreement with the Heritage School District
6. Additional supporting materials presenting the Sound Contour Map for nighttime sound levels

Little Prairie Solar believes that it has addressed all comments and concerns from the public and the zoning board members. If you have any questions or concerns, please contact David Holly at 949-880-1210 or at david.holly@baywa-re.com.

Regards,

David Holly

Attachment 1: Q&A Responses
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Q&A Responses

Questions and Comments from the Zoning Board of Appeals Public Hearing November 14, 2024

- The questions below are related to the proposed accessory Battery Energy Storage System (BESS) portion of the solar project. The Applicant has provided clarification on topics discussed during cross-examination and public testimony, which may have required more breadth and depth than was discussed during the first ZBA hearing on 11/14/24. Please note that if topics are universal to more than one participant, the responses are localized in this memorandum section regarding the battery energy storage topic of the Little Prairie Solar project. The Applicant consulted with an industry leading battery storage safety expert, Energy Safety Response Group (ESRG), for the data provided in this section. Please see the questions and responses below, providing the details requested to be expanded upon by the public and the Zoning Board members.

    - **Question:** In the event that a battery would catch fire, how long would that burn?

        - **Response:** Experience from lab testing and real-world events has shown BESS fires may range from a few minutes to several hours or more. In cases where an event lasted more than a few hours, it is typically a result of container-to-container propagation or a large scale, indoor system. As the accessory BESS system proposed on the Little Prairie Solar project is an outdoor, multi-container system, only the former applies. To help mitigate this risk, new fire testing requirements are under development which will force large scale fire to remain within its housing structure, with neighboring units unaffected at appropriate distances, to validate a lack of propagation even in circumstances with no fire department response. Further, while offensive firefighting techniques are typically considered less effective, defensive tactics should prove effective in reducing container to container spread in legacy systems. When executed properly, management and mitigation tactics—implemented through training and proper resource utilization, can shorten event time and minimize any localized impact.

          During more than 300 medium- to large-scale fire lab tests, ESRG researched multiple mitigation/management tactics and the results showed that through proper management and mitigation tactics, the timeline spent on scene can be drastically reduced. In the future, even more advanced tactics and approaches may be taught to the fire service which would further reduce event time and allow stabilization until third parties can take over site operations.

    - **Question:** During a fire, how far would/could toxic gas spread during the event? Would an evacuation be required?

        - **Response:** As discussed in the previous 11/14/24 ZBA hearing, research and field experience to date shows that gases emitted during lithium-ion battery incident(s) in an outdoor setting are comparable to what firefighters are prepared to encounter from a residential/commercial structure fire. ESRG provides training to any jurisdiction that requests the training, or to any jurisdiction that is looking to permit a battery energy storage site. Within that training framework, ESRG provides knowledge and education to first responders

on how to manage an incident appropriately. Through appropriate management and mitigation tactics, the local impact of the fire in terms of emissions can be limited. Ultimately, it is the responsibility of the local fire department to determine the best course of action (i.e., whether to evacuate or not) based on conditions found upon arrival, while also utilizing the resources provided to them (i.e., Emergency Response Plans, Hazard Mitigation Analysis, Subject Matter Experts, Remote Operations Centers). ESRG has not seen any information from their own testing or from multiple Nationally Recognized Testing Labs (NRTLs) that would suggest an evacuation should automatically commence during an incident. Regardless, ESRG supports all fire departments in whatever decision they deem necessary to protect life and property in their community.

- **Question:** How many fire fighters/gallons of water would be required to fight a fire on both the BESS and the solar facility? Provide a scenario for both facilities independently.

  - **Response:** NFPA 1142 discusses water supply for firefighters nationwide. Rural jurisdictions understand how to move water effectively from one source to a site experiencing an incident via water shuttle or hose relay. ESRG, leaning on NFPA 1142 when specifying water applications for BESS, typically recommends two, 2 ½ inch lines capable of flowing a total of 500 gallons per minute (250 GPM for each line). With the training provided, local first responders will be taught how to manage the incident conservatively by utilizing the water available to protect exposures as necessary.

    For BESS, should an enclosure experience an event, the first arriving fire department will utilize the site-specific Emergency Response Plan (ERP) and Standard Operating Procedures (SOP) to begin their Incident Action Plan (IAP) based off the current conditions they are witnessing. This ERP will document appropriate contact information for the site (i.e., remote operations center, subject matter experts) as well as the technology in deployed at the project. Next will be to utilize the NFPA 72 compliant fire alarm control panel (FACP) and determine what type of incident is occurring based on alarm data (i.e., heat or gas). With the ERP and the FACP, the fire department incident commander will be better suited to implement their IAP and how they will begin to manage the incident. Other aspects that are built into the ERP will be water sources (i.e., on-site water sources, water shuttle or water relay) along with other considerations for management/mitigation of the incident. Ultimately the local fire department, potentially in conjunction with a subject matter expert (SME), will determine when the emergency is over, and the site can be turned back over to the site owner.

    For solar, should an array experience an event, the first arriving fire department will utilize the site-specific ERP to begin their IAP based off the current conditions. The ERP will document appropriate contact information for the site (i.e., remote operations center, SMEs) as well as the technology in place. Through training, the fire department will coordinate on how to manage this incident by decreasing fire spread with water that can be applied from a

distance. The ERP will also document the source for water sources (i.e., on-site water sources, water shuttle or water relay). After contacting the subject matter expert, there will be a process in place to disable the energy supplied to a specific area which will be performed by maintenance/subject matter experts of the site. Ultimately the incident will be deemed under control by the local fire department, and the site turned back over to the site owner.

- **Question:** Please speak in greater detail regarding the safety measures that are in the BYD systems utilized in the conceptual design. What are the safety/precautionary measures in place (i.e., fire suppression, cooling systems, etc.).

  - **Response:** The BYD system that is currently included in the conceptual design for Little Prairie Solar project incorporates multiple safety systems integrated into the enclosure. As mentioned in the 11/14/24 ZBA hearing, every enclosure must adhere to NFPA 855 and show compliance with UL9540/9540a. Under NFPA 855, other safety features such as temperature and gas detectors must comply with NFPA 72, which will connect directly to the Fire Alarm Control Panel (FACP). The BYD enclosure houses two (2) fire detection sensors, two (2) temperature sensors, and a gas detection sensor with two (2) off-gassing valves. Each enclosure will be equipped with an audible fire alarm and visual fire strobe.

    The BYD system is equipped with an active exhaust ventilation system in accordance with NFPA 69 (Standard on Explosion Prevention Systems). This system helps control the concentration of combustible vapors in the event of abnormal operation. The system is set to engage two (2) fans per enclosure should the LFL (Lower Flammable Limit) reach or exceed 10% of the enclosure based on the gas detector sensor. The ventilation system is designed so that it can be remotely activated.

    Each enclosure will have its own battery management system (BMS). The BMS is utilized to monitor cell and pack parameters such as voltage, temperature, state of charge (SOC) to ensure early detection of pre-fault conditions and immediate detection of fault events. The BMS is designed to ensure disconnect of the effected string should an event exceed permissible value. An example of this could be a detection of abnormal temperatures on a specific string of batteries and the BMS detection would allow disconnecting that string to avoid a cascading problem before it causes harm to the system.

- **Question:** Discussion on past fire events noted by the public in other states and what caused the faults. How long did these events burn, and if/why residences were evacuated. How does the proposed Little Prairie Solar project differ?

  - **Response:** Two incidents that have occurred recently occurred in California. One in San Diego, the other in Escondido. Both systems were pre-NFPA 855 systems that have been in operation and supplying power to the grid prior to the extensive updates for BESS required in NFPA-855. The San Diego incident is an indoor system, whereas the Escondido incident was an outdoor system. At the

time of their incidents, the Escondido system was entirely offline, and per the incident commander who responded to the incident, was noted stating that "the system was being worked on by maintenance personnel." Both incidents are still under investigation.

As for community orders, ESRG is aware that "shelter in place" orders were made for both incidents. In Escondido, the Incident Commander at the time initiated a shelter in place order for all commercial and industrial buildings near the site as a precautionary measure. With the San Diego incident, an evacuation order was initially placed, with a shelter in place order for a nearby prison as a precautionary measure before both were promptly lifted when no hazard was observed.

The main differentiator between these two operational BESS systems and the BESS system that is being proposed at the Little Prairie Solar project, is that any BESS systems currently will have to meet all safety measures under the NFPA 855 standards/framework. Furthermore, the Little Prairie Solar BESS system will document that it has undergone UL 9540/9540a tests to be in compliance with NFPA 855 standards. These tests will be discussed in further detail with a Hazard Mitigation Analysis (HMA) that will be provided with the zoning use permit application. The Little Prairie Solar project will comply with NFPA 855 as it pertains to the integration of BESS at this site.

<u>Public Testimony about Prairie Solar 1 LLC:</u>

- There was discussion brought during the public testimony period of the first ZBA hearing on 11/14/24, with regards to concerns associated with construction activities on an adjacent but separate solar project (Zoning Use Permit No. 211-24-01). Those concerns have been addressed directly to the County under separate cover outside of the scope of the Little Prairie Solar project being reviewed under Zoning Use Case No. 144-S-24. Further discussion about a separate and adjacent solar project, should, respectfully, be discussed outside of the current zoning use case being reviewed as the Applicant is no longer the owner of that project and cannot represent any actions on that project as part of Zoning Use Case No. 144-S-24. However, the topics of concern which were shared by the public during the 11/14/24 hearing apply as relevant construction activities which could be expected to occur on the Little Prairie Solar project, and we would like to expand on those topics for clarity with all the stakeholders involved in the Little Prairie Solar project.

  Little Prairie Solar LLC acknowledges these topics noted from the public are of importance to not only the participating landowners that own the property within the Little Prairie Solar project, but the local community in general, and those topics discussed below include topsoil management, construction sequencing with regards to topsoil management, and the potential for earthwork/grading activities.

  - **Response:** Unexpected earthwork for the Little Prairie Solar project was noted during the public cross-examination portion of the 11/14/24 hearing. There is potential that the project will require earthwork in the form of grading on the properties participating to bring the topography into acceptable tolerances for the solar tracking equipment. The analysis and engineering process to determine if any cut and/or fill is necessary for

a project occurs during the detailed engineering design phase of the development process. This information, including a grading plan, would be included in a zoning use permit application to the County for the project. It is common practice for earthwork activities to occur on utility-scale solar projects to perform grading activities if the site-specific conditions warrant it. There are specific protections for the landowners and communities that host these projects with regards to how such activities that involve earthwork can be conducted in the state of Illinois. Those protections are detailed in the county zoning ordinance Section 6.1.5.(F.) "Standard conditions to Mitigate Damage to Farmland" and in the executed Agriculture Impact Mitigation Agreement (AIMA) for the project, specifically Section 5 "Topsoil Removal and Replacement." From a practical perspective, if earthwork is required for the project, topsoil must be removed from the surface and stockpiled prior to performing any grading activities that result in a change in topography. This is required on the project to ensure that topsoil is not mixed with the subsurface soil to ensure the integrity of the topsoil is maintained. After a grading activity has occurred, the topsoil will then be re-spread on top of the subsurface material that required earthwork to be performed as part of a grading plan. All quantities of earthwork will be documented and approved by the county engineer.

Topsoil, which has a higher organic content, is generally not suitable material for building base for select areas that require increased subsurface preparation, such as the project substation. If fill is required, for example at the project substation location, or other locations at the project, a quality material could be imported to the project site and topsoil removed from the footprint beforehand. That topsoil removed would be stored on-site and stabilized per the applicable National Pollution Discharge Elimination System (NPDES) permit/Stormwater Pollution Prevention Plan (SWPPP) for the project. The protections and management requirements for topsoil, in the County zoning ordinance and executed AIMA, must be adhered to and the applicant acknowledges that these requirements will be met for the project.

The project design will meet all authority having jurisdiction (AHJ) requirements for stormwater design. A certified Professional engineer in the state of Illinois will certify the stormwater plans and ensure they are compliant with applicable local, state, and industry standards for managing potential stormwater runoff.

Public Testimony from Mr. Justin Leerkamp:

- Mr. Leerkamp had questions about potential fill material, soil and/or aggregate rock, and what could be expected at the project substation, BESS facility and roads.
    - **Response:** It is common for utility-scale solar projects to incorporate aggregate rock material as the base at a project substation footprint, the BESS facility footprint, and internal access roads. The process of construction includes performing any earthwork needed based on a project grading plan which would be part of an approved Zoning Use Permit from the county. Topsoil would be removed to preserve it and be retained on the project site, following County requirements and those in the AIMA. Topsoil stockpiled would be stabilized per the applicable National Pollution Discharge Elimination System (NPDES) permit/Stormwater Pollution Prevention Plan (SWPPP) for the project.

      It is common that utility-scale solar projects utilize rip-rap material as an erosion control method to combat flow of water or it could also be used to construct a construction

entrance or an area of road that is expected to encounter wetter conditions. It is critical to this discussion on Little Prairie Solar to note that this type of material would not be utilized as structural fill on the project, as it would only be applied as an approved temporary measure to meet requirements per the applicable National Pollution Discharge Elimination System (NPDES) permit/Stormwater Pollution Prevention Plan (SWPPP) for the project. Detailed engineering plans for the project would depict the locations of this type of measure and those plans would require approval by the county as part of the Zoning Use Permit.

- Mr. Leerkamp asked about the depreciation rate for taxing bodies on solar farms.
    - **Response:** Illinois utilizes a formulaic approach to assessment of renewable energy. Beginning with assessment year 2018 (taxes paid in 2019), the fair cash value for a commercial solar energy system in Illinois is based on its nameplate capacity per megawatt (35 ILCS 200/10- 720 et seq.). The state of Illinois assesses commercial solar (and wind) facilities as real property as a unit, including land value, using a statutory prescribed base year $/MW of nameplate capacity which is trended by CPI-U inflation rates and then straight-line depreciated over 25 years. The amount allowed for physical depreciation cannot reduce the commercial solar energy system to less than 30 percent of the trended real property cost basis. Please refer to the provided document from the Illinois Department of Revenue for more detailed information.

- Mr. Leerkamp noted questions about the amount of any fill that could be expected on the Little Prairie Solar project.
    - **Response:** Any potential fill quantities that may be required for the project are unknown at this phase of the development process. Detailed engineering calculations regarding topographical tolerances will be assessed after geotechnical investigation has occurred and will be provided with the application to the county for a zoning use permit. It should be noted that the zoning use permit is part of a robust approval process with the County. The zoning use permit must show that the final engineering design meets all applicable County ordinances. This permit is accompanied by the final site plan and an erosion and sediment control plan.

<u>Cross examination from Mr. Ted Hartke:</u>

- Mr. Hartke noted concerns about solar farm panel integrity under varying weather conditions and potential for contamination.
    - **Response:** To further expand with supporting evidence and a real-world example, please see the below responses.
        a) A study was completed by Virginia Tech[1] for First Solar, a leading solar developer and solar module manufacturer with CdTe. The study states, “The risks to the environment arising from broken solar panels during adverse events are considered by reviewing experimental results, theoretical worst-case modeling, and observational data from historical events. In each case considered, the potential negative health and safety impacts of utility-scale photovoltaic installations are low. Based upon the potential environmental health and safety

impacts of CdTe photovoltaic installations across their life cycle, it is concluded they pose little to no risk under normal operating conditions and foreseeable accidents such as fire, breakage, and extreme weather events like tornadoes and hurricanes."

b) In April of 2015, a tornado struck the Desert Sunlight Solar Farm in the Mojave Desert of California. Of the installation's 8,800,000 photovoltaic modules, 154,843 modules were damaged by the tornado (1.8%). The damaged panels were collected, approximately 135,000 were recycled, and the remainder was disposed of. Sampling of soil and module pieces from the tornado event passed Toxicity Characteristic Leaching Procedure (TCLP) tests, and an environmental non-governmental agency contacted the U.S. Bureau of Land Management and reported no indication of soil contamination. Details of the [2]Desert Sunlight Solar Farm tornado event were referenced from a study completed by Virginia Tech[1] for First Solar, a leading solar developer and solar module manufacturer. See Link.

[1]https://www.firstsolar.com/-/media/First-Solar/Sustainability-Documents/Sustainability-Peer-Reviews/Virgina-Tech-Peer-Review.ashx. Accessed April 2024.

[2]Desert Sunlight Tornado Damage. Accessed April 2024.

- Mr. Hartke noted concerns about solar sound levels produced from the project. Further, in an email to the Planning department dated 12/2/24, Mr. Hartke noted his concern and claim that "adverse health effects (sleep disturbance) is shown at 40dBA".

    - **Response:** After reviewing Mr. Hartke's response to the planning department regarding a request for a sound contour map, we understand that his concern is primarily focused on sleep disturbance for residents in the area. For an operational hybrid project, the inverters for the solar modules emit decreased sound levels during hours in which the modules are not converting solar energy to produce power and are effectively on idle/standby during nighttime hours. The components on the project which could be operating during nighttime hours at normal operating/emitting levels and producing associated operational sound emissions are the components in the BESS facility. Therefore, we have produced a sound contour map showing the operational sound contours specific to the BESS facility components. We hope that this will be helpful given the real-world scenario we are presenting in which the BESS facility may be operating during nighttime hours. Please see the attached BESS-specific contour map provided. It should be noted that common household items which are typically operating inside of residential homes during nighttime hours, such as common types of residential refrigerators, operate at levels that can exceed 40dBA, a level which Mr. Hartke has claimed cause health effects/sleep disturbance.

      As the project is designed, the sound analysis shows that the facility operational sound levels are below Illinois Pollution Control Board Standards and meeting the County zoning ordinance and state siting (55 ILCS 5/5-12020) requirements.

Cross-Examination Questions from Mr. Sean O'Brien

- What connects a BESS and PV facility to the central control operations center?
    - **Response:** The BESS (more specifically the Battery Management System – BMS) and PV facility is connected to a remote-operations control center through a secure encrypted data connection over the internet. The PV and BESS facility has a primary hardline internet service and backup cellular connection for redundancy.
- How long can the facility operate without a connection to a remote-operations control center, safely?
    - **Response:** The facility can operate safely without any internet connection as safety protections are integrated directly into the site protection equipment. The power plant would automatically be de-energized by the protection equipment if there were any catastrophic failure of the PV, substation, or BESS systems. However, this does not mean that if there was a fire, that the system would automatically put out the fire. The fire department would still need to be called in the event of a fire. The BESS system comes with a fire detection system which is why the redundant internet services are useful to make sure the control center receives those fire alerts so that the fire department can be notified and dispatched.
- Are there backup systems for connections in place, what are they and logistically how do they communicate if the primary system goes down?
    - **Response:** As mentioned above, primary hardline internet service and backup cellular connection for redundancy.

Public Testimony from Mr. Don Wauthier:

- Mr. Wauthier noted a trend for use of solar farm areas for secondary agricultural uses (grazing of sheep for example). He noted for the board to consider requiring a secondary use for the project and also stated that it is a waste to society to let grass be there for 40 years.
    - **Response:** Little Prairie Solar has originally proposed to incorporate dual use of the landscape through the vegetation proposed for the project. The vegetation includes groundcover which is pollinator habitat which also is specifically designed with the ability to be grazed by sheep for maintenance purposes. The Project was designed and submitted to the County originally with acknowledgement and compliance with Champaign County Zoning Ordinance Section 6.1.5.(F)(9)(a.)(b)(ii.), which states that the establishment of a vegetative ground cover within the Project includes the following: "The species selected shall serve a secondary habitat purpose as much as possible".

      The project has enrolled in the Solar Synergy Program with the Bee and Butterfly Habitat Fund, which also provides for the pollinator habitat designed specifically for the Project to support the ability of a local apiary to be established and further increase the ecological uses and benefits of the land during solar operations. The applicant has designed the Project to specifically incorporate a secondary habitat purpose not only to meet County regulations in the ordinance, but to enhance soil health while the project is in operation for numerous decades.

The array seed mixture utilizes species such as clover (https://www.canr.msu.edu/news/benefits_of_white_clover) and other native legumes which will increase soil aeration due to their long and fibrous root system, fix nitrogen from the atmosphere increasing those nutrient values in the soil, increases moisture holding capabilities in the soil, improved soil friability, reduced erosion potential, reduced soil compaction due to the extensive root system, and movement and percolation of water off the site. Additional non-soil health benefits from the proposed permanent seed mixture are the use of drought tolerant species, vigorous and quick growth to out compete weed species on site, beneficial pollinator health, and increased palatability on-site for grazing. Pollinator species populations and habitat performance will also be monitored once the final vegetative cover is established. Soil sampling activities will also be conducted to document improvements to soil health and to document carbon sequestration levels.

Lastly, participation of Little Prairie Solar project in the Solar Synergy Program allows the Bee and Butterfly Habitat Fund to connect the project with a commercial beekeeping operation to help deliver some of the project's sustainability goals, increase US-sourced honey production, and decrease annual honey bee hive losses. Information can be obtained by the Bee and Butterfly Habitat Fund relating to annual honey bee survival and honey production.

- Mr. Wauthier noted that research indicates solar panels have the potential to increase surface runoff of stormwater unless proper best management practices are incorporated into the design. Appears the intention Mr. Wauthier's comment is to ensure the Board is aware of general engineering best management practices.

    - **Response:** Runoff and erosion were considered as a primary concern for Project design and following best engineering practices as evidenced in peer-reviewed and published studies, the groundcover has been designed to eliminate the potential for excess runoff. According to a study published in the Journal of Hydrologic Engineering titled "Hydrologic Response to Solar Farms", it was determined that "The addition of solar panels over a grassy field does not have much of an effect on the volume of runoff, the peak discharge, nor the time to peak." Further, "well maintained grass cover beneath the panels and in the spacer section is highly recommended" and "if these simple measures are taken, solar farms will not have an adverse hydrologic impact from excess runoff or contribute eroded soil particles to receiving streams and waterways". This research study document was submitted as part of the original SUP application package for Little Prairie Solar and can be referenced in **Exhibit T**.

      The project design will meet all AHJ requirements for stormwater design. A certified Professional engineer in the state of Illinois will certify the stormwater plans and ensure they are compliant with applicable local and state requirements and industry standards for managing potential stormwater runoff.

- Mr. Wauthier noted the potential for a right-of-way on the drainage ditch that runs through the property.

    - **Response**: Little Prairie staff have coordinated with Mr. Wauthier and requested documentation of the right-of-way for this location, or regulations governing a right-of-way requirement on open ditches via email exchange on 12/18/24. We have not

received documentation from the drainage district of the noted ROW on either side of the ditch as of the date of this memorandum. As designed currently, until further documentation can be provided which would necessitate a design change, a 50-foot buffer has been designed from the centerline of the ditch on either side of the ditch to allow access to the ditch corridor for any future maintenance or improvements that could be needed. For clarity, the project fence line is located outside of this provided buffer off the drainage ditch. As designed, we believe 50 feet is an adequate width to accommodate maintenance activities along either side of the ditch, which can be accessed without entering the proposed facility.

Public Testimony from Mr. Kent Krukewitt

- Mr. Krukewitt noted that drain tile is important as drainage of farm ground is essential. Mr. Krukewitt posed the question how the applicant can get water to the nearby ditch if they don't know where tiles are.

    - **Response:** We agree that drainage infrastructure is important to the local area and regionally. The applicant is proposing to follow the farmland drainage plan, and applicable County and state regulations, both in the County zoning ordinance and the executed Agriculture Impact Mitigation Agreement for the project. Existing drain tile infrastructure has been in place for existing commercial farming activities on the participating properties for landowners and/or their farmer tenants and the applicant will not be redesigning existing infrastructure of the systems to a complex pattern drain tile system on each property. We do not believe the existing drain tile infrastructure of the landowners should be redesigned if it is functioning well in the current condition to support existing farming activities. Installing a pattern drain tile system would require significant systematic rows of topsoil disturbance for installation. Most importantly, the participating landowners of the project have stated that they do not desire for their drain tile infrastructure to be replaced with a pattern drain tile system and for their existing drain tile infrastructure to remain, where possible. Confirmation of those requests in letter form has been included with this memorandum.

      Please refer to the Farmland Drainage Plan, which is provided with this memorandum, which details the steps taken to identify drainage infrastructure on the participating properties through a detailed investigation process. The applicant has included all existing drainage infrastructure details that are publicly available and any details that have been provided by the drainage districts into the conceptual design for the project. Any drain tile infrastructure of personal landowners or the district which are not known, shall be noted during the drain tile investigation, which will occur prior to a zoning use permit so that the details can be implemented into detailed engineering designs. The timing of this investigation follows County zoning ordinance and Agriculture Impact Mitigation Agreement requirements. Those results of the drain tile investigation will also be included in a revision to the Farmland Drainage Plan. The Farmland Drainage Plan details the steps taken if the existing drainage infrastructure, which may exist on each property, is disturbed during construction, operations, and/or decommissioning.

      The project, as designed at this conceptual stage, is abiding by the County zoning ordinance, drainage requirements set forth in the Agriculture Impact Mitigation Agreement and state siting legislation (55 ILCS 5/5-12020).

- Mr. Krukewitt noted that the accessory use battery storage containers are near open ditch and had a concern for contamination.

    - **Response:** As noted in the ZBA hearing on 11/14/24 and corroborated by our BESS expert, the BESS units are sealed containers. Additional BMP's recommended by the manufacturer will be placed on the eastern side of the facility to contain the potential for any materials to leave the facility site.

- Mr. Krukewitt noted that the drainage district has regulations which have been shared with the circuit court.

    - **Response:** The Applicant acknowledges this and intends to continue coordinating with the drainage districts throughout the project development. To note our good faith coordination efforts thus far, we began our first notification of the Little Prairie Solar Project to Mr. Krukewitt, in an in-person meeting on June 20, 2023, and have been coordinating on design iterations throughout pre-permitting phase and remain in coordination through the current permitting process. To date, Mr. Krukewitt has provided us with an engineering layout of the Frito Lay outfall drain that exists within Little Prairie Solar site and Mr. Don Wauthier has provided a package of documentation that exists for drainage details in the area that are available to the drainage district. Since then, the Applicant has incorporated that drainage feature the current design. During construction if any drain tiles are encountered, Little Prairie Solar LLC will repair or replace, depending on site-specific conditions encountered, the features as indicated in our Farmland Drainage Plan.

      It should also be noted for the record that the state siting legislation, (55 ILCS 5/5-12020)(t) states the following: "Notwithstanding any other provision of law, a facility owner with siting approval from a county to construct a commercial wind energy facility or a commercial solar energy facility is authorized to cross or impact a drainage system, including, but not limited to, drainage tiles, open drainage ditches, culverts, and water gathering vaults, owned or under the control of a drainage district under the Illinois Drainage Code without obtaining prior agreement or approval from the drainage district in accordance with the farmland drainage plan required by subsection (j-5)."

- Mr. Krukewitt noted that cut/fill can change surface drainage.

    - **Response:** The applicant acknowledges the potential for grading of any surface elevation to influence on surface drainage. Construction-level civil engineering design will consider any changes to subsoil elevation which could be required to bring the site into acceptable tolerances for the solar trackers. This level of design is performed as part of the design process which becomes the basis of the zoning use permit application to the County. The engineering design will follow the requirements of the Champaign County Stormwater Ordinance, Special Use Permit, AIMA, and State Siting legislation. Per an email from Don Wauthier to Little Prairie Solar LLC received on 12/19/24, Mr. Wauthier noted that for the drainage district, the project simply needs to demonstrate that pre and post development peak rates of stormwater runoff flow are equivalent. The Applicant commits to this requirement and shall be confirmed in the zoning use

permit application materials which must also be approved before construction can commence.

The project design will meet all AHJ requirements for stormwater design. A certified Professional engineer in the state of Illinois will certify the stormwater plans and ensure they are compliant with applicable local and state requirements and industry standards for managing potential stormwater runoff.

Public Testimony from Mr. Daniel Herriett

- Mr. Herriott noted that he is neighboring landowner and didn't receive a letter from BayWa r.e.
    - **Response:** According to landowners who own the property Mr. Herriott farms, Mr. Herriott does not own the land adjacent to the project on the east side of the existing Sidney 138kV substation, he farms the property as a tenant farmer for the McElroy family. Mr. Herriott owns property close to the project, however, as noted in the Champaign County data, are shown to be non-adjacent to the property boundary. Little Prairie Solar LLC sent letters and visited with landowners whose properties are physically adjacent to the project boundary participating parcels.
- Mr. Herriott noted his concern for protecting soil resources and shared personal claims about construction being performed on a separate and adjacent solar project.
    - **Response:** Regarding claims about construction processes on a separate and adjacent solar project, those concerns have been addressed directly to the County under separate cover outside of the scope of the Little Prairie Solar project being reviewed under Zoning Use Case No. 144-S-24. Further discussion about a separate and adjacent solar project, should, respectfully, be discussed outside of the current zoning use case being review for Little Prairie Solar project.

Public Testimony from Mr. Justin Leerkamp:

- Mr. Leerkamp noted his concern for protecting soil resources and shared personal claims about construction being performed on a separate and adjacent solar project.
    - **Response:** Please note the processes and requirements regarding topsoil management and construction activities that Little Prairie Solar project has acknowledged and must comply with during construction, operations, and decommissioning stated above in this document.

      Regarding claims about construction processes on a separate and adjacent solar project, those concerns have been addressed directly back to the County under separate cover outside of the scope of the Little Prairie Solar project being reviewed under Zoning Use Case No. 144-S-24.

Public Testimony from Janet Smith:

- Ms. Smith noted her concern for sound and heat from solar panels relating to her property and proximity to the Project. We are .9 miles from the BESS. I'm concerned about evacuation, and being notified.

- **Response:** The Applicant followed up directly with Janet Smith via email to address her concerns on 11/21/24. A Summary of the details is provided below for reference:

  - **Heat**

    Research shows that any potential temperature increase from solar modules dissipates within 100 feet from the solar modules. We have designed the project based on the County ordinance setback requirements which provides a minimum of 240-feet from the property line to the limits of the Project fence line of Ms. Smith's property (Parcel ID: 242823200004). Additionally, there would be at least 20 feet beyond the fence line to the solar modules. Any solar panels on the project would be more than 250 feet from Ms. Smith's property boundary. As proposed, the Little Prairie design complies with the County ordinance by incorporating a vegetated screening buffer on all sides of the Little Prairie Project facing your property which provides further buffering from any project equipment which we believe has a mitigative effect regarding concerns raised.

    The applicant has voluntarily designed the Project to incorporate the County ordinance setbacks, as opposed to state siting regulations which would otherwise decrease the setback from the Project fence line to Ms. Smith's residence by over 100 feet.

  - **Glare**

    A glare analysis was performed with a third-party expert and that report was provided as part of our permitting application to the County (see **Exhibit Q**). The results of the glare analysis showed that there would be no instances of red or yellow glare at the project. Only green glare would be present, which is common to our everyday lives and would not interrupt normal activities. Examples of green glare include the reflection from pond water and soil on the ground. Further, solar panels are designed with anti-reflective coating to minimize glare and are designed in general to retain sunlight for energy conversion, not to reflect sunlight. Lastly, the site is designed to comply with the County ordinance requirement which states that a vegetated screening buffer is required within 1,000 feet of residences and the Little Prairie design is complying with the County ordinance by incorporating a vegetated screening buffer on all sides of the Little Prairie Project facing Ms. Smith's property. The vegetative screening buffer provided to comply with the County ordinance also provides a mitigative effect regarding glare concerns raised.

    The applicant has also moved the access road further north away from Ms. Smith's property as requested based on feedback from Ms. Smith at the Open House hosted in Sidney on September 19, 2024.

    The applicant has voluntarily designed the Project to incorporate the County ordinance setbacks, as opposed to state siting regulations which would otherwise decrease the setback from the Project fence line to Ms. Smith's residence by over 100 feet.

  - **Inverter Sound**

    A sound analysis was performed and was submitted as part of the SUP application package to the County (see **Exhibit P**). The results of the sound analysis show that operational sound from project equipment does not exceed Illinois Pollution Control Board (IPCB) requirements at adjacent residences which complies with the County

zoning ordinance requirements. Results showed that the daytime average sound levels physically measured at the project site were higher than the modeled sound levels at the edges of the Project. Further, the sound analysis was done conservatively and did not account for the solar panels and pollinator habitat groundcover between inverter locations and edges of the project which would have further mitigative effects on sound from inverters within the Project.

The project is designed to meet the requirements of the County ordinance which state that inverters must be setback 275-feet from the project fence line. We have designed inverter locations to not only meet the ordinance with respect to the area around Ms. Smith's property but have located the inverters even further than the minimum setback requirements allow. This was done to specifically keep any inverters away from the edges of the Project where there may be occupied residences such Ms. Smith's occupied property. Lastly, there will be a vegetation screen between any inverters of the project and Ms. Smith's property, on all sides as depicted on the site plan. Results of the sound analysis show, no adverse impacts regarding sound from the Project are anticipated at Ms. Smith's residence.

The applicant has offered to meet to discuss the site plan specifics further with Ms. Smith and we are eagerly awaiting a response from Ms. Smith as of the date of this memorandum.

Little Prairie Solar Project

Farmland Drainage Plan

Original Date: December 30, 2024

Revised: TBD

Contents

Appendices

Applicable Legislation References

This Farmland Drainage Plan (FDP) is being prepared to comply with Champaign County and State of Illinois (IL) requirements set forth in:

1) Champaign County Zoning Ordinance Section 6.1.5(F.)(2) "Protection of Agricultural Drainage Tile" which states:

   a. The applicant shall endeavor to locate all existing agricultural drainage tile prior to establishing any construction staging areas, construction of any necessary PV SOLAR FARM access lanes or driveways, construction of any PV SOLAR FARM STRUCTURES, any common switching stations, substations, and installation of underground wiring or cabling. The applicant shall contact affected landowners and tenants and the Champaign County Soil and Water Conservation District and any relevant drainage district for their knowledge of tile line locations prior to the proposed construction. Drainage districts shall be notified at least two weeks prior to disruption of tile.

   b. The location of drainage district tile lines shall be identified prior to any construction and drainage district tile lines shall be protected from disturbance as follows:

      (a) All identified drainage district tile lines and any known existing drainage district tile easement shall be staked or flagged prior to construction to alert construction crews of the presence of drainage district tile and the related easement.

      (b) Any drainage district tile for which there is no existing easement shall be protected from disturbance by a 30 feet wide no-construction buffer on either side of the drainage district tile. The no-construction buffer shall be staked or flagged prior to the start of construction and shall remain valid for the lifetime of the PV SOLAR FARM SPECIAL USE Permit and during any deconstruction activities that may occur pursuant to the PV SOLAR FARM SPECIAL USE Permit.

      (c) Construction shall be prohibited within any existing drainage district easement and also prohibited within any 30 feet wide no-construction buffer on either side of drainage district tile that does not have an existing easement unless specific construction is authorized in writing by all commissioners of

the relevant drainage district. A copy of the written authorization shall be provided to the Zoning Administrator prior to the commencement of construction.

c. Any agricultural drainage tile located underneath construction staging areas, access lanes, driveways, any common switching stations, and substations shall be replaced as required in Section 6.3 of the Champaign County Storm Water Management and Erosion Control Ordinance.

d. Any agricultural drainage tile that must be relocated shall be relocated as required in the Champaign County Storm Water Management and Erosion Control Ordinance.

e. Conformance of any relocation of drainage district tile with the Champaign County Storm Water Management and Erosion Control Ordinance shall be certified by an Illinois Professional Engineer. Written approval by the drainage district shall be received prior to any backfilling of the relocated drain tile and a copy of the approval shall be submitted to the Zoning Administrator. As-built drawings shall be provided to both the relevant drainage district and the Zoning Administrator of any relocated drainage district tile.

f. All tile lines that are damaged, cut, or removed shall be staked or flagged in such manner that they will remain visible until the permanent repairs are completed.

g. All exposed tile lines shall be screened or otherwise protected to prevent the entry into the tile of foreign materials, loose soil, small mammals, etc.

h. Permanent tile repairs shall be made within 14 days of the tile damage provided that weather and soil conditions are suitable or a temporary tile repair shall be made. Immediate temporary repair shall also be required if water is flowing through any damaged tile line. Temporary repairs are not needed if the tile lines are dry and water is not flowing in the tile provided the permanent repairs can be made within 14 days of the damage. All permanent and temporary tile repairs shall be made as detailed in the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5R. and shall not be waived or modified except as authorized in the SPECIAL USE Permit.

i. All damaged tile shall be repaired so as to operate as well after construction as before the construction began.

j. Following completion of the PV SOLAR FARM construction, the applicant shall be responsible for correcting all tile line repairs that fail, provided that the failed repair was made by the Applicant.

2) Illinois Statutes Chapter 55 ILCS 5/5-12020 (j-5) which states:

A commercial wind energy facility or a commercial solar energy facility shall file a farmland drainage plan with the county and impacted drainage districts outlining how surface and subsurface drainage of farmland will be restored during and following construction or deconstruction of the facility. The plan is to be created independently by the facility developer and shall include the location of any potentially impacted drainage district facilities to the extent this information is publicly available from the county or the drainage district, plans to repair any subsurface drainage affected during construction or deconstruction using procedures outlined in the agricultural impact mitigation agreement entered into by the commercial wind energy facility owner or commercial solar energy facility owner, and procedures for the repair and restoration of surface drainage affected during construction or deconstruction. All surface and subsurface damage shall be repaired as soon as reasonably practicable.

Additionally, Illinois Statutes Chapter 55 ILCS 5/5-12020 (t) states:

Notwithstanding any other provision of law, a facility owner with siting approval from a county to construct a commercial wind energy facility or a commercial solar energy facility is authorized to cross or impact a drainage system, including, but not limited to, drainage tiles, open drainage ditches, culverts, and water gathering vaults, owned or under the control of a drainage district under the Illinois Drainage Code without obtaining prior agreement or approval from the drainage district in accordance with the farmland drainage plan required by subsection (j-5).

Definitions

A. Agricultural Land – Land which is presently under agricultural cultivation; land which has been previously cultivated and not subsequently developed for non-agriculture use; and cleared land which is capable of being cultivated. Includes, but not limited to, land used for cropland, improved pasture, truck gardens, vineyards and orchards.

B. Cropland – A land use category that includes areas used for the production of crops for harvest, both cultivated and non-cultivated. Cultivated crops include row crops, close grown crops, vegetables and hay and pasture in rotation with the crops. Non-cultivated

crops include lands used in conservation grassland programs, berries, horticultural plants and long stand vegetables.

C. Drain Tile – Any artificial sub-surface system designed to intercept, collect, and convey excess soil moisture to a suitable outlet. This may include systems constructed using clay, concrete, polyvinyl chloride (PVC), polyethylene (PE) materials, and high-density polyethylene (HDPE) plastic.

D. Drain Tile Inspector – A person qualified by experience for the purpose of evaluating pipeline construction in relation to drain tile removal and replacement, repairs and system restoration.

E. Drain Tile Contractor – A person qualified by experience for the purpose of drain tile installation, drainage repairs and drainage system restoration.

F. Landowner – Person(s) holding legal title to property on which the solar facility and any associated infrastructure are located on from whom project Owner is seeking or has obtained a temporary or permanent easement, or any person(s) legally authorized by a landowner to make decisions regarding the mitigation or restoration of agricultural impacts to such landowner's property.

G. Mutually Beneficial Drain Tile – A Drain Tile that is located on two (2) or more tracts of land that are under different ownership or provides drainage conveyance for upstream or downstream land.

H. Stakeholders – Federal, state and local agencies, landowners and local citizens impacted by the proposed project activities.

I. Surface Drains – Any surface drainage system such as shallow surface field drains, grassed waterways, open ditches, or any other conveyance of surface water.

J. Tenant – A person or persons lawfully residing on, or in operational control of the land.

K. Topsoil – The upper-most part of the soil commonly referred to as the plow layer, the A layer, or the A horizon, or its equivalent in uncultivated soils. It is the surface layer of the soil that has the darkest color or the highest content of organic matter (as Identified in the United States Department of Agriculture (USDA) County Soil Survey and verified with right-of-way samples).

Project Points of Contact

Project Owner:
Company Name: Little Prairie Solar LLC
Contact Name: David Holly
Address: 18575 Jamboree Road, Ste 850, Irvine, CA 92612
Phone Number: 949-880-1210
Email: david.holly@baywa-re.com

Construction Contractor:
Company Name: TBD
Contact Name: TBD
Address: TBD
Phone Number: TBD

Civil Engineer of Record:
Company Name: TBD
Contact: TBD
Address: TBD
Telephone: TBD

Drain Tile Contractor:
Company Name: TBD
Contact: TBD
Address: TBD
Telephone: TBD

Introduction

This FDP has been prepared for activities associated with construction of the Little Prairie Solar LLC Project (the Project). All parcels participating in the Project are currently zoned as AG-1 Agriculture and the Project is applying for an SUP from Champaign County, IL. The project is geographically located east of the Village of Sidney and west of the Village of Homer, north of County Road 800 N Road, west of County Road 2400 E, east of County Road 2200 E (S Bryant St.), and south of County Road 1000 N, Champaign County, Illinois. Existing drain tile conditions are shown in **Appendix A**.

The proposed Project will be constructed upon existing agricultural fields that may contain a network of subsurface drainage systems, commonly known as drain tile systems. Little Prairie LLC is dedicated to working with all vested parties to reduce the potential for impacts to drain tile systems and has developed this FDP for use during planning, construction, and restoration of the storage facility to manage, mitigate, and repair drainage systems impacted by construction activities.

Drain tiles crossed by the Project and its associated infrastructure will be reviewed and analyzed to determine the potential for drainage impacts. Appropriate advanced planning and mitigation work will be undertaken to a reasonably practicable extent, to meet applicable County and State requirements. This will be accomplished through coordination between Little Prairie LLC, the engineering procurement & construction (EPC) contractor, field personnel, sub-contractors, landowners, drainage district officials and subject matter experts. Little Prairie LLC and the EPC contractor will work with all relevant parties to help in mitigating and repairing drain tile impacts from construction-related activities so that drainage systems are at least equivalent to their pre-construction condition. It is the intent for this FDP to be revised and expanded upon as appropriate and additional site-specific information is obtained through various phases of the development of the Project.

Agricultural Drainage History and Basics

Agricultural drainage systems are used in agricultural areas throughout the mid-west farm belt to improve crop production by removing excess surface (flooding) and sub-surface (root zone) water from agricultural fields. Drain tile systems have made possible increased acreage and yield of crops from previously unproductive areas.

Crop production on certain soil types and landscapes are significantly enhanced by subsurface drainage. This includes areas with low permeability soils, isolated low depressions and lands with low slope gradients. Only water draining freely from the soil profile by gravity is removed by drain tiles. Tile drains are intended to function at

atmospheric pressure as gravity flow systems. Flow occurs because of differences in the water surface elevation (e.g., the water table and tile elevations), thus making a positive (free flowing or pumped) outlet critical to their operation. The initial flow collector in the tile drain system is the perforated lateral. The depth to which tile laterals will lower the water table and water removal rate are a function of drain depth, spacing, and soil permeability.

Historically, the most common materials used to manufacture drain tile have been clay, concrete, polyvinyl chloride (PVC), and polyethylene (PE). Practically all agricultural drain tile installed today is made from HDPE plastic. Drain tile made from high-density polyethylene (HDPE) plastic comes in various wall profiles (e.g. corrugated and smooth), diameters (e.g. 4" – 24" and larger), wall thicknesses (e.g. single and dual wall), and wall perforations (e.g. slotted and non-perforated).

Drain depth typically ranges from three to six feet and spacing from 30 to 100 feet. Laterals drain to mains and submains where the flow rate is governed by inside pipe roughness, pipe size and slope. Mains and submains must be sized to convey the flow from all upstream lateral systems. Tile drain systems eventually discharge into a surface water conveyance system or ditch. These ditches are part of a mutual legal public drainage system or jurisdictional drainage district system, both administered and governed by Illinois Drainage Laws. Older systems tend not to follow these concepts.

Existing agricultural drain tile systems have improved drainage within naturally wet soil types which completely changes the native hydraulic soil characteristic and creates stable aeriated conditions for improved crop performance. After many years of subsurface drainage, these regional soils have developed dependence on artificial drainage which is essential to productive farming. Construction activities, particularly trenching and heavy equipment traffic, have the potential to damage existing tile and disturbance or malfunction of these systems can cause saturated lands which may be less productive for typical commercial farming operations.

Refer to the Drain Tile Exhibit, found in **Appendix A**, for approximate existing site system information. Note, the drain tile locations are based off currently available desktop data and preliminary information obtained from property owners and applicable drainage districts. A perimeter drainage survey will be completed prior to construction to locate mutually beneficial drain tile materials and depths which can then be incorporated into the final engineering design to be part of the Zoning Use Certificate (Building Permit) application to the County.

The project owner and the EPC Contractor will use available information from the perimeter drainage survey, landowner data and publicly available mapping to anticipate locations of potential impact on drain tiles. Anticipated areas of impact will be mitigated in advance as much as practical. Unexpected areas of impact will be repaired or relocated on a case-by-case basis as they are identified.

Drain tile can be installed with a backhoe, tile plow, and chain machine or wheel trencher. Drain tile laterals are generally installed at a depth of three-to-five feet, and outlet tile is often installed five-to-six feet deep or deeper in some areas. Installation depths can vary dramatically based on the need to maintain grade through a slope and reach a desired outlet location and depth. The drain tile must be installed deep enough to effectively drain subsurface water from the property, minimizing the need to repair or install additional drain tile in the future.

The construction standards and policies described herein only apply to construction activities occurring partially or wholly on privately owned agricultural land. Drainage Investigation/Perimeter Survey Report

The Project will work with a qualified drainage consultant to undertake a desktop and field mapping exercise to determine the existing drain tile system within the Project boundary prior to construction. All existing found drain tile routes located within the Project will be recorded using Global Positioning Systems (GPS) technology and shown on mapping software. Final drain tile mapping shall be computer drafted on an aerial base map also depicting the Project limits. A field report should be attached to the plan containing evaluation information including size, flow, depth characteristics, pipe type/quality, and any other pertinent field notes. Through this process, it is important to identify mutual drain tiles and surface flow systems that benefit the lands of adjacent properties to maintain flow integrity and their right to outfall water appropriately. All drainage tile lines identified in this manner shall be shown on the construction and deconstruction plans.

Repair Standards and Practices

Rerouting and Permanent Repair of Agricultural Drainage Tiles

Within 60 days after construction is complete, the Project owner shall provide the landowner, the Illinois Department of Agriculture (IDOA), and the Champaign County Soil

and Water Conservation District (CCSWCD) with "as-built" drawings (strip maps) showing the location of all drainage tile lines by survey station encountered in the construction of the facility including any tile line repair location(s), and any underground cable installed as part of the Project.

Maintaining Surrounding Area Subsurface Drainage

If underground drain tile is damaged by the solar facility's construction, the facility owner shall repair the lines or install new drainage line(s) of comparable quality and cost to the original(s), and of sufficient size and appropriate slope in locations that limit direct impact from the Project. If damaged tile lines cause an unreasonable disruption to the drainage system, as determined by the landowner, then such repairs shall be made promptly to ensure appropriate drainage. Any new line(s) may be located outside of, but adjacent to the perimeter of the Facility. Disrupted adjacent drain tile lines shall be attached thereto to provide an adequate outlet for disrupted adjacent tile lines.

Re-establishing Subsurface Drainage Within Project Footprint

Following deconstruction and using best efforts, if underground drainage tile lines were present within the footprint of the Project and were severed or otherwise damaged during original construction, Project operation, and/or Project deconstruction, the Project owner shall repair existing drainage or install new drainage tile lines of comparable quality and cost to the original, within the footprint of the Project with sufficient capacity to restore the underground drainage capacity that existed within the footprint of the facility prior to construction. Such installation shall be completed within 12 months after the end of the useful life of the Project and shall be compliant with **Figure 1** and **Figure 2** of the executed AIMA agreement (attached) or based on prudent industry standards if agreed to by the landowner.

If there is any dispute between the landowner and the Project owner on the method of permanent drainage tile line repair, the CCSWCD's opinion shall be considered by the Project owner and the landowner.

Following completion of the work required pursuant to this FDP, the facility owner shall be responsible for correcting all drainage tile line repairs that fail due to construction and/or deconstruction for one year following the completion of construction or deconstruction, provided those repairs were made by the Project owner. The Project owner shall not be responsible for drainage tile repairs that the Project owner pays the landowner to perform.

Repair Standards

The following standards and policies shall apply to the drain tile repair:

A. The Drain Tile Contractor will work under the direction of, and with the direct involvement of, the contractor causing the impact, and the EPC Contractor construction management team.

B. All tile lines that are damaged, cut, or removed shall be staked or flagged with the stakes or flags placed in such a manner they would remain visible until the permanent repairs are completed. Also, the location of damaged tiles would be recorded using GPS technology (or similar accurate technology) as a method of permanently charting tiles for ease in locating in the future.

C. Damaged, unused, or discarded pieces of drain tile will be removed from the project site and disposed of promptly.

D. If available during the time of construction, contractor will endeavor to use qualified local Drain Tile Contractors with experience in Illinois to conduct drain tile repairs/replacements. Having a Drain Tile repair person who can be called in quickly is paramount to a successful repair.

E. Photographs and a written memo will be prepared outlining the extent of the damage to the line, and how the damage occurred. Once repairs are completed, a write up of what was completed along with photos will be submitted to the EPC Contractor's Operations team.

F. If water is flowing through any damaged tile line, the tile line would be temporarily repaired as soon as practicable upon discovery and within 24 hours until such time that permanent repair can be made. If the tile lines are dry and water is not flowing, temporary repairs are not required if the permanent repairs should be made within 14 days of the time damage occurred; however, the exposed tile lines would be screened or otherwise protected to prevent the entry of foreign materials into the tile lines.

G. Wherever possible, a minimum of one foot of separation between the drain tile and the facility infrastructure will be maintained whether the infrastructure passes over or under the drain tile.

H. The original drain tile alignment, depth, gradient and water flow shall be maintained to the greatest extent practicable and consider any notes taken for that location during the pre-construction drain tile investigation. Repair materials will be equivalent to those currently in place for repairing the damaged drain tile and will be joined to existing drain tile

by means of adapters or couplers manufactured for that purpose. See **Figures 1** & **2** of the AIMA (attached) for examples of plan view and end views of temporary and permanent repair schematics. Measurements shall be used to ensure the proper gradient is maintained.

I. All permanent drain tile repairs shall be completed by replacing the damaged tile across the zone of impact work area. If drain tile are found to be damaged, they must be repaired so they operate as well after construction as before the construction began.

J. Following completion of the construction, all repaired drain tiles shall meet or exceed the industry standard specifications. If construction takes place in the winter, drain tiles, if flowing, would be temporarily repaired within 48 hours of discovery. Final repairs to drain tiles would be performed in the spring when soils are thawed and the ground is dry enough to limit rutting.

Construction Phase

The following sets forth anticipated techniques and measures to be employed during construction (these may be subject to change depending on field conditions and other unforeseen variables). The EPC contractor will have a representative present during construction, to monitor the execution of the following measures and, as noted herein, the landowner will be given the opportunity to observe temporary and permanent repairs on their property, to the greatest extents possible.

1. Drain tile identification using the information gathered during the drain tile assessment phase, known locations of existing drain will be shared with all site sub-contractors. In some cases, drain tile information may be limited or locations not known. If any drain tile has been exposed or damaged during construction, the EPC Contractor shall communicate with the landowner based on field conditions as to how the drain tile will be repaired. If the drain tile location is not known, the drain tile will be demarked once it has been exposed during construction for all subcontractors to be aware. If impacts occur, sub-contractors shall immediately notify the EPC Contractor to initiate the repair procedure. Photos shall be taken and submitted to the EPC Contractor once recognized an incident has occurred.

2. A drain tile shall impact be repaired as soon as possible before normal construction and installation in that area resumes. The following describes the typical construction process for drain tile repairs:

a. Trench - Temporary Repair

i. As construction equipment traverses across the landowner's property, temporary repairs will be completed at each location where damage occurs. Drain tile that will be impacted by trenching will be:

1. Cut and temporarily capped or screened, if water is not flowing in the drain tile.

2. Cut and temporarily repaired, if water is flowing in the drain tile.

ii. For temporary repairs, a rigid support or pipe will be laid across the full extent of the trench with a one-foot minimum into undisturbed ground on both sides of the trench. Drain tile will be laid on the support and connected with adapters to the existing drain tile. This process will be utilized throughout the trenching phase to maintain drainage, as necessary.

iii. The temporary drain tile will be disconnected as the pipe is lowered into the trench to approximately six to 12-inches below the drain tile. The drain tile connections will be re-established as quickly as possible to reduce the amount of water flowing into the trench.

b. Drain Tile Trench - Permanent Repair

i. After the pipe is lowered into the trench but before the trench is backfilled, the drain tile will be permanently repaired:

1. Where drain tile was temporarily capped or screened, the drain tile will be laid onto a rigid beam, high strength composite material, rigid outer casing pipe or other rigid support material that will keep the repaired drain tile supported the full length of the trench and into undisturbed ground on both sides of the trench. The rigid support will be stabilized, and adapters or couplers will connect the repaired tile to existing drain tile on both sides of the trench.

2. Where drain tile was temporarily repaired in the trench, the drain tile will be fortified based on the above-mentioned requirements. The rigid support will be stabilized.

Refer to **Figures 1** & **2** in **Appendix B** for Sample Drain Tile Repair Details.

Repair Process

1. Excavation

a. The trench or excavation for the drain tile repair shall be constructed to the depths indicated on the existing Drain Tile location map or as located in the field. The trench width may be increased above the top of the drain tile at the option of the contractor for better accessibility.

b. Trench shields, shoring and bracing, or other methods necessary to safeguard construction personnel and to prevent damage to the existing improvements shall be furnished, placed, and subsequently re-moved by the contractor.

2. Preparing the bedding

a. In stable soils, the tile shall be firmly and uniformly bedded throughout its entire length of the repair to the specified depth and in the specified manner.

b. When the bottom of the trench does not provide a sufficiently stable or firm foundation for the drain tile, cradles for the tile (constructed of timber or fabricated lumber of a cleat-and-rail type construction), a sand-gravel mix, or other approved material shall be used to stabilize the bottom of the trench.

c. Drain tile shall not be laid on a rock foundation. In the event that boulders, rocks or ledge rock, or cemented material that prevents satisfactory bedding are encountered at the required grade with the trench cross- section, the trench shall be excavated to a minimum depth of 6 inches below grade and backfilled to grade with a sand-gravel mixture or other approved material. The bedding material shall be shaped to grade and compacted. Alternative measures can be presented for consideration.

3. Laying tile

a. Inlets/Outlets

i. The ends and inside surface of all tiles shall be kept clean during installation. All earth or other extraneous material within the tile shall be removed before installation of the new tile section. At the end of work each day and when repairs have been temporarily suspended, the open end shall be blocked so that earth or other extraneous material cannot enter the tile. On longer repair runs, the upper end of each tile line shall be blocked with permanent type material following satisfactory completion of tile installation.

b. Connections

i. Lateral connections are made with manufactured junctions comparable in strength with the specified tile unless otherwise specified. Where existing tile lines not shown on the drawings are crossed, they shall be bridged across the new trench or they shall be connected into the new tile lines.

c. Backfilling

i. Backfilling of the trench shall be completed as rapidly as consistent with the soil conditions and follow topsoil preservation requirements per County regulations, requirements in the special use permit, and the AIMA.

ii. Backfill shall extend above the ground surface and be well rounded and centered over the trench.

iii. Unless otherwise specified, where drain tile is installed under roads and at other designated locations shown on the drawings, the backfill shall be placed in successive layers of not more than nine inches and each layer shall be compacted before the next layer is placed. The density of the compacted backfill shall not be less than the density of the surrounding adjacent earth material unless otherwise specified.

Post Construction

After the replacement of topsoil and reseeding, the drain tile repaired and replaced shall be monitored for a year under Operations and Maintenance. Conditions to be monitored during this period include drain tile settling, vegetation production, erosion, and drainage. The monitoring period is intended to allow for effects of weather changes such as frost action, precipitation, settling and changes in the seasons, from which various monitoring determinations can be made. During and after the post-construction monitoring phase, Little Prairie Solar LLC will provide a contact for the landowner (s) and will coordinate to address any of the landowner concerns that may arise.

Conclusion

Little Prairie LLC recognizes the importance of agricultural drainage systems in the proposed Project area and is committed to minimizing the potential for impacts to drainage systems as a result of construction-related activities. Little Prairie LLC will work with

landowners to identify the locations of existing drain tile and plans for maintaining drainage systems, and devise mitigation and repair strategies as necessary. Little Prairie LLC will be responsible for the costs associated with mitigating and repairing impacts from construction-related activities and all reasonable measures will be taken to avoid or minimize impacts. Reckless activities which result in the damage to drain tiles will be the responsibility of the involved party(ies). Repairs and restoration to drain tile systems resulting from the construction of the Project will be monitored post construction, and throughout operations and decommissioning per the AIMA requirements, to ensure the system functions properly.

Sources:

Huddleston McBride Land Drainage Co. – Agricultural Drainage Considerations Document

State of Illinois Agricultural Impact Mitigation Agreement (AIMA) for Little Prairie Solar LLC

Champaign County Zoning Ordinance (As Amended Through February 23, 2023)

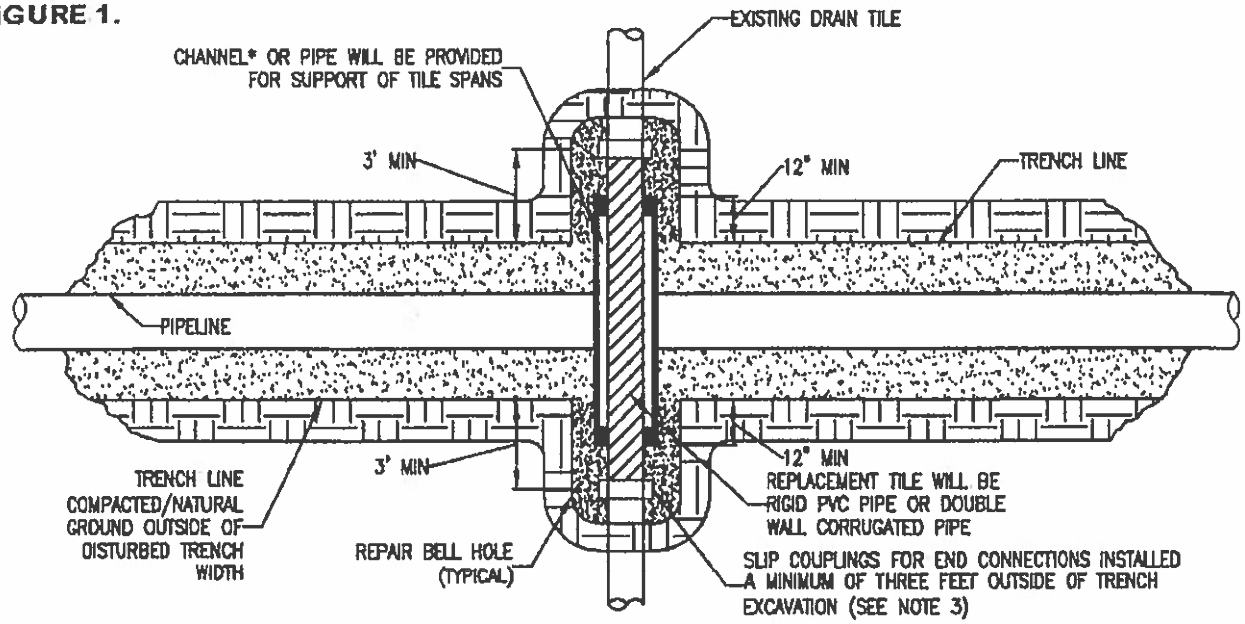
Appendix A:

Drain Tile Investigation Survey Report

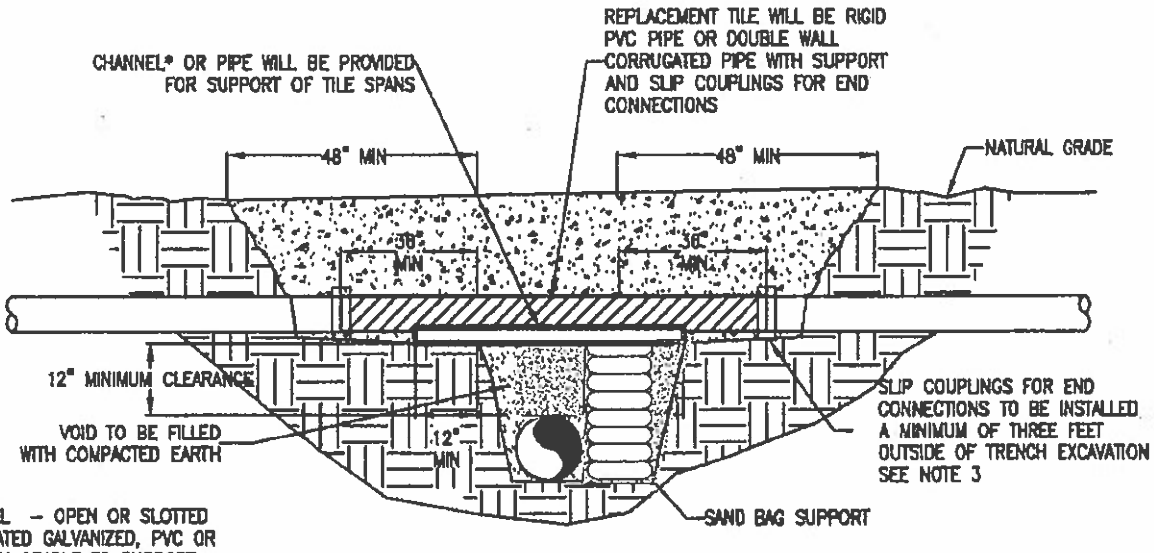
Appendix B:

Example Drain Tile Repair Details

FIGURE 1.



PLAN
N.T.S.



*CHANNEL – OPEN OR SLOTTED CORRUGATED GALVANIZED, PVC OR ALUMINUM CRADLE TO SUPPORT DRAIN TILE.

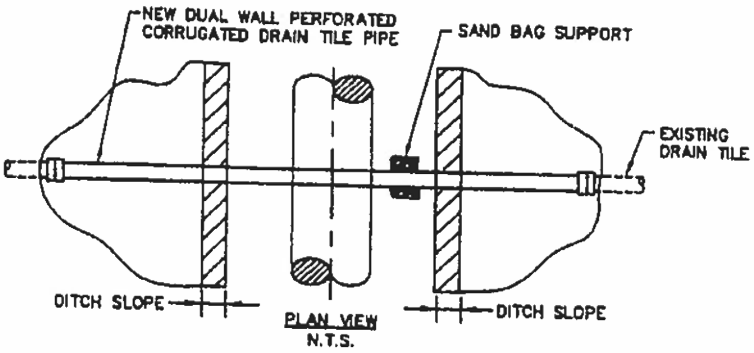
CROSS SECTION
N.T.S.

NOTE:

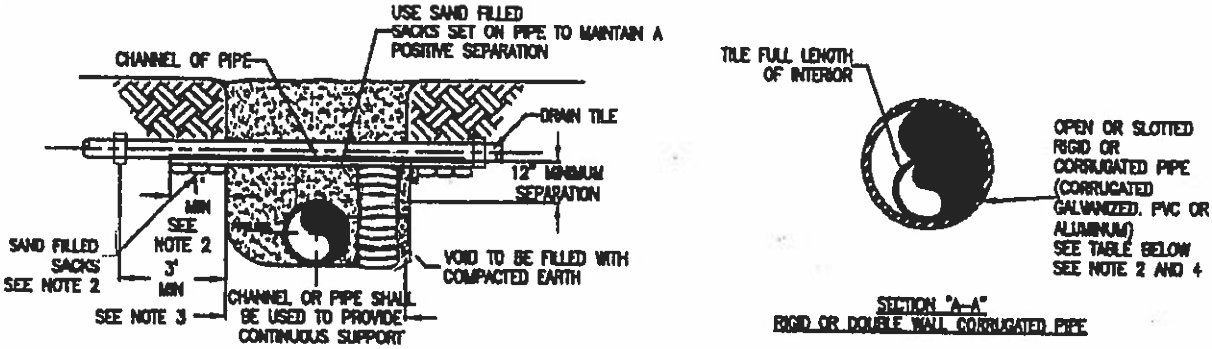
1. IMMEDIATELY REPAIR TILE IF WATER IS FLOWING THROUGH TILE AT TIME OF TRENCHING. IF NO WATER IS FLOWING AND TEMPORARY REPAIR IS DELAYED, OR NOT MADE BY THE END OF THE WORK DAY, A SCREEN OR APPROPRIATE 'NIGHT CAP' SHALL BE PLACED ON OPEN ENDS OF TILE TO PREVENT ENTRAPMENT OF ANIMALS ETC.
2. CHANNEL OR PIPE (OPEN OR SLOTTED) MADE OF CORRUGATED GALVANIZED PIPE, PVC OR ALUMINUM WILL BE USED FOR SUPPORT OF DRAIN TILE SPANS.
3. INDUSTRY STANDARDS SHALL BE FOLLOWED TO ENSURE PROPER SEAL OF REPAIRED DRAIN TILES.

TEMPORARY DRAIN TILE REPAIR

FIGURE 2.



PLAN VIEW



END VIEWS

MINIMUM SUPPORT TABLE			
TILE SIZE	CHANNEL SIZE	PIPE SIZE	
3"	4" @ 5.4 #/ft	4"	STD. WT.
4"-5"	5" @ 6.7 #/ft	6"	STD. WT.
6"-9"	7" @ 9.8 #/ft	9"-10"	STD. WT.
10"	10" @ 15.3 #/ft	12"	STD. WT.

NOTE:

1. TILE REPAIR AND REPLACEMENT SHALL MAINTAIN ORIGINAL ALIGNMENT GRADIENT AND WATER FLOW TO THE GREATEST EXTENT POSSIBLE. IF THE TILE NEEDS TO BE RELOCATED, THE INSTALLATION ANGLE MAY VARY DUE TO SITE SPECIFIC CONDITIONS AND LANDOWNER RECOMMENDATIONS.

2. 1'-0" MINIMUM LENGTH OF CHANNEL OR RIGID PIPE (OPEN OR SLOTTED CORRUGATED GALVANIZED, PVC OR ALUMINUM CRADLE) SHALL BE SUPPORTED BY UNDISTURBED SOIL, OR IF CROSSING IS NOT AT RIGHT ANGLES TO PIPELINE, EQUIVALENT LENGTH PERPENDICULAR TO TRENCH. SHIM WITH SAND BAGS TO UNDISTURBED SOIL FOR SUPPORT AND DRAINAGE GRADIENT MAINTENANCE (TYPICAL BOTH SIDES).

3. DRAIN TILES WILL BE PERMANENTLY CONNECTED TO EXISTING DRAIN TILES A MINIMUM OF THREE FEET OUTSIDE OF EXCAVATED TRENCH LINE USING INDUSTRY STANDARDS TO ENSURE PROPER SEAL OF REPAIRED DRAIN TILES INCLUDING SLIP COUPLINGS.

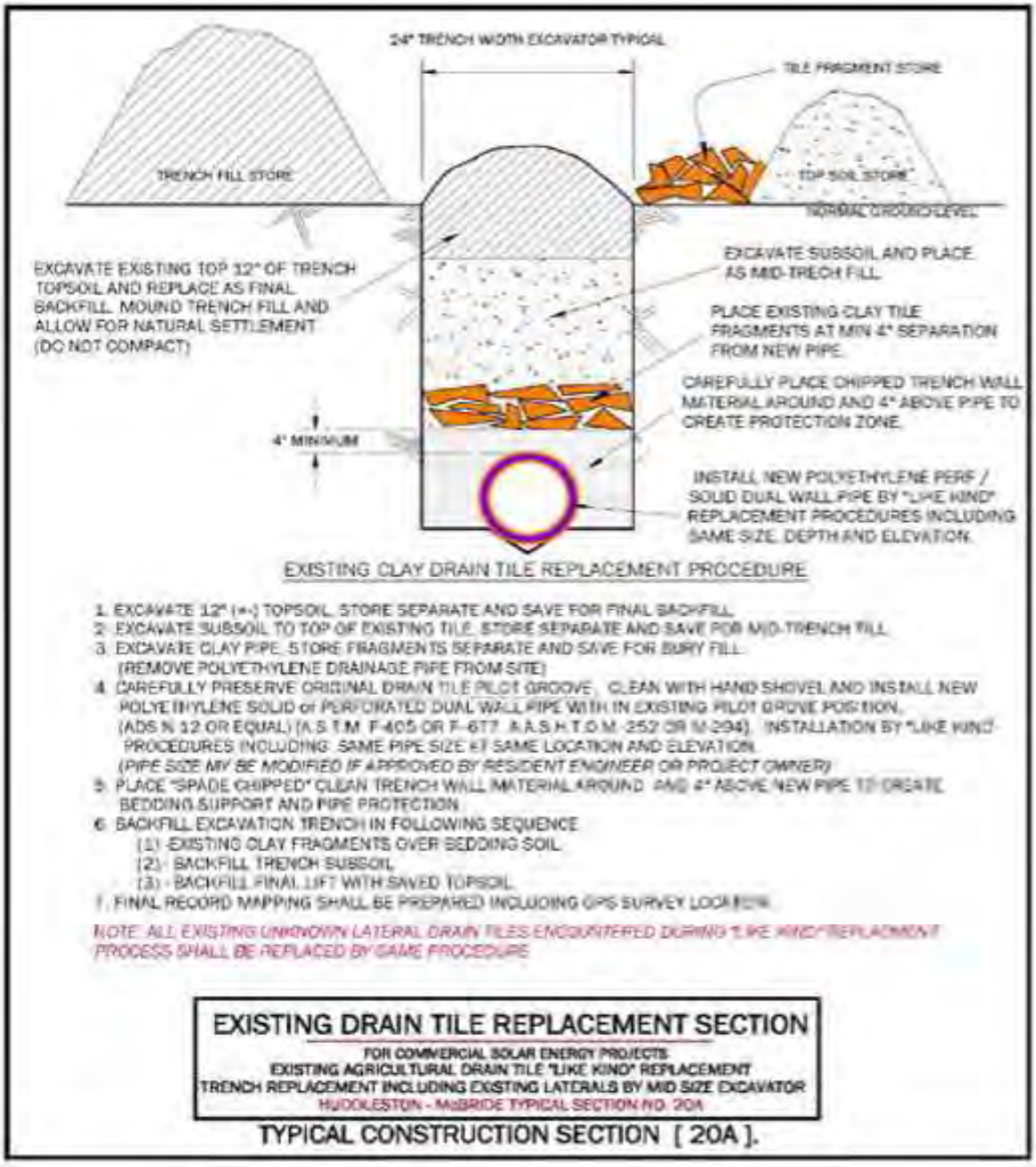
4. DIAMETER OF RIGID PIPE SHALL BE OF ADEQUATE SIZE TO ALLOW FOR THE INSTALLATION OF THE TILE FOR THE FULL LENGTH OF THE RIGID PIPE.

5. OTHER METHODS OF SUPPORTING DRAIN TILE MAY BE USED IF ALTERNATE PROPOSED IS EQUIVALENT IN STRENGTH TO THE CHANNEL/PIPE SECTIONS SHOWN AND IF APPROVED BY COMPANY REPRESENTATIVES AND LANDOWNER IN ADVANCE. SITE SPECIFIC ALTERNATE SUPPORT SYSTEM TO BE DEVELOPED BY COMPANY REPRESENTATIVES AND FURNISHED TO CONTRACTOR FOR SPANS IN EXCESS OF 20', TILE GREATER THEN 10" DIAMETER, AND FOR "HEADER" SYSTEMS.

6. ALL MATERIAL TO BE FURNISHED BY CONTRACTOR.

7. PRIOR TO REPAIRING TILE, CONTRACTOR SHALL PROBE LATERALLY INTO THE EXISTING TILE TO FULL WIDTH OF THE RIGHTS OF WAY TO DETERMINE IF ADDITIONAL DAMAGE HAS OCCURRED. ALL DAMAGED/DISTURBED TILE SHALL BE REPAIRED AS NEAR AS PRACTICABLE TO ITS ORIGINAL OR BETTER CONDITION.

PERMANENT DRAIN TILE REPAIR



EXISTING CLAY DRAIN TILE REPLACEMENT PROCEDURE

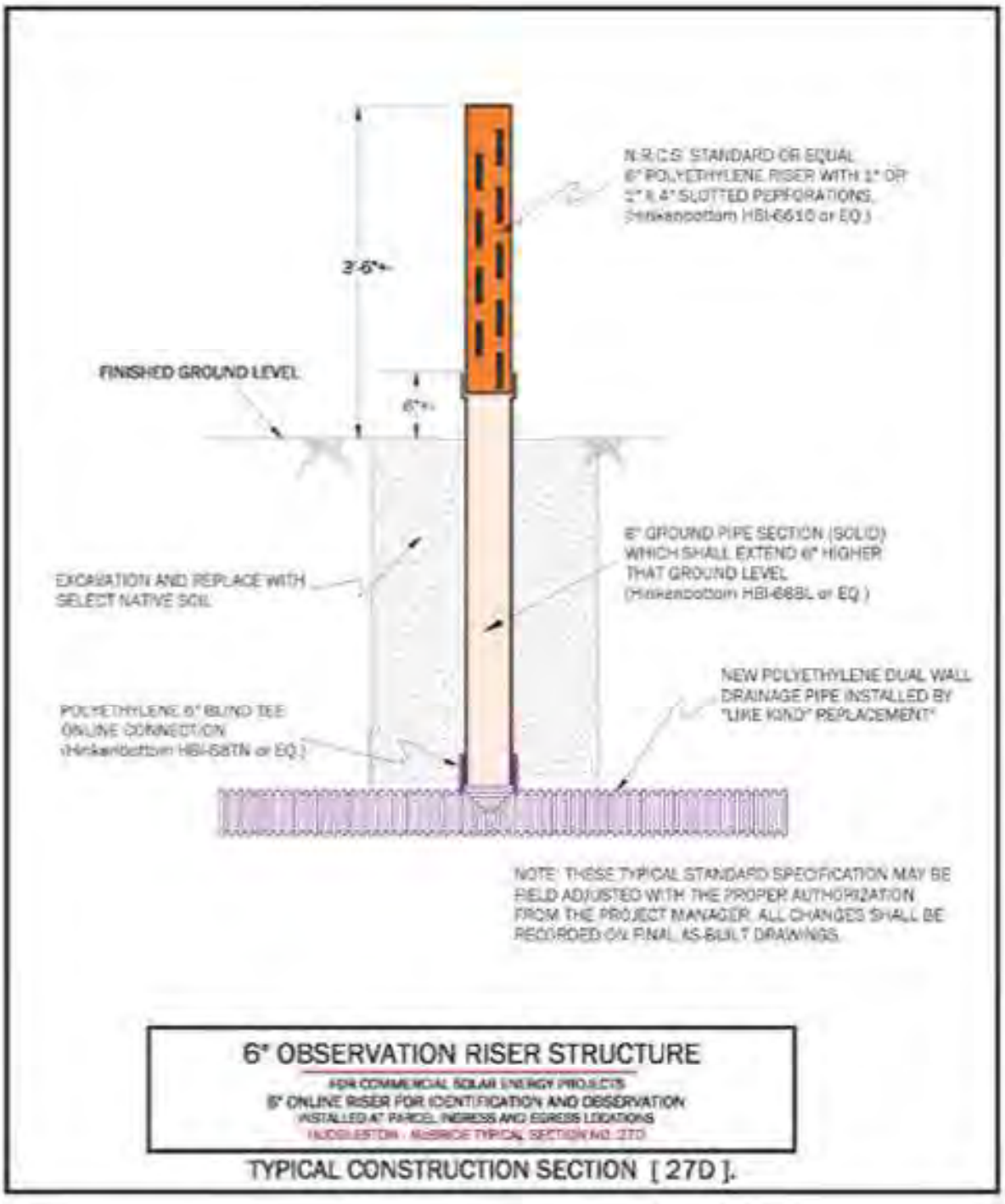
1. EXCAVATE 12" (+-) TOPSOIL. STORE SEPARATE AND SAVE FOR FINAL BACKFILL.
2. EXCAVATE SUBSOIL TO TOP OF EXISTING TILE. STORE SEPARATE AND SAVE FOR MID-TRENCH FILL.
3. EXCAVATE CLAY PIPE. STORE FRAGMENTS SEPARATE AND SAVE FOR BURY FILL.
   (REMOVE POLYETHYLENE DRAINAGE PIPE FROM SITE)
4. CAREFULLY PRESERVE ORIGINAL DRAIN TILE PILOT GROOVE. CLEAN WITH HAND SHOVEL AND INSTALL NEW POLYETHYLENE SOLID or PERFORATED DUAL WALL PIPE WITH IN EXISTING PILOT GROVE POSITION. (ADS N 12 OR EQUAL) (A.S.T.M. F-405 OR F-667. A.A.S.H.T.O.M. 252 OR M-294). INSTALLATION BY "LIKE KIND" PROCEDURES INCLUDING SAME PIPE SIZE AT SAME LOCATION AND ELEVATION.
   (PIPE SIZE MAY BE MODIFIED IF APPROVED BY RESIDENT ENGINEER OR PROJECT OWNER)
5. PLACE "SPADE CHIPPED" CLEAN TRENCH WALL MATERIAL AROUND AND 4" ABOVE NEW PIPE TO CREATE BEDDING SUPPORT AND PIPE PROTECTION.
6. BACKFILL EXCAVATION TRENCH IN FOLLOWING SEQUENCE
   (1) - EXISTING CLAY FRAGMENTS OVER BEDDING SOIL.
   (2) - BACKFILL TRENCH SUBSOIL.
   (3) - BACKFILL FINAL LIFT WITH SAVED TOPSOIL.
7. FINAL RECORD MAPPING SHALL BE PREPARED INCLUDING GPS SURVEY LOCATION.

NOTE: ALL EXISTING UNKNOWN LATERAL DRAIN TILES ENCOUNTERED DURING "LIKE KIND" REPLACEMENT PROCESS SHALL BE REPLACED BY SAME PROCEDURE.

EXISTING DRAIN TILE REPLACEMENT SECTION

FOR COMMERCIAL SOLAR ENERGY PROJECTS
EXISTING AGRICULTURAL DRAIN TILE "LIKE KIND" REPLACEMENT
TRENCH REPLACEMENT INCLUDING EXISTING LATERALS BY MID SIZE EXCAVATOR
HUDDLESTON - McBRIDE TYPICAL SECTION NO. 20A

TYPICAL CONSTRUCTION SECTION [20A].


N.R.C.S. STANDARD OR EQUAL
6" POLYETHYLENE RISER WITH 1" OR
2" & 4" SLOTTED PERFORATIONS.
(Hinkenbottom HBI-6616 or EQ.)
3'-6"+-
FINISHED GROUND LEVEL
6"+-
6" GROUND PIPE SECTION (SOLID)
WHICH SHALL EXTEND 6" HIGHER
THAT GROUND LEVEL
(Hinkenbottom HBI-668L or EQ.)
EXCAVATION AND REPLACE WITH
SELECT NATIVE SOIL
NEW POLYETHYLENE DUAL WALL
DRAINAGE PIPE INSTALLED BY
"LIKE KIND" REPLACEMENT"
POLYETHYLENE 6" BLIND TEE
ONLINE CONNECTION
(Hinkenbottom HBI-68TN or EQ.)
NOTE: THESE TYPICAL STANDARD SPECIFICATION MAY BE
FIELD ADJUSTED WITH THE PROPER AUTHORIZATION
FROM THE PROJECT MANAGER. ALL CHANGES SHALL BE
RECORDED ON FINAL AS-BUILT DRAWINGS.
6" OBSERVATION RISER STRUCTURE
FOR COMMERCIAL SOLAR ENERGY PROJECTS
6" ONLINE RISER FOR IDENTIFICATION AND OBSERVATION
INSTALLED AT PARCEL INGRESS AND EGRESS LOCATIONS
SUGGESTION - ASSIGN TYPICAL SECTION NO. 27D
TYPICAL CONSTRUCTION SECTION [27D].

Appendix C:

AIMA Agreement for Little Prairie Solar LLC

STANDARD AGRICULTURAL IMPACT MITIGATION AGREEMENT

between

Little Prairie Solar LLC

and the

ILLINOIS DEPARTMENT OF AGRICULTURE

Pertaining to the Construction of a Commercial Solar Energy Facility

in

Champaign **County, Illinois**

Pursuant to the Renewable Energy Facilities Agricultural Impact Mitigation Act (505 ILCS 147), the following standards and policies are required by the Illinois Department of Agriculture (IDOA) to help preserve the integrity of any Agricultural Land that is impacted by the Construction and Deconstruction of a Commercial Solar Energy Facility. They were developed with the cooperation of agricultural agencies, organizations, Landowners, Tenants, drainage contractors, and solar energy companies to comprise this Agricultural Impact Mitigation Agreement (AIMA).

Little Prairie Solar LLC, hereafter referred to as Commercial Solar Energy Facility Owner, or simply as Facility Owner, plans to develop and/or operate a 135MWac Commercial Solar Energy Facility in Champaign County [GPS Coordinates: 40.16761; -88.029855], which will consist of up to 1,047 acres that will be covered by solar facility related components, such as solar panel arrays, racking systems, access roads, an onsite underground collection system, inverters and transformers and any affiliated electric transmission lines. This AIMA is made and entered between the Facility Owner and the IDOA.

If Construction does not commence within four years after this AIMA has been fully executed, this AIMA shall be revised, with the Facility Owner's input, to reflect the IDOA's most current Solar Farm Construction and Deconstruction Standards and Policies. This AIMA, and any updated AIMA, shall be filed with the County Board by the Facility Owner prior to the commencement of Construction.

The below prescribed standards and policies are applicable to Construction and Deconstruction activities occurring partially or wholly on privately owned agricultural land.

Conditions of the AIMA

The mitigative actions specified in this AIMA shall be subject to the following conditions:

A. All Construction or Deconstruction activities may be subject to County or other local requirements. However, the specifications outlined in this AIMA shall be the minimum standards applied to all Construction or Deconstruction activities. IDOA may utilize any legal means to enforce this AIMA.

B. Except for Section 17. B. through F., all actions set forth in this AIMA are subject to modification through negotiation by Landowners and the Facility Owner, provided such changes are negotiated in advance of the respective Construction or Deconstruction activities.

C. The Facility Owner may negotiate with Landowners to carry out the actions that Landowners wish to perform themselves. In such instances, the Facility Owner shall offer Landowners the area commercial rate for their machinery and labor costs.

D. All provisions of this AIMA shall apply to associated future Construction, maintenance, repairs, and Deconstruction of the Facility referenced by this AIMA.

E. The Facility Owner shall keep the Landowners and Tenants informed of the Facility's Construction and Deconstruction status, and other factors that may have an impact upon their farming operations.

F. The Facility Owner shall include a statement of its adherence to this AIMA in any environmental assessment and/or environmental impact statement.

G. Execution of this AIMA shall be made a condition of any Conditional/Special Use Permit. Not less than 30 days prior to the commencement of Construction, a copy of this AIMA shall be provided by the Facility Owner to each Landowner that is party to an Underlying Agreement. In addition, this AIMA shall be incorporated into each Underlying Agreement.

H. The Facility Owner shall implement all actions to the extent that they do not conflict with the requirements of any applicable federal, state and local rules and regulations and other permits and approvals that are obtained by the Facility Owner for the Facility.

I. No later than 45 days prior to the Construction and/or Deconstruction of a Facility, the Facility Owner shall provide the Landowner(s) with a telephone number the Landowner can call to alert the Facility Owner should the Landowner(s) have questions or concerns with the work which is being done or has been carried out on his/her property.

J. If there is a change in ownership of the Facility, the Facility Owner assuming ownership of the Facility shall provide written notice within 90 days of ownership transfer, to the Department, the County, and to Landowners of such change. The Financial Assurance requirements and the other terms of this AIMA shall apply to the new Facility Owner.

K. The Facility Owner shall comply with all local, state and federal laws and regulations, specifically including the worker protection standards to protect workers from pesticide exposure.

L. Within 30 days of execution of this AIMA, the Facility Owner shall use Best Efforts to provide the IDOA with a list of all Landowners that are party to an Underlying Agreement and known Tenants of said Landowner who may be affected by the Facility. As the list of Landowners and Tenants is updated, the Facility Owner shall notify the IDOA of any additions or deletions.

M. If any provision of this AIMA is held to be unenforceable, no other provision shall be affected by that holding, and the remainder of the AIMA shall be interpreted as if it did not contain the unenforceable provision.

Definitions

Abandonment	When Deconstruction has not been completed within 12 months after the Commercial Solar Energy Facility reaches the end of its useful life. For purposes of this definition, a Commercial Solar Energy Facility shall be presumed to have reached the end of its useful life if the Commercial Solar Energy Facility Owner fails, for a period of 6 consecutive months, to pay the Landowner amounts owed in accordance with an Underlying Agreement.

Aboveground Cable	Electrical power lines installed above ground surface to be utilized for conveyance of power from the solar panels to the solar facility inverter and/or point of interconnection to utility grid or customer electric meter.
Agricultural Impact Mitigation Agreement (AIMA)	The Agreement between the Facility Owner and the Illinois Department of Agriculture (IDOA) described herein.
Agricultural Land	Land used for Cropland, hayland, pastureland, managed woodlands, truck gardens, farmsteads, commercial ag-related facilities, feedlots, livestock confinement systems, land on which farm buildings are located, and land in government conservation programs used for purposes as set forth above.
Best Efforts	Diligent, good faith, and commercially reasonable efforts to achieve a given objective or obligation.
Commercial Operation Date	The calendar date of which the Facility Owner notifies the Landowner, County, and IDOA in writing that commercial operation of the facility has commenced. If the Facility Owner fails to provide such notifications, the Commercial Operation Date shall be the execution date of this AIMA plus 6 months.
Commercial Solar Energy Facility (Facility)	A solar energy conversion facility equal to or greater than 500 kilowatts in total nameplate capacity, including a solar energy conversion facility seeking an extension of a permit to construct granted by a county or municipality before June 29, 2018. "Commercial solar energy facility" does not include a solar energy conversion facility: (1) for which a permit to construct has been issued before June 29, 2018; (2) that is located on land owned by the commercial solar energy facility owner; (3) that was constructed before June 29, 2018; or (4) that is located on the customer side of the customer's electric meter and is primarily used to offset that customer's electricity load and is limited in nameplate capacity to less than or equal to 2,000 kilowatts.
Commercial Solar Energy Facility Owner deemed (Facility Owner)	A person or entity that owns a commercial solar energy facility. A Commercial Solar Energy Facility Owner is not nor shall it be to be a public utility as defined in the Public Utilities Act.
County	The County or Counties where the Commercial Solar Energy Facility is located.
Construction	The installation, preparation for installation and/or repair of a Facility.
Cropland	Land used for growing row crops, small grains or hay; includes land which was formerly used as cropland, but is currently enrolled in a government conservation program; also includes pastureland that is classified as Prime Farmland.

Deconstruction	The removal of a Facility from the property of a Landowner and the restoration of that property as provided in the AIMA.
Deconstruction Plan	A plan prepared by a Professional Engineer, at the Facility's expense, that includes: (1) the estimated Deconstruction cost, in current dollars at the time of filing, for the Facility, considering among other things: i. the number of solar panels, racking, and related facilities involved; ii. the original Construction costs of the Facility; iii. the size and capacity, in megawatts of the Facility; iv. the salvage value of the facilities (if all interests in salvage value are subordinate to that of the Financial Assurance holder if abandonment occurs); v. the Construction method and techniques for the Facility and for other similar facilities; and (2) a comprehensive detailed description of how the Facility Owner plans to pay for the Deconstruction of the Facility.
Department	The Illinois Department of Agriculture (IDOA).
Financial Assurance	A reclamation or surety bond or other commercially available financial assurance that is acceptable to the County, with the County or Landowner as beneficiary.
Landowner	Any person with an ownership interest in property that is used for agricultural purposes and that is party to an Underlying Agreement.
Prime Farmland	Agricultural Land comprised of soils that are defined by the USDA Natural Resources Conservation Service (NRCS) as "Prime Farmland" (generally considered to be the most productive soils with the least input of nutrients and management).
Professional Engineer	An engineer licensed to practice engineering in the State of Illinois.
Soil and Water Conservation District (SWCD)	A unit of local government that provides technical and financial assistance to eligible Landowners for the conservation of soil and water resources.
Tenant	Any person, apart from the Facility Owner, lawfully residing or leasing/renting land that is subject to an Underlying Agreement.
Topsoil	The uppermost layer of the soil that has the darkest color or the highest content of organic matter; more specifically, it is defined as the "A" horizon.
Underlying Agreement	The written agreement between the Facility Owner and the Landowner(s) including, but not limited to, an easement, option, lease, or license under the terms of which another person has constructed, constructs, or intends to construct a Facility on the property of the Landowner.

Underground Cable	Electrical power lines installed below the ground surface to be utilized for conveyance of power within a Facility or from a Commercial Solar Energy Facility to the electric grid.
USDA Natural Resources Conservation Service (NRCS)	An agency of the United States Department of Agriculture that provides America's farmers with financial and technical assistance to aid with natural resources conservation.

Construction and Deconstruction Standards and Policies

1. Support Structures

A. Only single pole support structures shall be used for the Construction and operation of the Facility on Agricultural Land. Other types of support structures, such as lattice towers or H-frames, may be used on nonagricultural land.

B. Where a Facility's Aboveground Cable will be adjacent and parallel to highway and/or railroad right-of-way, but on privately owned property, the support structures shall be placed as close as reasonably practicable and allowable by the applicable County Engineer or other applicable authorities to the highway or railroad right-of-way. The only exceptions may be at jogs or weaves on the highway alignment or along highways or railroads where transmission and distribution lines are already present.

C. When it is not possible to locate Aboveground Cable next to highway or railroad right-of-way, Best Efforts shall be expended to place all support poles in such a manner to minimize their placement on Cropland (i.e., longer than normal above ground spans shall be utilized when traversing Cropland).

2. Aboveground Facilities

Locations for facilities shall be selected in a manner that is as unobtrusive as reasonably possible to ongoing agricultural activities occurring on the land that contains or is adjacent to the Facility.

3. Guy Wires and Anchors

Best Efforts shall be made to place guy wires and their anchors, if used, out of Cropland, pastureland and hayland, placing them instead along existing utilization lines and on land other than Cropland. Where this is not feasible, Best Efforts shall be made to minimize guy wire impact on Cropland. All guy wires shall be shielded with highly visible guards.

4. Underground Cabling Depth

A. Underground electrical cables located outside the perimeter of the (fence) of the solar panels shall be buried with:

1. a minimum of 5 feet of top cover where they cross Cropland.
2. a minimum of 5 feet of top cover where they cross pastureland or other non-Cropland classified as Prime Farmland.
3. a minimum of 3 feet of top cover where they cross pastureland and other Agricultural Land not classified as Prime Farmland.

4. a minimum of 3 feet of top cover where they cross wooded/brushy land.

B. Provided that the Facility Owner removes the cables during Deconstruction, underground electric cables may be installed to a minimum depth of 18 inches:

1. Within the fenced perimeter of the Facility; or

2. When buried under an access road associated with the Facility provided that the location and depth of cabling is clearly marked at the surface.

C. If Underground Cables within the fenced perimeter of the solar panels are installed to a minimum depth of 5 feet, they may remain in place after Deconstruction.

5. Topsoil Removal and Replacement

A. Any excavation shall be performed in a manner to preserve topsoil. Best Efforts shall be made to store the topsoil near the excavation site in such a manner that it will not become intermixed with subsoil materials.

B. Best Efforts shall be made to store all disturbed subsoil material near the excavation site and separate from the topsoil.

C. When backfilling an excavation site, Best Efforts shall be used to ensure the stockpiled subsoil material will be placed back into the excavation site before replacing the topsoil.

D. Refer to Section 7 for procedures pertaining to rock removal from the subsoil and topsoil.

E. Refer to Section 8 for procedures pertaining to the repair of compaction and rutting of the topsoil.

F. Best Efforts shall be performed to place the topsoil in a manner so that after settling occurs, the topsoil's original depth and contour will be restored as close as reasonably practicable. The same shall apply where excavations are made for road, stream, drainage ditch, or other crossings. In no instance shall the topsoil materials be used for any other purpose unless agreed to explicitly and in writing by the Landowner.

G. Based on the mutual agreement of the landowner and Facility Owner, excess soil material resulting from solar facility excavation shall either be removed or stored on the Landowner's property and reseeded per the applicable National Pollution Discharge Elimination System (NPDES) permit/Stormwater Pollution Prevention Plan (SWPPP). After the Facility reaches the end of its Useful Life, the excess subsoil material shall be returned to an excavation site or removed from the Landowner's property, unless otherwise agreed to by Landowner.

6. Rerouting and Permanent Repair of Agricultural Drainage Tiles

The following standards and policies shall apply to underground drainage tile line(s) directly or indirectly affected by Construction and/or Deconstruction:

A. Prior to Construction, the Facility Owner shall work with the Landowner to identify drainage tile lines traversing the property subject to the Underlying Agreement to the extent reasonably practicable. All drainage tile lines identified in this manner shall be shown on the Construction and Deconstruction Plans.

B. The location of all drainage tile lines located adjacent to or within the footprint of the Facility shall be recorded using Global Positioning Systems (GPS) technology. Within 60 days after Construction is complete, the Facility Owner shall provide the Landowner, the IDOA, and the respective County Soil and Water Conservation District (SWCD) with "as built" drawings (strip maps) showing the location of all drainage tile lines by survey station encountered in the Construction of the Facility, including any tile line repair location(s), and any underground cable installed as part of the Facility.

C. **Maintaining Surrounding Area Subsurface Drainage**

If drainage tile lines are damaged by the Facility, the Facility Owner shall repair the lines or install new drainage tile line(s) of comparable quality and cost to the original(s), and of sufficient size and appropriate slope in locations that limit direct impact from the Facility. If the damaged tile lines cause an unreasonable disruption to the drainage system, as determined by the Landowner, then such repairs shall be made promptly to ensure appropriate drainage. Any new line(s) may be located outside of, but adjacent to the perimeter of the Facility. Disrupted adjacent drainage tile lines shall be attached thereto to provide an adequate outlet for the disrupted adjacent tile lines.

D. **Re-establishing Subsurface Drainage Within Facility Footprint**

Following Deconstruction and using Best Efforts, if underground drainage tile lines were present within the footprint of the facility and were severed or otherwise damaged during original Construction, facility operation, and/or facility Deconstruction, the Facility Owner shall repair existing drainage tiles or install new drainage tile lines of comparable quality and cost to the original, within the footprint of the Facility with sufficient capacity to restore the underground drainage capacity that existed within the footprint of the Facility prior to Construction. Such installation shall be completed within 12 months after the end of the useful life of the Facility and shall be compliant with Figures 1 and 2 to this Agreement or based on prudent industry standards if agreed to by Landowner.

E. If there is any dispute between the Landowner and the Facility Owner on the method of permanent drainage tile line repair, the appropriate County SWCD's opinion shall be considered by the Facility Owner and the Landowner.

F. During Deconstruction, all additional permanent drainage tile line repairs beyond those included above in Section 6.D. must be made within 30 days of identification or notification of the damage, weather and soil conditions permitting. At other times, such repairs must be made at a time mutually agreed upon by the Facility Owner and the Landowner. If the Facility Owner and Landowner cannot agree upon a reasonable method to complete this restoration, the Facility Owner may implement the recommendations of the appropriate County SWCD and such implementation constitutes compliance with this provision.

G. Following completion of the work required pursuant to this Section, the Facility Owner shall be responsible for correcting all drainage tile line repairs that fail due to Construction and/or Deconstruction for one year following the completion of Construction or Deconstruction, provided those repairs were made by the Facility Owner. The Facility Owner shall not be responsible for drainage tile repairs that the Facility Owner pays the Landowner to perform.

7. Rock Removal

With any excavations, the following rock removal procedures pertain only to rocks found in the uppermost 42 inches of soil, the common freeze zone in Illinois, which emerged or were brought to the site as a result of Construction and/or Deconstruction.

A. Before replacing any topsoil, Best Efforts shall be taken to remove all rocks greater than 3 inches in any dimension from the surface of exposed subsoil which emerged or were brought to the site as a result of Construction and/or Deconstruction.

B. If trenching, blasting, or boring operations are required through rocky terrain, precautions shall be taken to minimize the potential for oversized rocks to become interspersed in adjacent soil material.

C. Rocks and soil containing rocks removed from the subsoil areas, topsoil, or from any excavations, shall be removed from the Landowner's premises or disposed of on the Landowner's premises at a location that is mutually acceptable to the Landowner and the Facility Owner.

8. Repair of Compaction and Rutting

A. Unless the Landowner opts to do the restoration work on compaction and rutting, after the topsoil has been replaced post-Deconstruction, all areas within the boundaries of the Facility that were traversed by vehicles and Construction and/or Deconstruction equipment that exhibit compaction and rutting shall be restored by the Facility Owner. All prior Cropland shall be ripped at least 18 inches deep or to the extent practicable, and all pasture and woodland shall be ripped at least 12 inches deep or to the extent practicable. The existence of drainage tile lines or underground utilities may necessitate less ripping depth. The disturbed area shall then be disked.

B. All ripping and disking shall be done at a time when the soil is dry enough for normal tillage operations to occur on Cropland adjacent to the Facility.

C. The Facility Owner shall restore all rutted land to a condition as close as possible to its original condition upon Deconstruction, unless necessary earlier as determined by the Landowner.

D. If there is any dispute between the Landowner and the Facility Owner as to what areas need to be ripped/disked or the depth at which compacted areas should be ripped/disked, the appropriate County SWCD's opinion shall be considered by the Facility Owner and the Landowner.

9. Construction During Wet Weather

Except as provided below, construction activities are not allowed on agricultural land during times when normal farming operations, such as plowing, disking, planting or harvesting, cannot take place due to excessively wet soils. With input from the landowner, wet weather conditions may be determined on a field by field basis.

A. Construction activities on prepared surfaces, surfaces where topsoil and subsoil have been removed, heavily compacted in preparation, or otherwise stabilized (e.g. through cement mixing) may occur at the discretion of the Facility Owner in wet weather conditions.

B. Construction activities on unprepared surfaces will be done only when work will not result in rutting which may mix subsoil and topsoil. Determination as to the potential of subsoil and topsoil mixing will be made in consultation with the underlying Landowner, or, if approved by the Landowner, his/her designated tenant or designee.

10. Prevention of Soil Erosion

A. The Facility Owner shall work with Landowners and create and follow a SWPPP to prevent excessive erosion on land that has been disturbed by Construction or Deconstruction of a Facility.

B. If the Landowner and Facility Owner cannot agree upon a reasonable method to control erosion on the Landowner's property, the Facility Owner shall consider the recommendations of the appropriate County SWCD to resolve the disagreement.

C. The Facility Owner may, per the requirements of the project SWPPP and in consultation with the Landowner, seed appropriate vegetation around all panels and other facility components to prevent erosion. The Facility Owner must utilize Best Efforts to ensure that all seed mixes will be as free of any noxious weed seeds as possible. The Facility Owner shall consult with the Landowner regarding appropriate varieties to seed.

11. Repair of Damaged Soil Conservation Practices

Consultation with the appropriate County SWCD by the Facility Owner shall be carried out to determine if there are soil conservation practices (such as terraces, grassed waterways, etc.) that will be damaged by the Construction and/or Deconstruction of the Facility. Those conservation practices shall be restored to their preconstruction condition as close as reasonably practicable following Deconstruction in accordance with USDA NRCS technical standards. All repair costs shall be the responsibility of the Facility Owner.

12. Compensation for Damages to Private Property

The Facility Owner shall reasonably compensate Landowners for damages caused by the Facility Owner. Damage to Agricultural Land shall be reimbursed to the Landowner as prescribed in the applicable Underlying Agreement.

13. Clearing of Trees and Brush

A. If trees are to be removed for the Construction or Deconstruction of a Facility, the Facility Owner shall consult with the Landowner to determine if there are trees of commercial or other value to the Landowner.

B. If there are trees of commercial or other value to the Landowner, the Facility Owner shall allow the Landowner the right to retain ownership of the trees to be removed and the disposition of the removed trees shall be negotiated prior to the commencement of land clearing.

14. Access Roads

A. To the extent practicable, access roads shall be designed to not impede surface drainage and shall be built to minimize soil erosion on or near the access roads.

B. Access roads may be left intact during Construction, operation or Deconstruction through mutual agreement of the Landowner and the Facility Owner unless otherwise restricted by federal, state, or local regulations.

C. If the access roads are removed, Best Efforts shall be expended to assure that the land shall be restored to equivalent condition(s) as existed prior to their construction, or as otherwise agreed to by the Facility Owner and the Landowner. All access roads that are removed shall be ripped to a depth of 18 inches. All ripping shall be performed consistent with Section 8.

15. Weed/Vegetation Control

A. The Facility Owner shall provide for weed control in a manner that prevents the spread of weeds. Chemical control, if used, shall be done by an appropriately licensed pesticide applicator.

B. The Facility Owner shall be responsible for the reimbursement of all reasonable costs incurred by owners of agricultural land where it has been determined by the appropriate state or county entity that weeds have spread from the Facility to their property. Reimbursement is contingent upon written notice to the Facility Owner. Facility Owner shall reimburse the property owner within 45 days after notice is received.

C. The Facility Owner shall ensure that all vegetation growing within the perimeter of the Facility is properly and appropriately maintained. Maintenance may include, but not be limited to, mowing, trimming, chemical control, or the use of livestock as agreed to by the Landowner.

D. The Deconstruction plans must include provisions for the removal of all weed control equipment used in the Facility, including weed-control fabrics or other ground covers.

16. Indemnification of Landowners

The Facility Owner shall indemnify all Landowners, their heirs, successors, legal representatives, and assigns from and against all claims, injuries, suits, damages, costs, losses, and reasonable expenses resulting from or arising out of the Commercial Solar Energy Facility, including Construction and Deconstruction thereof, and also including damage to such Facility or any of its appurtenances, except where claims, injuries, suits, damages, costs, losses, and expenses are caused by the negligence or intentional acts, or willful omissions of such Landowners, and/or the Landowners heirs, successors, legal representatives, and assigns.

17. Deconstruction Plans and Financial Assurance of Commercial Solar Energy Facilities

A. Deconstruction of a Facility shall include the removal/disposition of all solar related equipment/facilities, including the following utilized for operation of the Facility and located on Landowner property:

1. Solar panels, cells and modules;
2. Solar panel mounts and racking, including any helical piles, ground screws, ballasts, or other anchoring systems;
3. Solar panel foundations, if used (to depth of 5 feet);

4. Transformers, inverters, energy storage facilities, or substations, including all components and foundations; however, Underground Cables at a depth of 5 feet or greater may be left in place;
5. Overhead collection system components;
6. Operations/maintenance buildings, spare parts buildings and substation/switching gear buildings unless otherwise agreed to by the Landowner;
7. Access Road(s) unless Landowner requests in writing that the access road is to remain;
8. Operation/maintenance yard/staging area unless otherwise agreed to by the Landowner; and
9. Debris and litter generated by Deconstruction and Deconstruction crews.

B. The Facility Owner shall, at its expense, complete Deconstruction of a Facility within twelve (12) months after the end of the useful life of the Facility.

C. During the County permit process, or if none, then prior to the commencement of construction, the Facility Owner shall file with the County a Deconstruction Plan. The Facility Owner shall file an updated Deconstruction Plan with the County on or before the end of the tenth year of commercial operation.

D. The Facility Owner shall provide the County with Financial Assurance to cover the estimated costs of Deconstruction of the Facility. Provision of this Financial Assurance shall be phased in over the first 11 years of the Project's operation as follows:

1. On or before the first anniversary of the Commercial Operation Date, the Facility Owner shall provide the County with Financial Assurance to cover ten (10) percent of the estimated costs of Deconstruction of the Facility as determined in the Deconstruction Plan.
2. On or before the sixth anniversary of the Commercial Operation Date, the Facility Owner shall provide the County with Financial Assurance to cover fifty (50) percent of the estimated costs of Deconstruction of the Facility as determined in the Deconstruction Plan.
3. On or before the eleventh anniversary of the Commercial Operation Date, the Facility Owner shall provide the County with Financial Assurance to cover one hundred (100) percent of the estimated costs of Deconstruction of the Facility as determined in the updated Deconstruction Plan provided during the tenth year of commercial operation.

The Financial Assurance shall not release the surety from liability until the Financial Assurance is replaced. The salvage value of the Facility may only be used to reduce the estimated costs of Deconstruction if the County agrees that all interests in the salvage value are subordinate or have been subordinated to that of the County if Abandonment occurs.

E. The County may, but is not required to, reevaluate the estimated costs of Deconstruction of any Facility after the tenth anniversary, and every five years thereafter, of the Commercial Operation Date. Based on any reevaluation, the County may require changes in the level of Financial Assurance used to calculate the phased Financial Assurance levels described in Section 17.D. required from the Facility Owner. If the County is unable to its satisfaction to perform the investigations necessary to approve the Deconstruction Plan filed by the Facility Owner, then the County and Facility may mutually agree on the selection of a Professional Engineer independent of the Facility Owner to conduct any necessary investigations. The Facility Owner shall be responsible for the cost of any such investigations.

F. Upon Abandonment, the County may take all appropriate actions for Deconstruction including drawing upon the Financial Assurance.

Concurrence of the Parties to this AIMA

The Illinois Department of Agriculture and Little Prairie Solar LLC concur that this AIMA is the complete AIMA governing the mitigation of agricultural impacts that may result from the Construction and Deconstruction of the solar farm project in Champaign County within the State of Illinois.

The effective date of this AIMA commences on the date of execution.

STATE OF ILLINOIS
DEPARTMENT OF AGRICULTURE

Jerry Costello II

By: Jerry Costello II, Director

Clay Nordsieck

By ~~Tess Teagans, General Counsel~~
Clay Nordsieck County General Counsel

801 E. Sangamon Avenue, 62702
State Fairgrounds, POB 19281 Springfield,
IL 62794-9281

4/19, 2024

Little Prairie Solar LLC

Michael Stanton
Michael Stanton (Apr 1, 2024 09:33 EDT)

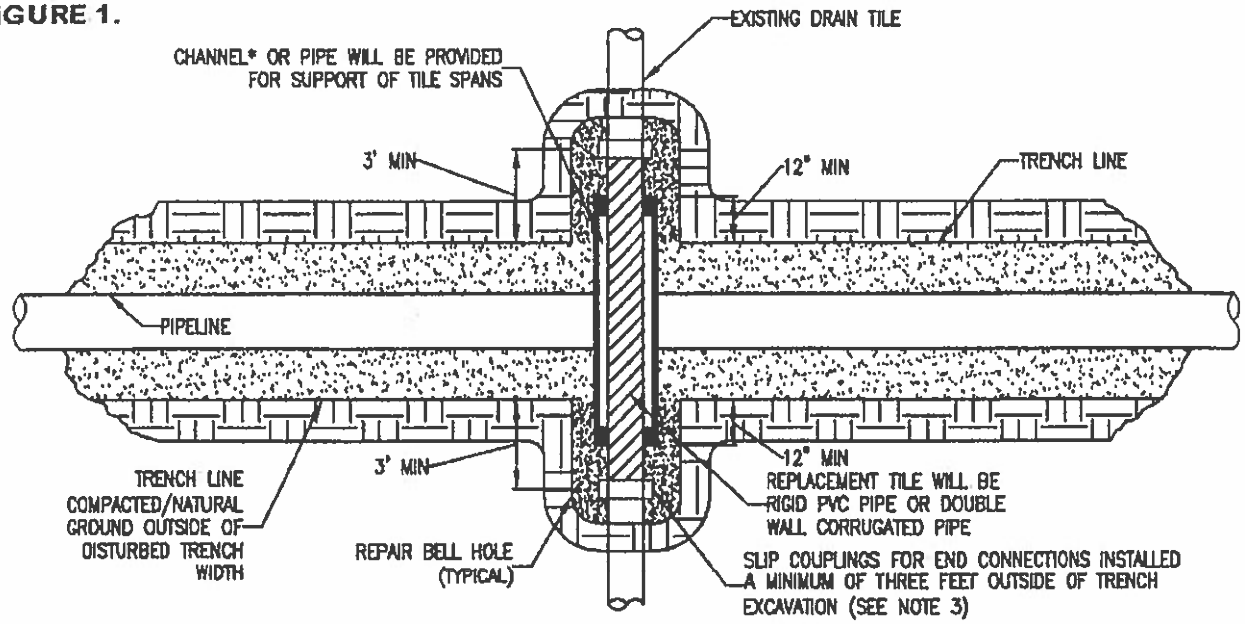
By chael Stanton, Authorized Representati

18575 Jamboree Rd., Suite 850
Irvine, CA 92612

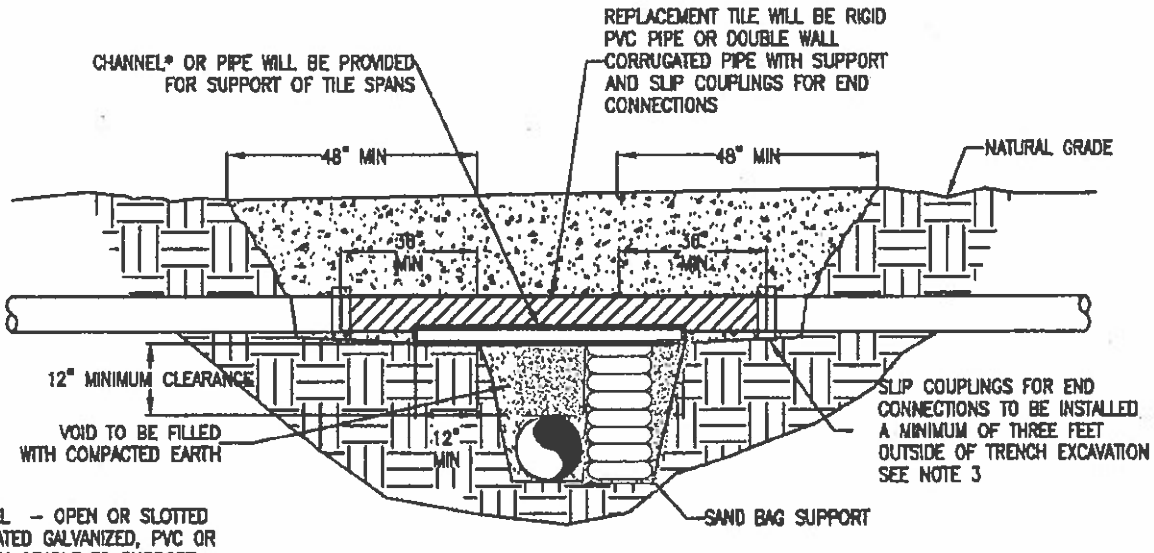
Address

Apr 10 2024 1/25, 2024

FIGURE 1.



PLAN
N.T.S.



*CHANNEL – OPEN OR SLOTTED CORRUGATED GALVANIZED, PVC OR ALUMINUM CRADLE TO SUPPORT DRAIN TILE.

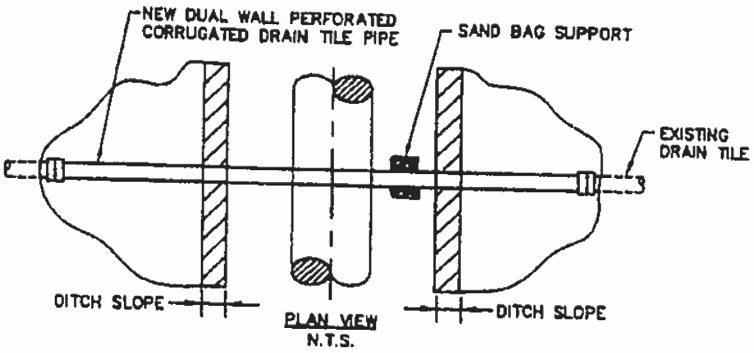
CROSS SECTION
N.T.S.

NOTE:

1. IMMEDIATELY REPAIR TILE IF WATER IS FLOWING THROUGH TILE AT TIME OF TRENCHING. IF NO WATER IS FLOWING AND TEMPORARY REPAIR IS DELAYED, OR NOT MADE BY THE END OF THE WORK DAY, A SCREEN OR APPROPRIATE 'NIGHT CAP' SHALL BE PLACED ON OPEN ENDS OF TILE TO PREVENT ENTRAPMENT OF ANIMALS ETC.
2. CHANNEL OR PIPE (OPEN OR SLOTTED) MADE OF CORRUGATED GALVANIZED PIPE, PVC OR ALUMINUM WILL BE USED FOR SUPPORT OF DRAIN TILE SPANS.
3. INDUSTRY STANDARDS SHALL BE FOLLOWED TO ENSURE PROPER SEAL OF REPAIRED DRAIN TILES.

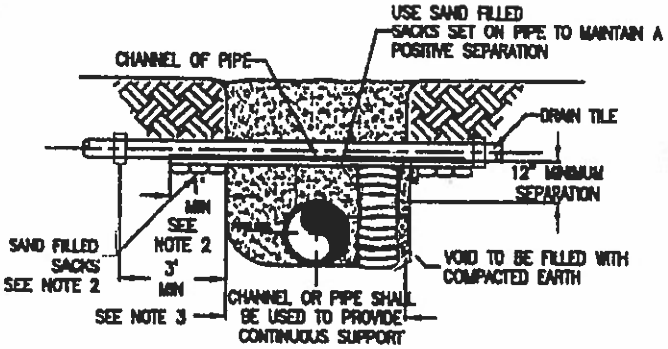
TEMPORARY DRAIN TILE REPAIR

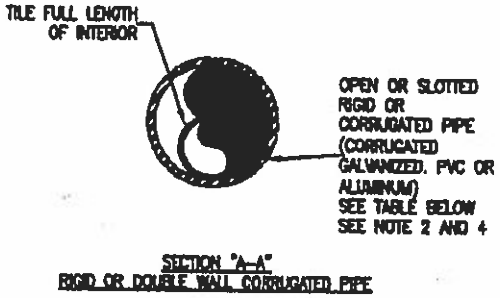
FIGURE 2.



PLAN VIEW
N.T.S.

PLAN VIEW





SECTION "A-A"
RIGID OR DOUBLE WALL CORRUGATED PIPE

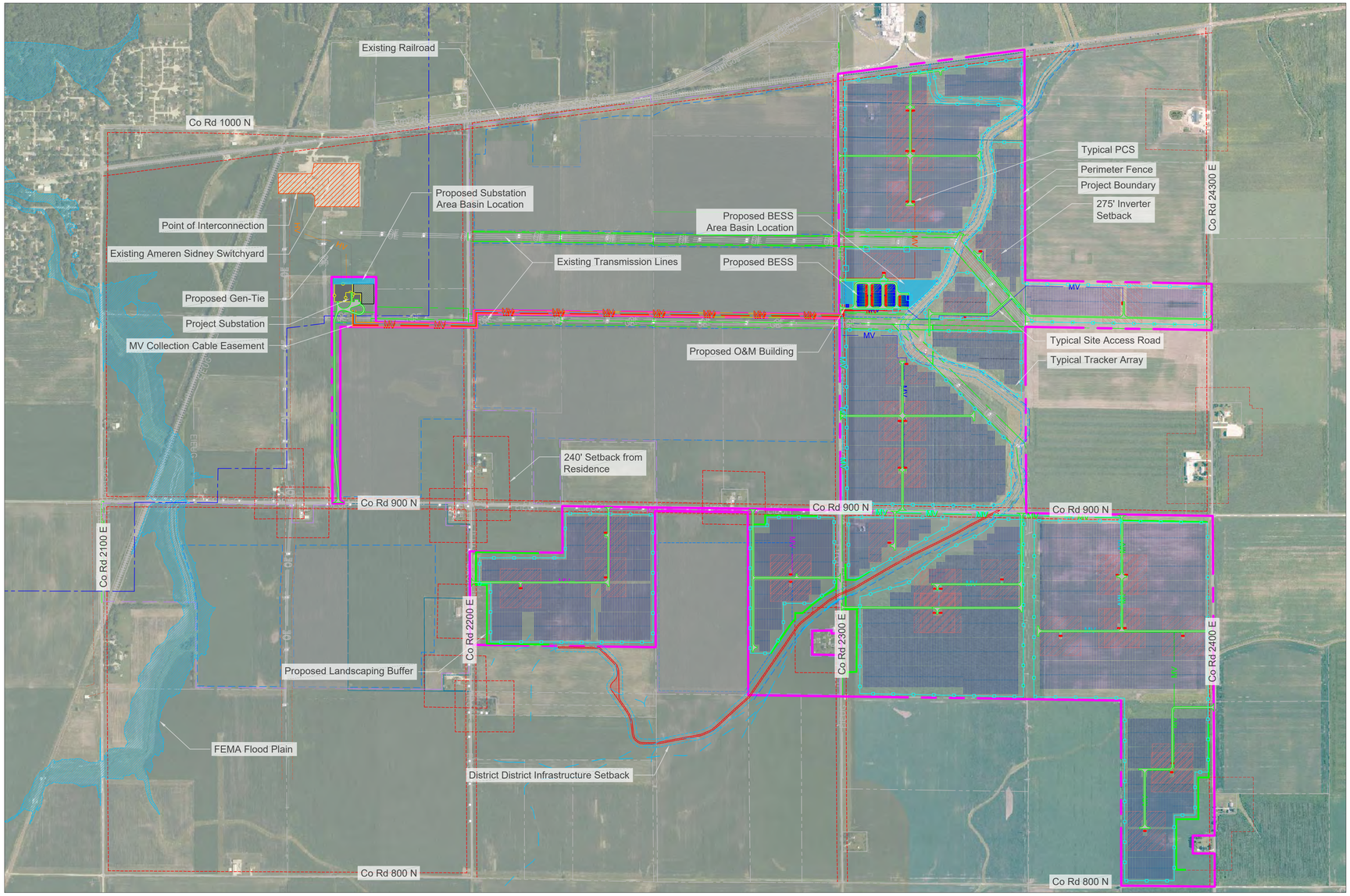
END VIEWS

MINIMUM SUPPORT TABLE			
TILE SIZE	CHANNEL SIZE	PIPE SIZE	
3"	4" @ 5.4 #/ft	4"	STD. WT.
4"-5"	5" @ 6.7 #/ft	6"	STD. WT.
6"-9"	7" @ 9.8 #/ft	9"-10"	STD. WT.
10"	10" @ 15.3 #/ft	12"	STD. WT.

NOTE:

1. TILE REPAIR AND REPLACEMENT SHALL MAINTAIN ORIGINAL ALIGNMENT GRADIENT AND WATER FLOW TO THE GREATEST EXTENT POSSIBLE. IF THE TILE NEEDS TO BE RELOCATED, THE INSTALLATION ANGLE MAY VARY DUE TO SITE SPECIFIC CONDITIONS AND LANDOWNER RECOMMENDATIONS.
2. 1'-0" MINIMUM LENGTH OF CHANNEL OR RIGID PIPE (OPEN OR SLOTTED CORRUGATED GALVANIZED, PVC OR ALUMINUM CRADLE) SHALL BE SUPPORTED BY UNDISTURBED SOIL, OR IF CROSSING IS NOT AT RIGHT ANGLES TO PIPELINE, EQUIVALENT LENGTH PERPENDICULAR TO TRENCH. SHIM WITH SAND BAGS TO UNDISTURBED SOIL FOR SUPPORT AND DRAINAGE GRADIENT MAINTENANCE (TYPICAL BOTH SIDES).
3. DRAIN TILES WILL BE PERMANENTLY CONNECTED TO EXISTING DRAIN TILES A MINIMUM OF THREE FEET OUTSIDE OF EXCAVATED TRENCH LINE USING INDUSTRY STANDARDS TO ENSURE PROPER SEAL OF REPAIRED DRAIN TILES INCLUDING SLIP COUPLINGS.
4. DIAMETER OF RIGID PIPE SHALL BE OF ADEQUATE SIZE TO ALLOW FOR THE INSTALLATION OF THE TILE FOR THE FULL LENGTH OF THE RIGID PIPE.
5. OTHER METHODS OF SUPPORTING DRAIN TILE MAY BE USED IF ALTERNATE PROPOSED IS EQUIVALENT IN STRENGTH TO THE CHANNEL/PIPE SECTIONS SHOWN AND IF APPROVED BY COMPANY REPRESENTATIVES AND LANDOWNER IN ADVANCE. SITE SPECIFIC ALTERNATE SUPPORT SYSTEM TO BE DEVELOPED BY COMPANY REPRESENTATIVES AND FURNISHED TO CONTRACTOR FOR SPANS IN EXCESS OF 20', TILE GREATER THEN 10" DIAMETER, AND FOR "HEADER" SYSTEMS.
6. ALL MATERIAL TO BE FURNISHED BY CONTRACTOR.
7. PRIOR TO REPAIRING TILE, CONTRACTOR SHALL PROBE LATERALLY INTO THE EXISTING TILE TO FULL WIDTH OF THE RIGHTS OF WAY TO DETERMINE IF ADDITIONAL DAMAGE HAS OCCURRED. ALL DAMAGED/DISTURBED TILE SHALL BE REPAIRED AS NEAR AS PRACTICABLE TO ITS ORIGINAL OR BETTER CONDITION.

PERMANENT DRAIN TILE REPAIR



Imperial Scale

LEGEND

- Project Boundary / Special Use Permit Boundary
- OE — Existing Overhead Line
- Existing Easement
- Existing RailRoad
- Existing Contours
- HV — High Voltage Line
- Proposed Fence
- MV — Proposed MV Cable
- 0.5 Mile Sidney Village Municipal Setback
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- 75' Overhead C/L Setback
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- 275' Inverter Setback
- Solar Array
- Access Roads
- Proposed Landscape Buffer
- FEMA Flood Plain
- Project Substation
- PCS Station (35)

SITE IMPROVEMENT PLAN

SCALE: 1" = 800'

NORTH

800 400 0 800 1600 2400

Scale: 1" = 800'

Information used to prepare this drawing

Item	Source	Date, Revision
Boundary Information	CAD file provided by BayWa r.e.: ACAD-418736-Boundary-20240412.dwg	4/16/2024
CUP/SUP	None	N/A
Site Constraints	CAD file provided by BayWa r.e.: ACAD-418736-Boundary-20240412.dwg	4/16/2024
Geotechnical Report	None	N/A
FEMA Panel	Panel: 17019C0475D	10/1/2013
Topographic Survey	USGS	N/A
Hydrology Information	None	N/A
Wetlands Information	National Wetland Database	N/A
Point of Interconnection	Little Prairie Solar Project Site Plan	2/27/24, A
Aerial Imagery	Bing Map	N/A
ASHRAE Data	http://ashrae-meteo.info/index.php	ASHRAE 2021
Wind Load Source	https://asce7hazardtool.online/	(ASCE 7-21)
Snow Load Source	https://asce7hazardtool.online/	(ASCE 7-21)
Seismic Load Source	https://asce7hazardtool.online/	(ASCE 7-21)

*Files are based on State Plane Coordinate System NAD83

Little Prairie Solar LLC

Sidney, Champaign County, Illinois

Owner/Developer	BayWa r.e.
Latitude:	40.012334
Longitude:	-88.028735
Min Elevation:	658
Max Elevation:	698
Total Project Boundary Acres:	1047.0
Total Buildable Acres:	859.4
Total Fenced Acres:	785.4
Total Array Acres:	655.8
Annual Cooling Design Temp:	91.3° F
Extreme Annual Min DB Mean Temp:	-9.4° F
Wind Load:	100 mph
Snow Load:	27 psf
Seismic	
Ss:	0.28
S1:	0.11

Design Information

Rotation/Tilt Angle	**60**
Module Wattage	**550**
Quantity of Modules	**334,022**
MWac PV	**135.00**
MWac BESS	**135.0**
BESS MWh	**540**
GCR	**35%**
Row Spacing	**21.35**

Notes:
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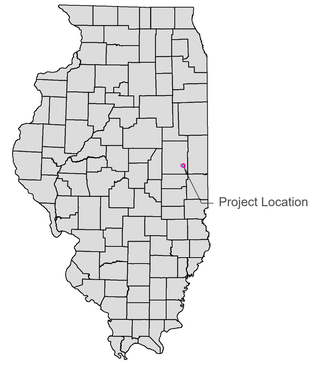
Vegetative screening for all dwellings within 1,000 feet of PV Solar Farm.

Access Roads
20' Wide (PV)
24' Wide (BESS)

Perimeter Fence
Approximately 82,307' LF of minimum 8-foot tall perimeter fence with 24' wide security gates



KEY MAP
SCALE: NTS

NOT FOR CONSTRUCTION

EnerSol Design
WWW.ENERSOLDESIGN.COM

BayWa r.e.

LITTLE PRAIRIE SOLAR LLC
SIDNEY, CHAMPAING COUNTY, ILLINOIS

REV	DATE	DESCRIPTION	DWN	CHK	APV
G	4/24/24	CORRECTED BOUNDARY	MP	MP	MP
H	5/29/24	CORRECTED BOUNDARY	MP	MP	MP
I	7/14/24	REVISED FENCE, ACCESS ROAD & ADDED BASIN	MP	MP	MP
J	7/31/24	REVISED ACCESS ROAD AND BESS SPACING	MP	MP	MP
K	8/26/24	REVISED ACCESS ROAD	MP	MP	MP
L	10/24/24	REVISED DITCH SETBACK AND ACCEESS ROAD	MP	MP	MP
M	12/11/24	ADDED DRAIN LINE	MP	MP	MP

TITLE:

SITE IMPROVEMENT PLAN

PROJECT NO.:	ES-2024-01.003
DRAWN BY:	##
REVIEWED BY:	##
SCALE:	AS NOTED

SDP-100

SHEET 1 OF 1

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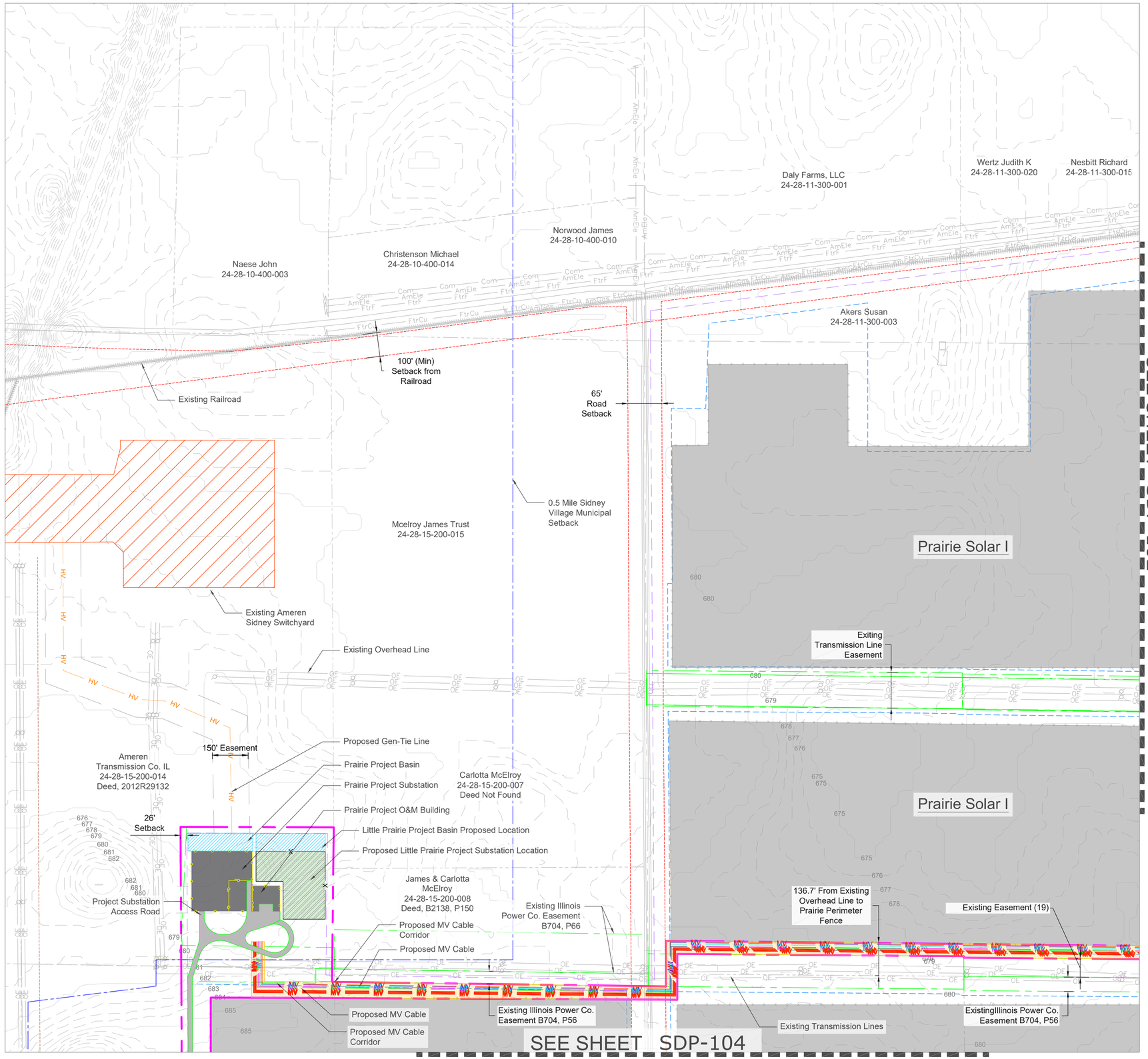

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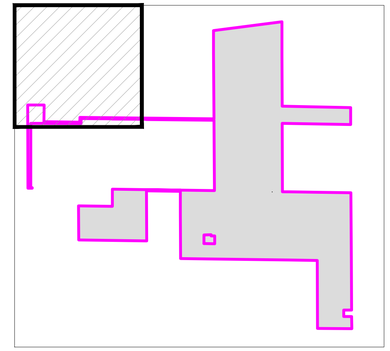

KEY MAP
SCALE: NTS
NORTH

NOT FOR CONSTRUCTION

Imperial Scale
200 100 0 200 400 600
Scale: 1" = 200'

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WWW.ENERSOLDESIGN.COM

BayWa r.e.

LITTLE PRAIRIE SOLAR LLC
SIDNEY, CHAMPAIGN COUNTY, ILLINOIS

REV	DATE	DESCRIPTION	DWN	CHK	APV
B	3/25/24	ISSUED FOR REVIEW	MP	MP	MP
C	3/27/24	ISSUED FOR REVIEW	MP	MP	MP
D	3/25/24	ADDED PARCEL INFORMATION	MP	MP	MP
E	4/22/24	REVISED BOUNDARY	MP	MP	MP
F	4/24/24	CORRECTED BOUNDARY	MP	MP	MP
G	5/29/24	CORRECTED BOUNDARY	MP	MP	MP
H	7/14/24	REVISED ACCESS ROAD	MP	MP	MP

TITLE:

SITE IMPROVEMENT PLAN

PROJECT NO.:	ES-2024-01.002
DRAWN BY:	MP
REVIEWED BY:	MP
SCALE:	AS NOTED

SDP-101

SHEET 2 OF 11

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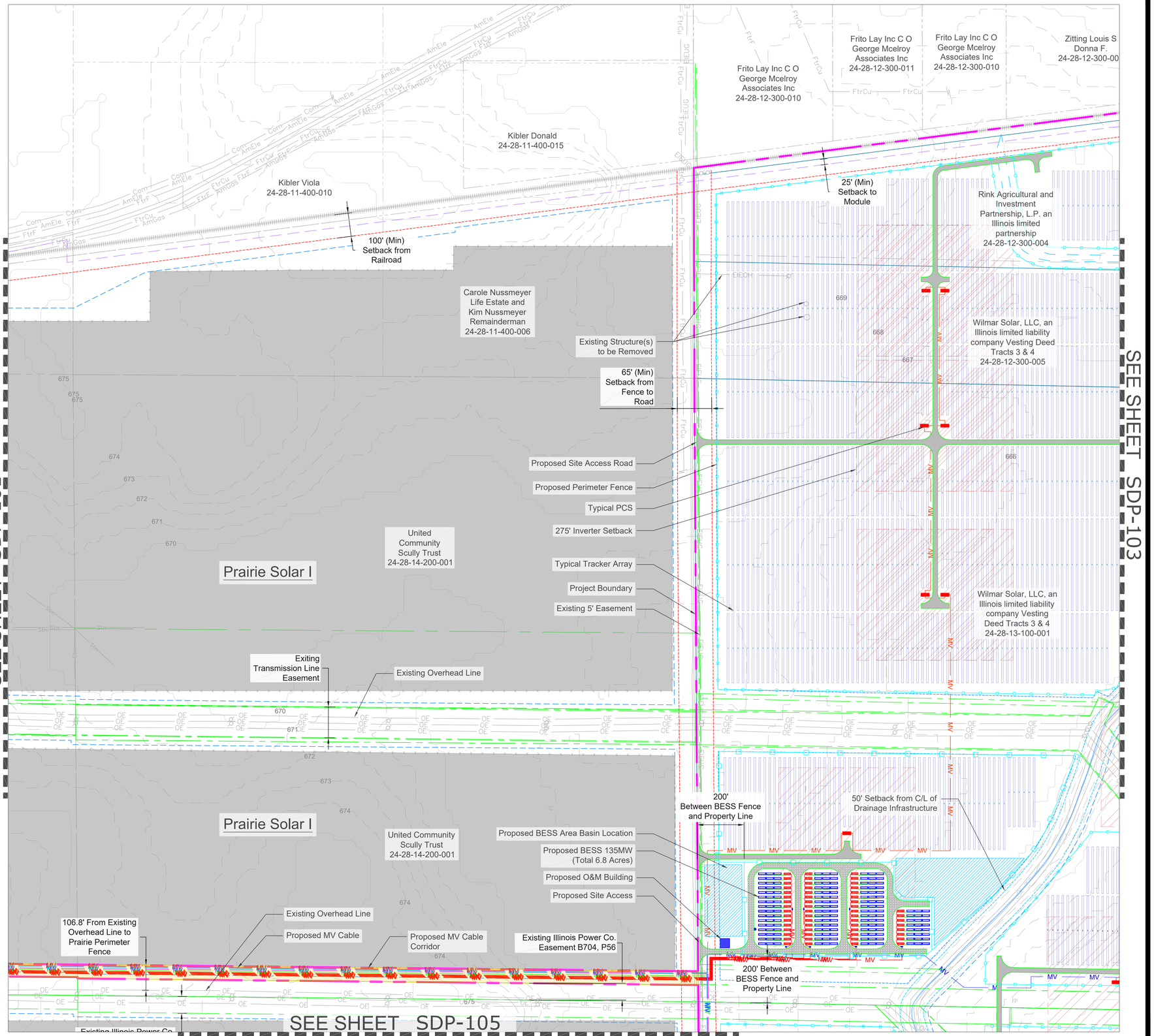

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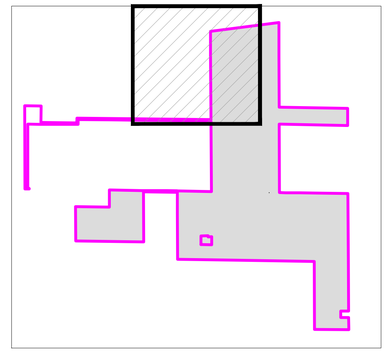

KEY MAP
SCALE: NTS
NORTH

NOT FOR CONSTRUCTION

Imperial Scale
200 100 0 200 400 600
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EnerSol Design
WWW.ENERSOLDESIGN.COM

BayWa r.e.

LITTLE PRAIRIE SOLAR LLC
SIDNEY, CHAMPAIGN COUNTY, ILLINOIS

REV	DATE	DESCRIPTION	DWN	CHK	APV
E	4/22/24	REVISED BOUNDARY AND BESS	MP	MP	MP
F	4/24/24	CORRECTED BOUNDARY AND ADDED BESS CAPACITY	MP	MP	MP
G	5/29/24	CORRECTED BOUNDARY	MP	MP	MP
H	7/14/24	REVISED FENCE AND ADD BASIN	MP	MP	MP
I	7/31/24	REVISED BESS ACCESS ROADS AND SPACING	MP	MP	MP
J	10/24/24	REVISED DRAINAGE DITCH SETBACK	MP	MP	MP
K	12/11/24	ADDED DRAIN LINE	MP	MP	MP

TITLE:
SITE IMPROVEMENT PLAN

PROJECT NO.:	ES-2024-01.002
DRAWN BY:	MP
REVIEWED BY:	MP
SCALE:	AS NOTED

SDP-102

SHEET 3 OF 11

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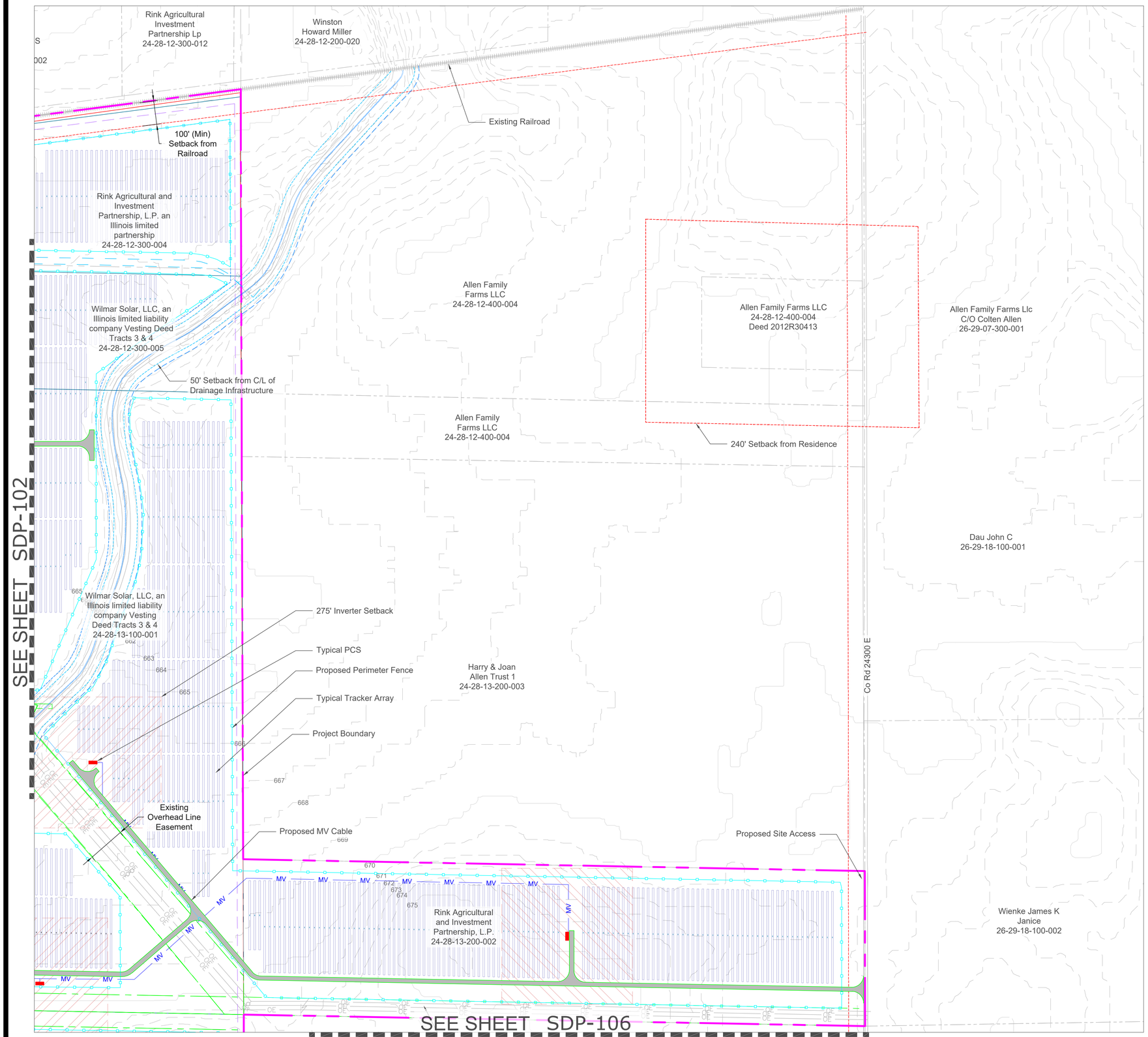

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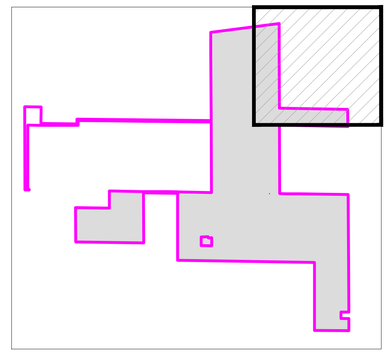

KEY MAP
SCALE: NTS
NORTH

NOT FOR CONSTRUCTION

Imperial Scale
200 100 0 200 400 600
Scale: 1" = 200'

EnerSol Design
WWW.ENERSOLDESIGN.COM

BayWa r.e.

LITTLE PRAIRIE SOLAR LLC
SIDNEY, CHAMPAIGN COUNTY, ILLINOIS

REV	DATE	DESCRIPTION	DWN	CHK	APV
D	3/28/24	SHIFTED PCS & ADDED PARCEL INFORMATION	MP	MP	MP
E	4/22/24	REVISED BOUNDARY	MP	MP	MP
F	4/24/24	CORRECTED BOUNDARY	MP	MP	MP
G	5/29/24	CORRECTED BOUNDARY	MP	MP	MP
H	7/14/24	REVISED FENCE AND ACCESS ROAD	MP	MP	MP
I	10/24/24	REVISED DRAINAGE DITCH SETBACK	MP	MP	MP
J	12/11/24	ADDED DRAIN LINE	MP	MP	MP

TITLE:
SITE IMPROVEMENT PLAN

PROJECT NO.:	ES-2024-01.002
DRAWN BY:	MP
REVIEWED BY:	MP
SCALE:	AS NOTED

SDP-103

SHEET 4 OF 11

C:\Users\Mike Perez\DC\ACCDocs\EnerSol Design\Little Prairie Solar LLC\Project Files\04_WIP\01_Active Drawings\Site Plans\Prairie SDP-100.dwg December 12, 2024

SEE SHEET SDP-101

Proposed MV Cable

Proposed MV Cable Corridor

Existing Illinois Power Co. Easement B704, P56

Existing Transmission Lines

ExistingIllinois Power Co. Easement B704, P56

Prairie Solar I

Prairie Solar I

Krukewitt James Kent
Krukewitt Linda L
24-28-14-300-002

Ameren
Transmission Co. IL
24-28-15-200-014
Deed 2012R29132

SEE SHEET SDP-105

Ruhter Jeremy &
Colleen
24-28-14-300-008

Busey Ag Services
24-28-15-400-001

John Grobe
Busey Ag Services
24-28-15-400-004

Lauchner Virginia S
24-28-14-300-007

Krukewitt James Kent
& Krukewitt Linda L
24-28-14-300-002

Tingley M
24-28-14-300-003

Project Substation
Access Road

Co Rd 900 N

65' (Min)
Setback from
Fence to Road

Proposed Site Access

75' (Min)
Setback from C/L
of Overhead
Lines

Jeffrey Snodgrass
24-28-22-200-008
Deed 2010R02766

Existing Overhead Line

240' Setback from Residence

Typical Tracker Array

Lauchner Virginia S
24-28-23-100-001

Perimeter Fence

Project Boundary

Proposed Landscape
Buffer

75' Setback
from C/L of
Overhead Lines

Hastings David L
24-28-22-200-009

Typical PCS

275' Inverter Setback

Proposed Site Access

Proposed MV Cable

Prairie Solar I

Illinois Presbyterian Home
24-28-23-100-002

Stipp Kathryn
24-28-22-200-015

Approximate Location of
Underground Drainage
Infrastructure

SEE SHEET SDP-107

LEGEND

- Project Boundary / Special Use Permit Boundary
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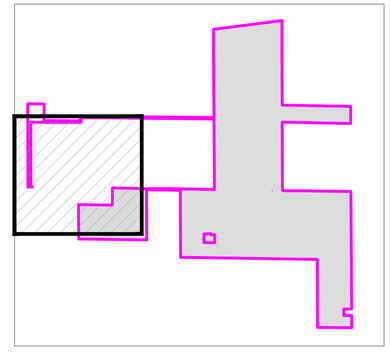

KEY MAP
SCALE: NTS

NORTH

NOT FOR CONSTRUCTION

Imperial Scale

200 100 0 200 400 600

Scale: 1" = 200'

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LITTLE PRAIRIE SOLAR LLC
SIDNEY, CHAMPAING COUNTY, ILLINOIS

REV	DATE	DESCRIPTION	DWN	CHK	APV
C	3/27/24	ISSUED FOR REVIEW	MP	MP	MP
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H	7/14/24	REVISED FENCE AND ACCESS ROAD	MP	MP	MP
I	10/24/24	REVISED ACCESS ROAD	MP	MP	MP

TITLE:

SITE IMPROVEMENT PLAN

PROJECT NO.:	ES-2024-01.002
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REVIEWED BY:	MP
SCALE:	AS NOTED

SDP-104

SHEET 5 OF 11

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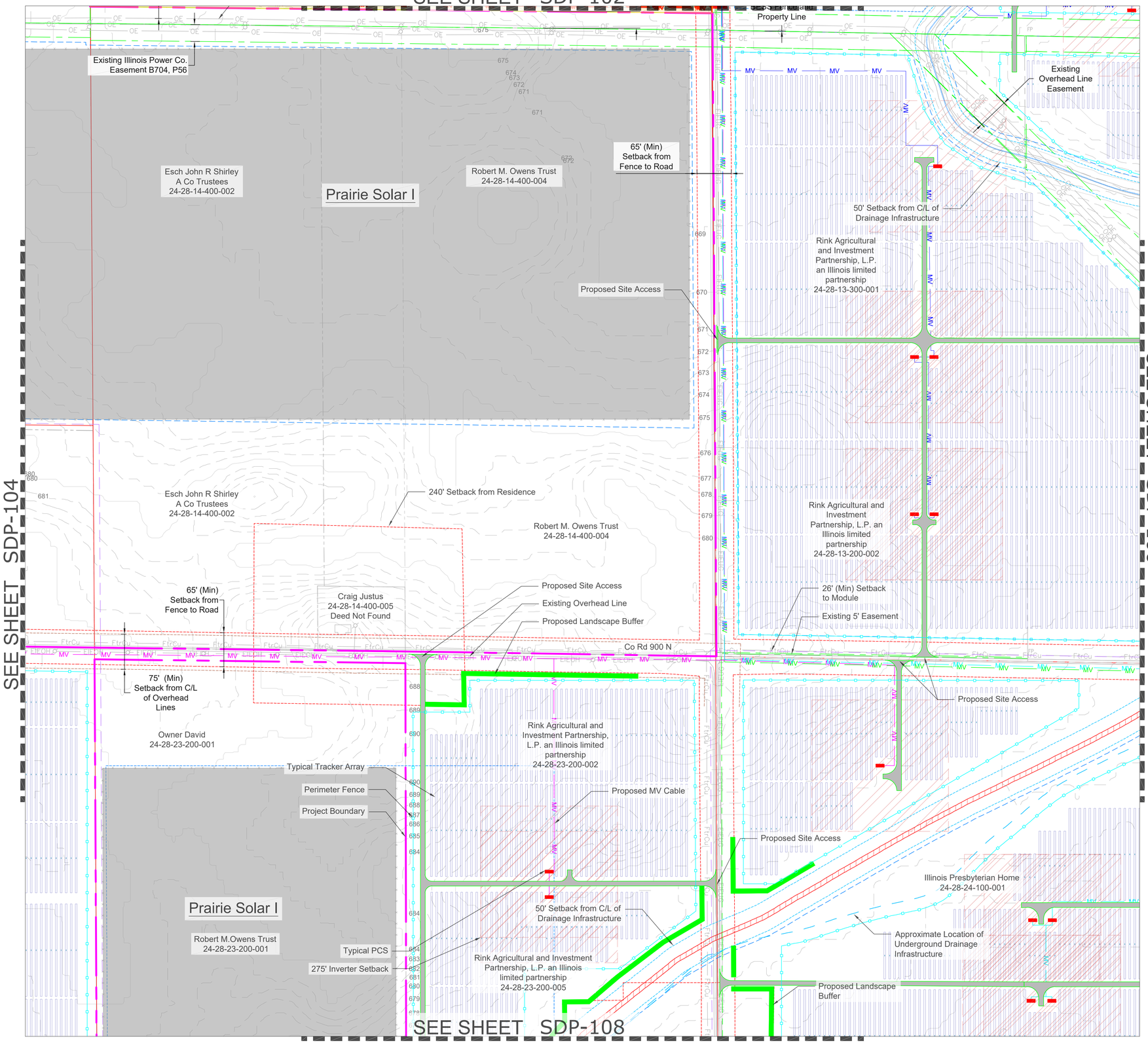

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- Project Boundary / Special Use Permit Boundary
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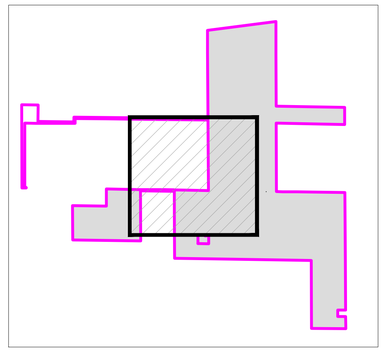

KEY MAP
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NORTH

NOT FOR CONSTRUCTION

Imperial Scale
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Scale: 1" = 200'

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TITLE:
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PROJECT NO.:	ES-2024-01.002
DRAWN BY:	MP
REVIEWED BY:	MP
SCALE:	AS NOTED

SDP-105

SHEET 6 OF 11

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SEE SHEET SDP-103

SEE SHEET SDP-105

SEE SHEET SDP-109

Existing Overhead Line

Wienke Martin C
Estate
26-29-18-300-003

Rink Agricultural and
Investment Partnership,
L.P. an Illinois limited
partnership
24-28-13-300-003

James & Linda
Krukewitt
24-28-13-400-005

Wienke Kevin & Tammy
26-29-18-300-002

Existing 132'
Overhead Line
Easement

240' Setback from Residence

Existing Overhead Line

50' Setback from C/L of
Drainage Infrastructure

Krukewitt James Kent
& Krukewitt Linda L
24-28-13-400-002

65' (Min) Setback
from Fence to Road

Proposed Site Access

Proposed MV Cable

Proposed Site Access

Proposed Landscape Buffer

Perimeter Fence

Project Boundary

Typical Tracker Array

Co Rd 900 N

275' Inverter Setback

Typical PCS

65' (Min)
Setback from
Fence to
Road

Approximate Location of
Underground Drainage
Infrastructure

Existing Overhead Line

Illinois Presbyterian Home
24-28-24-100-001

Existing 150'
Transmission
Easement

Rink Agricultural and
Investment Partnership,
L.P. an Illinois limited
partnership
24-28-24-200-005

Rink Agricultural and
Investment Partnership,
L.P. an Illinois limited
partnership
24-28-24-200-006

Rink Agricultural and
Investment Partnership,
L.P. an Illinois limited
partnership
24-28-24-200-004

Bennett
Barbara Jean
26-29-19-200-001

Rink Agricultural and
Investment Partnership,
L.P. an Illinois limited
partnership
24-28-24-200-003

LEGEND

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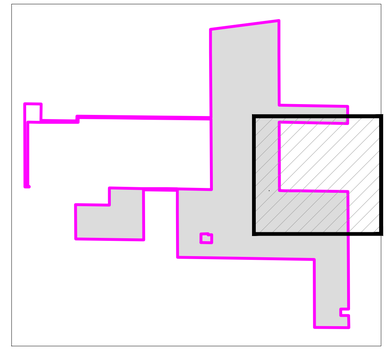

KEY MAP
SCALE: NTS
NORTH

NOT FOR CONSTRUCTION

Imperial Scale
200 100 0 200 400 600
Scale: 1" = 200'

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SIDNEY, CHAMPAING COUNTY, ILLINOIS

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TITLE:
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REVIEWED BY:	MP
SCALE:	AS NOTED

SDP-106

SHEET 7 OF 11

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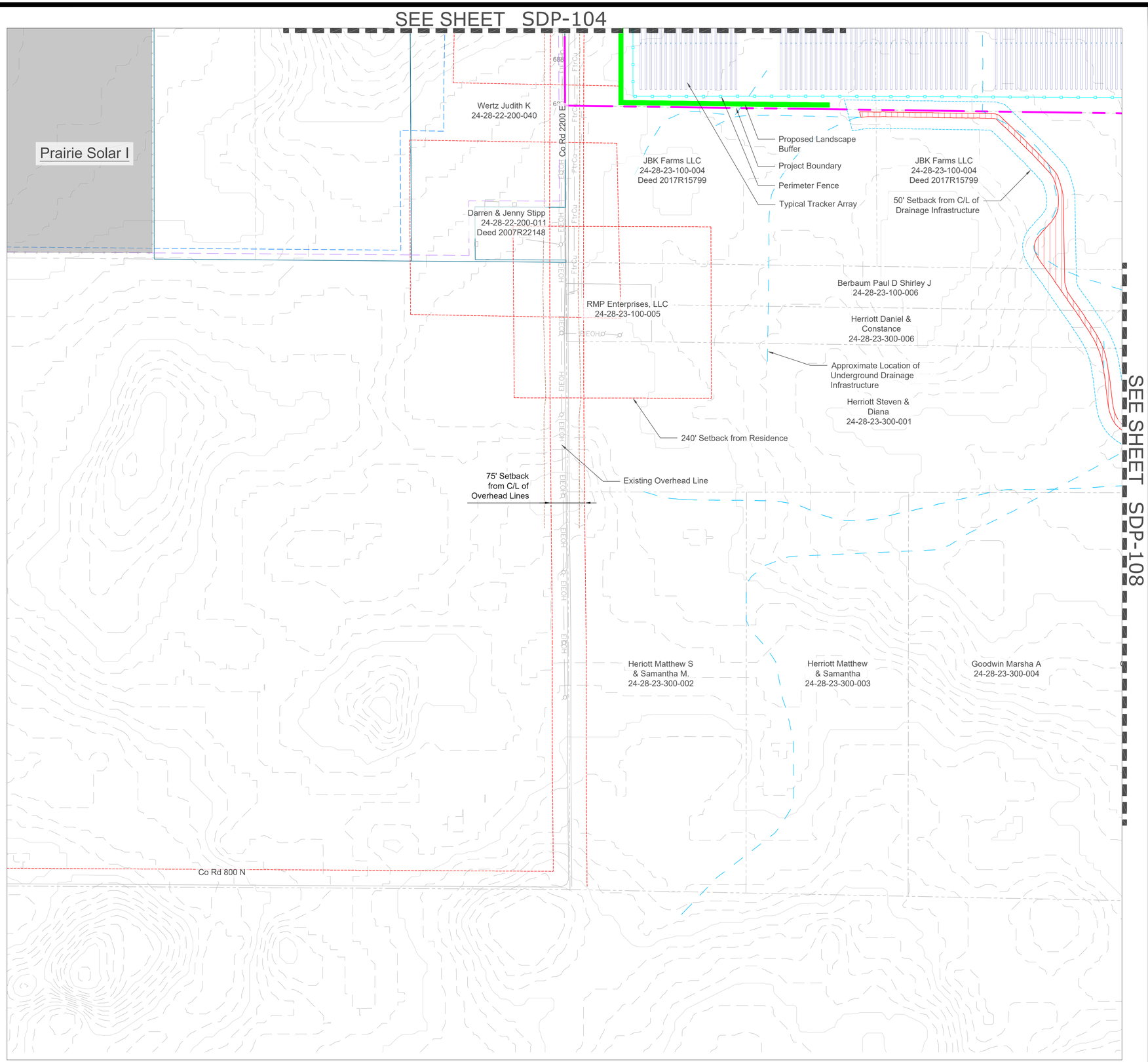

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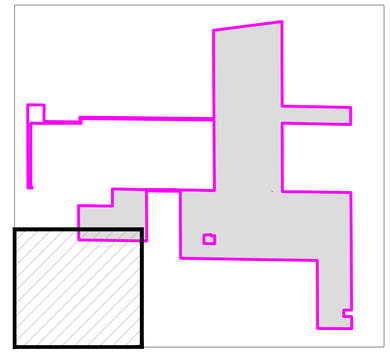

KEY MAP
SCALE: NTS
NORTH

NOT FOR CONSTRUCTION

Imperial Scale
200 100 0 200 400 600
Scale: 1" = 200'

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SIDNEY, CHAMPAING COUNTY, ILLINOIS

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TITLE:

SITE IMPROVEMENT PLAN

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REVIEWED BY:	MP
SCALE:	AS NOTED

SDP-107

SHEET 8 OF 11

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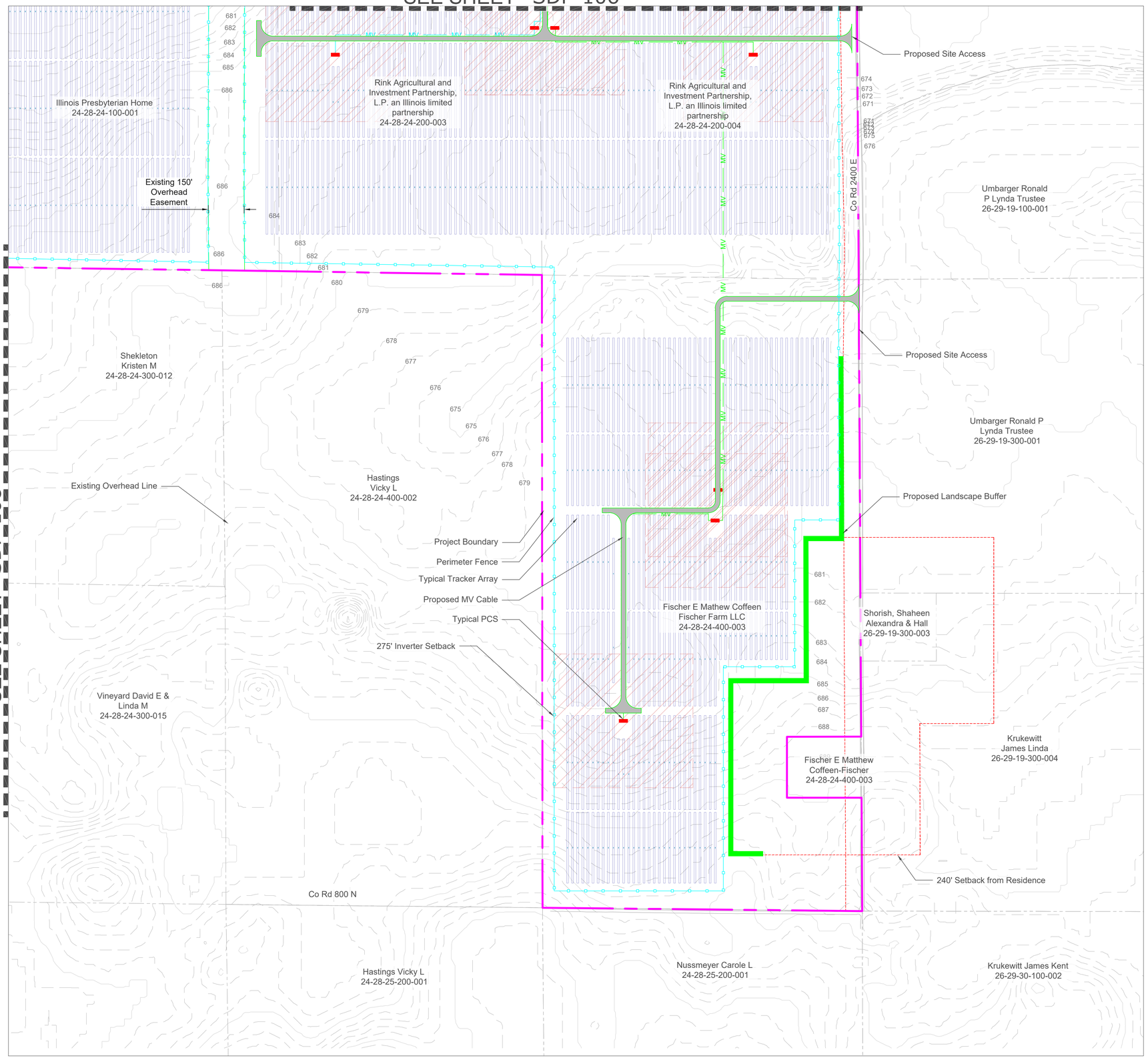
SEE SHEET SDP-106

SEE SHEET SDP-108



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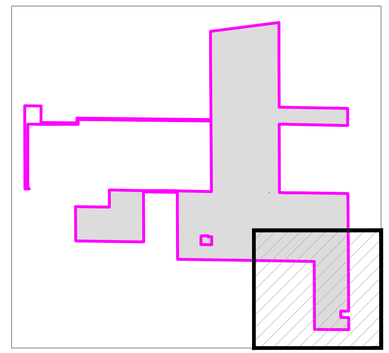

KEY MAP
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NORTH

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TITLE:

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REVIEWED BY:	MP
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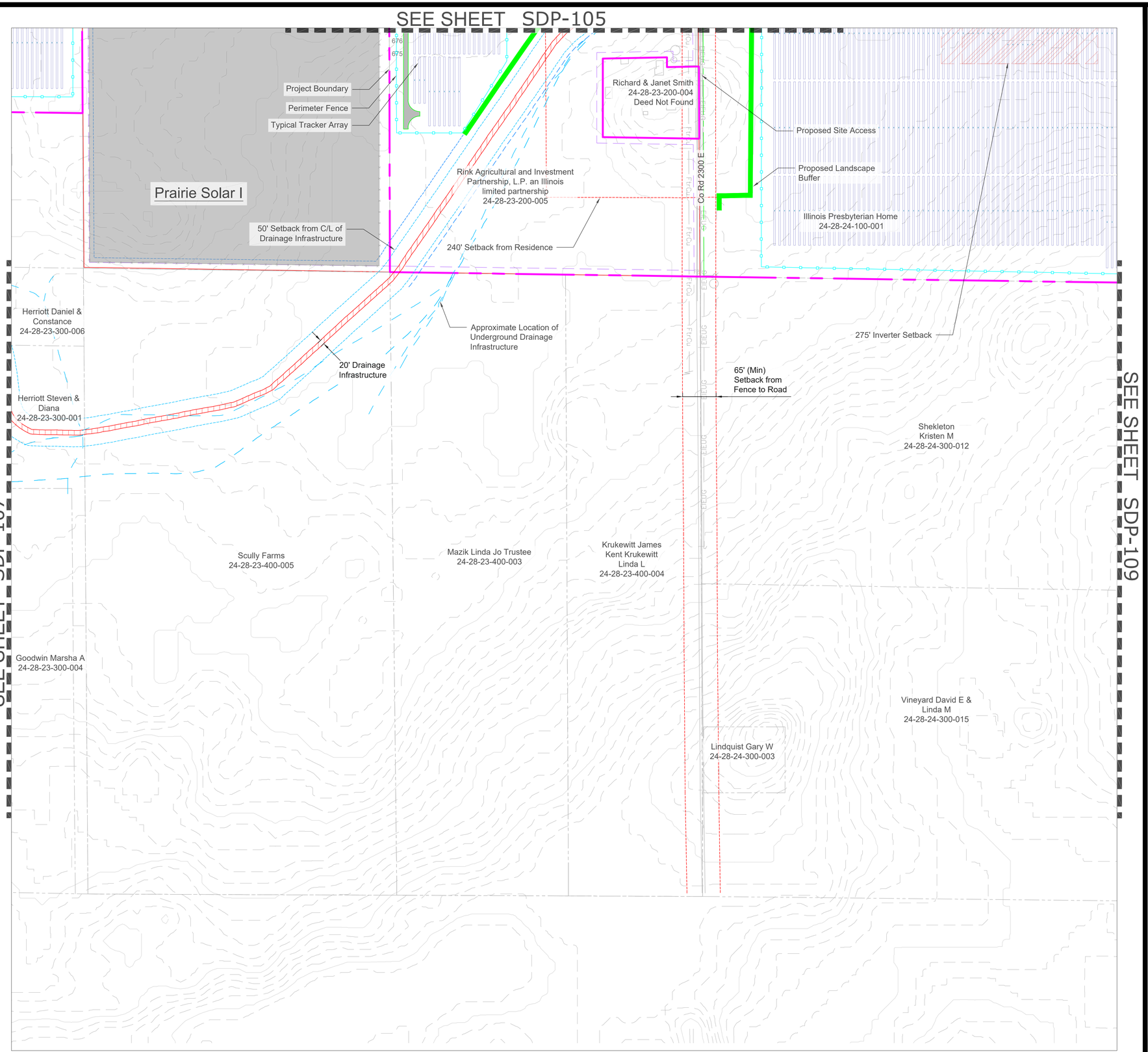
SDP-109

SHEET 10 OF 11



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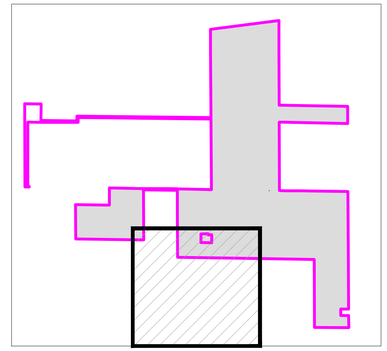

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SDP-108

SHEET 9 OF 11

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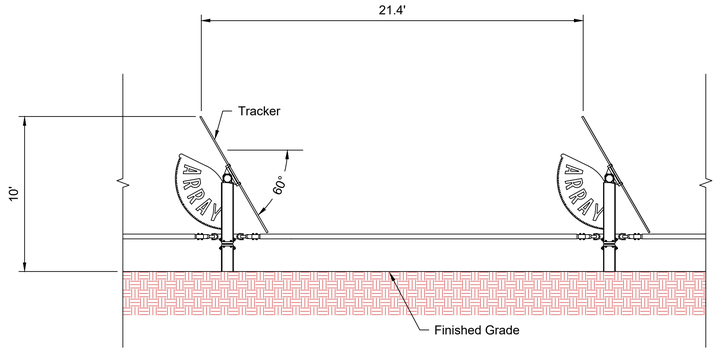
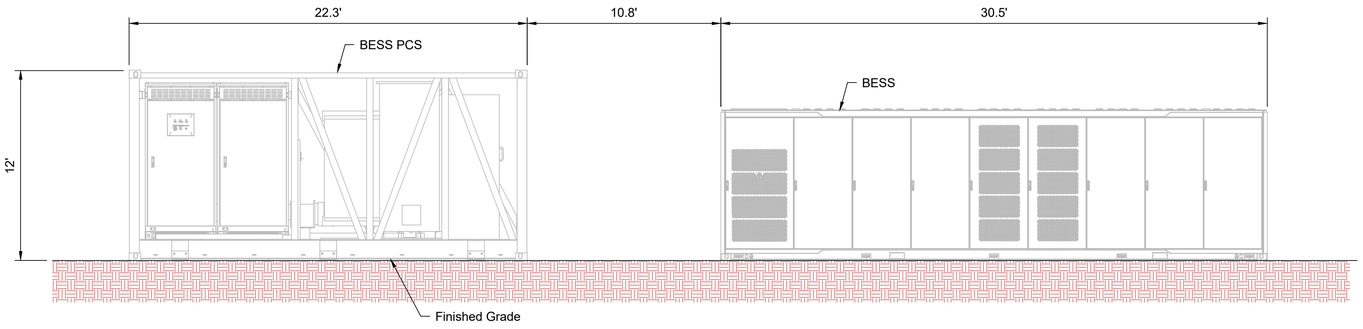
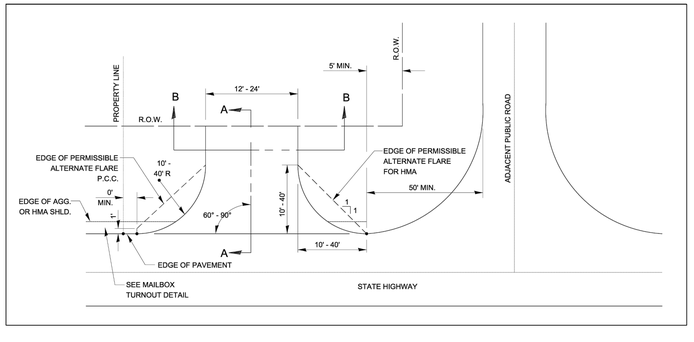


TYPICAL TRACKER ELEVATION
SCALE: NTS



TYPICAL BATTERY ENERGY STORAGE SYSTEM (BESS) ELEVATION VIEW
SCALE: NTS

NOTES:
1. BESS ENCLOSURES ARE ASSUMED TO BE WHITE IN COLOR WITH ENCLOSURE DIMENSIONS 19.9'x9.5'x8'. EACH ENCLOSURE WALL AND ROOF IS ASSUMED TO BE MADE OF STEEL AND CONTAINS TEN 1P416S PACKS.
2. INVERTERS ARE ASSUMED TO HAVE THE SAME COLOR AND MATERIAL AS BESS ENCLOSURES.
3. BESS UNIT SPECIFICATIONS ARE SUBJECT TO CHANGE DUE TO ADVANCEMENT IN BATTERY TECHNOLOGY OR PRODUCT AVAILABILITY.



TYPICAL NONCOMMERCIAL - RURAL (PRICATE ENTRANCE)
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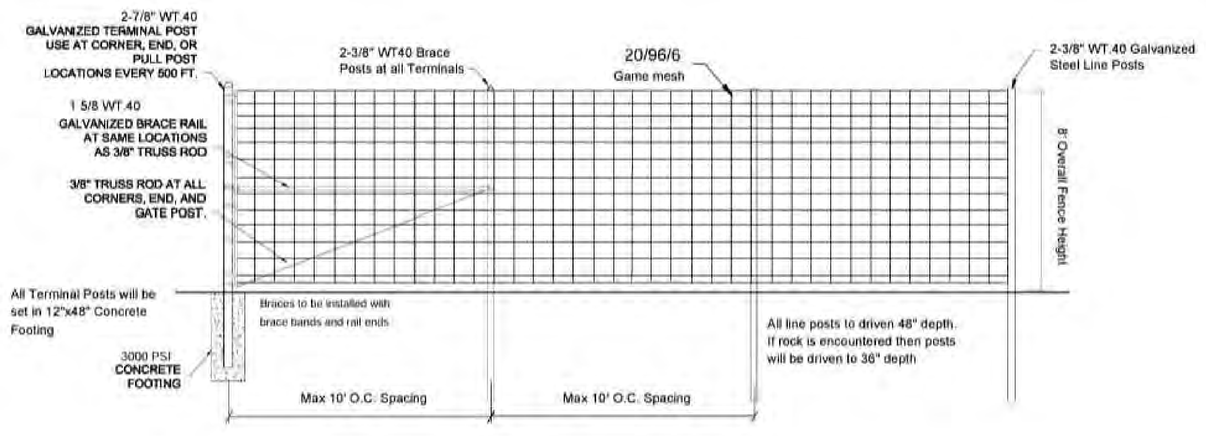

TYPICAL PERIMETER FENCE DETAIL
SCALE: NTS

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SIDNEY, CHAMPAING COUNTY, ILLINOIS

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B	3/25/24	ISSUED FOR REVIEW	MP	MP	MP
C	3/27/24	ISSUED FOR REVIEW	MP	MP	MP
D	8/26/24	REVISED MODULE HEIGHT	MP	MP	MP
E	10/24/24	REVISED FENCE DETAIL	MP	MP	MP
-	-	-	-	-	-
-	-	-	-	-	-

TITLE:

DETAILS

PROJECT NO.:	ES-2024-01.002
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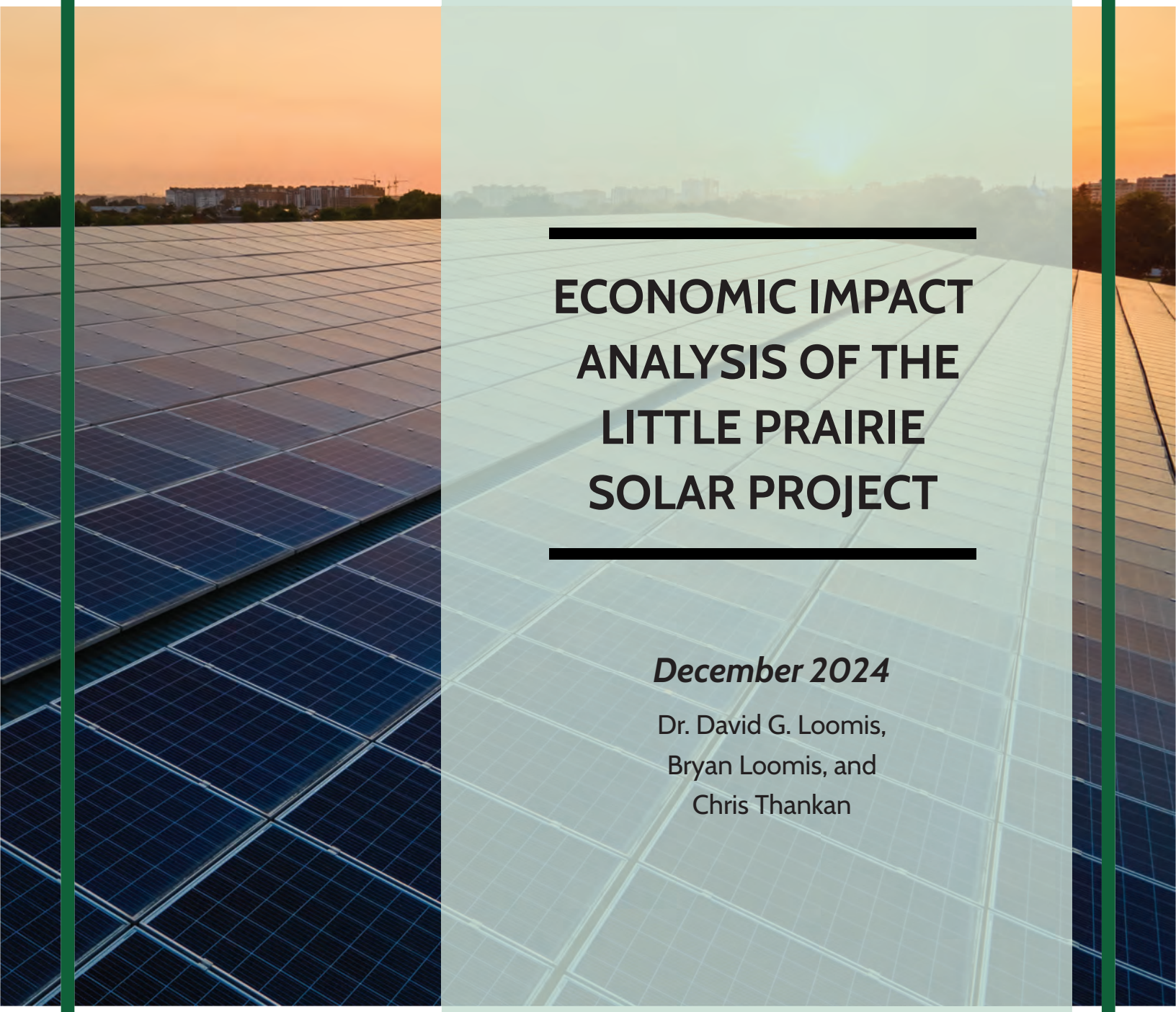
SDP-110

SHEET 11 OF 11

Strategic Economic Research, LLC



ECONOMIC IMPACT ANALYSIS OF THE LITTLE PRAIRIE SOLAR PROJECT

December 2024

Dr. David G. Loomis,
Bryan Loomis, and
Chris Thankan

Strategic Economic Research, LLC
strategiceconomic.com
815-905-2750

About the Authors

Dr. David G. Loomis, PhD

Professor Emeritus of Economics, Illinois State University
Co-Founder of the Center for Renewable Energy
President of Strategic Economic Research, LLC

Dr. David G. Loomis is Professor Emeritus of Economics at Illinois State University and Co-Founder of the Center for Renewable Energy. He has over 20 years of experience in the renewable energy field. He has served as a consultant for 43 renewable energy development companies. He has testified on the economic impacts of energy projects before the Illinois Commerce Commission, Iowa Utilities Board, Missouri Public Service Commission, Illinois Senate Energy and Environment Committee, the Wisconsin Public Service Commission, Kentucky Public Service Commission, Ohio Public Siting Board, and numerous county boards. Dr. Loomis is a widely recognized expert and has been quoted in the Wall Street Journal, Forbes Magazine, Associated Press and Chicago Tribune as well as appearing on CNN.

Dr. Loomis has published 40 peer-reviewed articles in leading energy policy and economics journals. He has raised and managed over $7 million in grants and contracts from government, corporate and foundation sources. He received the 2011 Department of Energy's Midwestern Regional Wind Advocacy Award and the 2006 Best Wind Working Group Award. Dr. Loomis received his Ph.D. in economics from Temple University in 1995.

Bryan Loomis, MBA

Vice President of Strategic Economic Research, LLC

Bryan Loomis has been conducting economic impact, property tax, and land use analyses at Strategic Economic Research since 2019. He has performed or overseen over 200 wind and solar analyses, and has also provided expert testimony for permitting hearings and open houses in many states, including Colorado, Kansas, Indiana, Illinois, and Iowa. He improved the property tax analysis methodology at SER by researching various state taxing laws and implementing depreciation, taxing jurisdiction millage rates and other factors into the tax analysis tool. Before working with SER, Bryan ran a consulting agency, working with over 30 technology startups on growth and marketing. Bryan received his MBA from Belmont University in 2016.

Chris Thankan

Director of Economic Analysis

Christopher Thankan assists with the production of the economic impact studies including sourcing, analyzing, and graphing government data. He also performs economic and property tax analysis for wind, solar, and transmission projects. Chris has a Bachelor of Science degree in Sustainable & Renewable Energy and minored in Economics.

Strategic Economic Research, LLC (SER) provides economic consulting for renewable energy projects across the U.S. We have produced over 400 economic impact reports in 32 states. Research Associates who performed work on this project include Paige Afram, Amanda Battaglia, Lindsey Cohn, Sawyer Keithley, Clara Lewis, Ethan Loomis, Hannah Loomis, Nita Loomis, Jessica Lucht, Mandi Mitchell, Russell Piontek, Isabelle Piwowarczyk, Tim Roberts, Krista Rust, Rachel Swanson, and Ashley Thompson.

Table of Contents

Table of Contents - Figures & Tables

I. Executive Summary

BayWa r.e. is developing the Little Prairie Solar Project in Champaign County, Illinois. The purpose of this report is to aid decision makers in evaluating the economic impact of this project on Champaign County and the State of Illinois. The basis of this analysis is to study the direct, indirect, and induced impacts on job creation, wages, and total economic output.

The Little Prairie Solar Project is a 135-megawatt alternating current (MWac) utility-scale solar powered-electric generation facility that will utilize photovoltaic (PV) panels installed on a single-axis tracking system. The Project will also include a 135 MW battery energy storage system (BESS). The total Project represents an investment in excess of $402 million.[1] The total development is anticipated to result in the following:

Economic Impact

Jobs- all numbers are full-time equivalents

- 172 new local jobs during construction for Champaign County
- 712 new local jobs during construction for the State of Illinois
- 8.4 new local long-term jobs for Champaign County
- 22.1 new local long-term jobs for the State of Illinois

Earnings

- Over $16.5 million in new local earnings during construction for Champaign County
- Over $70.8 million in new local earnings during construction for the State of Illinois
- Over $621 thousand in new local long-term earnings for Champaign County annually
- Over $1.5 million in new local long-term earnings for the State of Illinois annually

Output

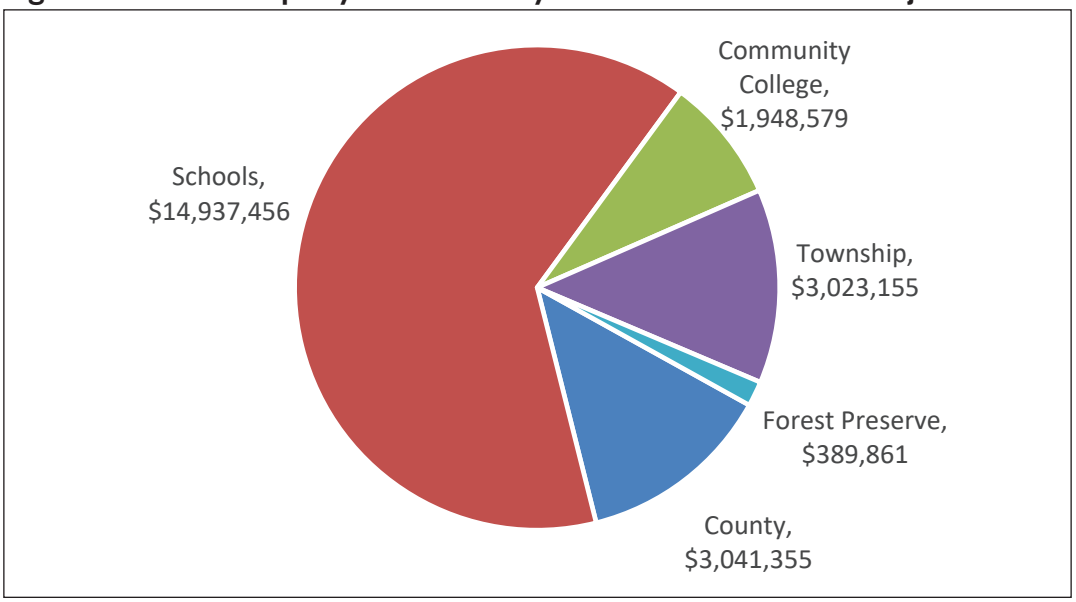
- Over $34.2 million in new local output during construction for Champaign County
- Over $144 million in new local earnings during construction for the State of Illinois
- Over $1.5 million in new local long-term output for Champaign County annually
- Over $4.7 million in new local long-term output for the State of Illinois annually

Tax Benefits

- Over $14.9 million in total school district property taxes over the life of the Project[2]
- Over $3.0 million in total county property taxes for Champaign County over the life of the Project
- Over $23.3 million in total property taxes in total for all taxing districts over the life of the Project

[1] Total investment includes capital expenditures, development expenses, and all costs leading up to the start of operations.
2 The calculated amounts are the maximum that the school districts could receive.

Figure 1.1 – Total Property Taxes Paid by the Little Prairie Solar Project



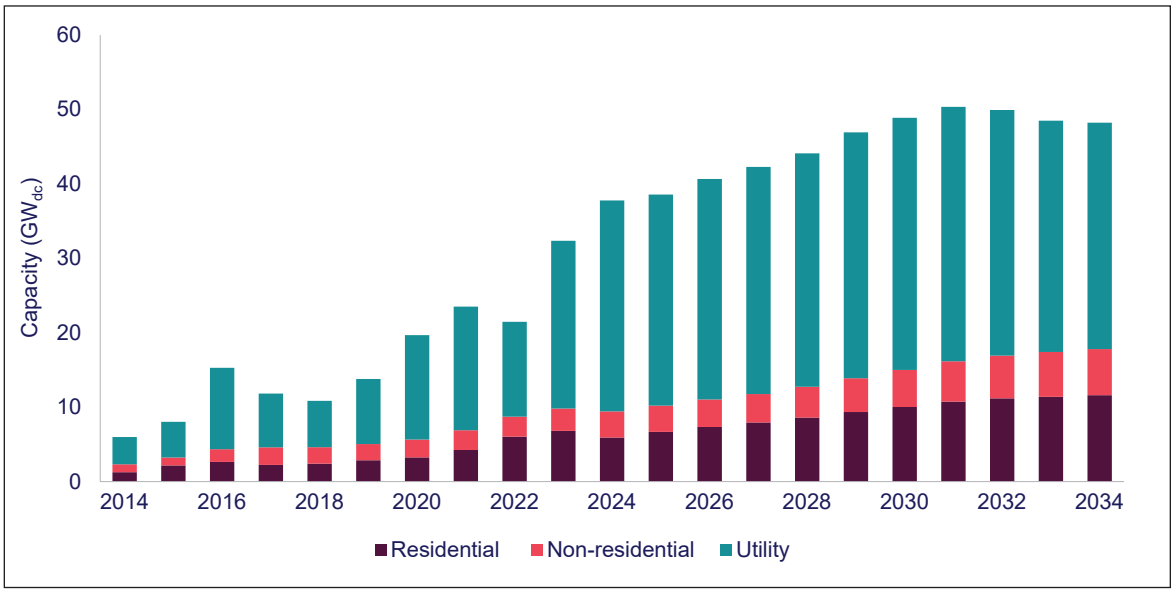
II. U.S. Solar PV and Energy Storage Industry Growth and Economic Development

a. U.S. Solar PV Industry Growth

The U.S. solar industry is growing at a rapid but uneven pace. Solar energy systems are installed for onsite use, including residential, commercial, and industrial properties; utility-scale solar powered-electric generation facilities are intended for wholesale distribution. Little Prairie Solar is a utility-scale solar PV project intended for wholesale markets through the transmission grid. From 2013 to 2018, the amount of electricity generated from solar had more than quadrupled, increasing 444% (SEIA, 2020). The industry has continued to add increasing numbers of PV systems to the grid. Back in the first half of 2021 alone, the U.S. installed over 11,000 MW direct current (MWdc) of solar PV driven mostly by utility-scale PV which exceeds most of the annual installations in the last decade. Figure 2.1 shows the historical capacity additions as well as the forecasted additions into 2034. The primary driver of this overall sharp pace of growth is large price declines in solar equipment. According to Figure 2.2, utility-scale solar fixed tilt and single-axis tracking have decreased from an average of $6/watt in 2010 to slightly more than $1/watt in 2022. Solar PV also benefits from the Federal Investment Tax Credit (ITC) which provides a tax credit for residential and commercial properties.

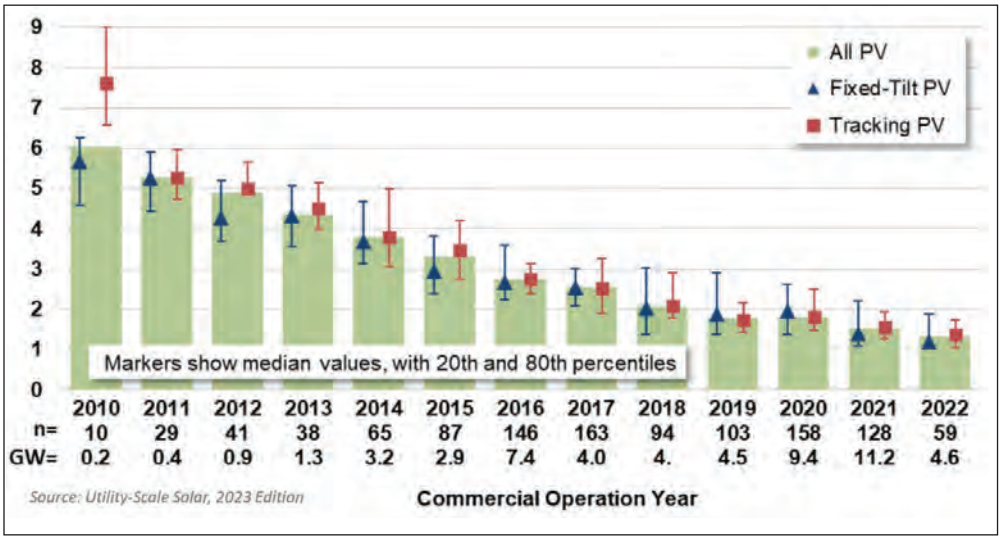
According to Figure 2.3, utility-scale PV installations jumped in the fourth quarter of 2023 to over 10,000 MWdc. Even with this large ramp-up of installations, there are an additional 74,000 MWdc of contracted utility-scale installations that have not been built yet.

Figure 2.1 – Annual U.S. Solar PV Installations, 2014 – 2034E



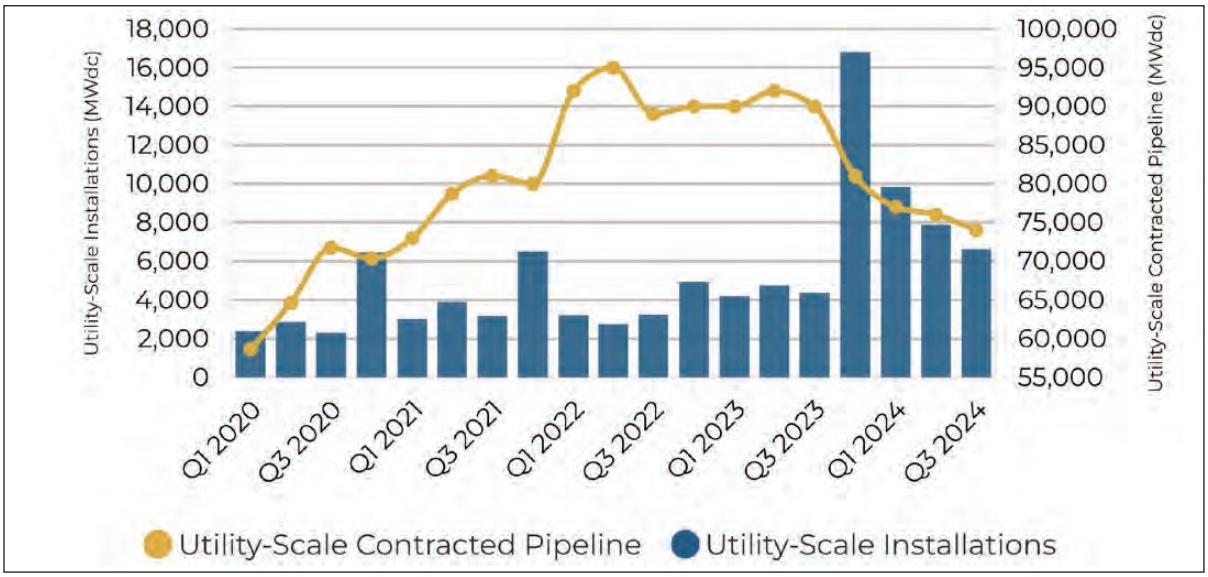
Source: Solar Energy Industries Association, Solar Market Insight Report 2023

Figure 2.2 – Installed Costs of Utility-Scale Solar from 2010 to 2022 (adjusted for inflation)



Source: Lawrence Berkeley National Laboratory, Utility-Scale Solar, 2023 Edition

Figure 2.3 – U.S. Utility PV Installations vs. Contracted Pipeline



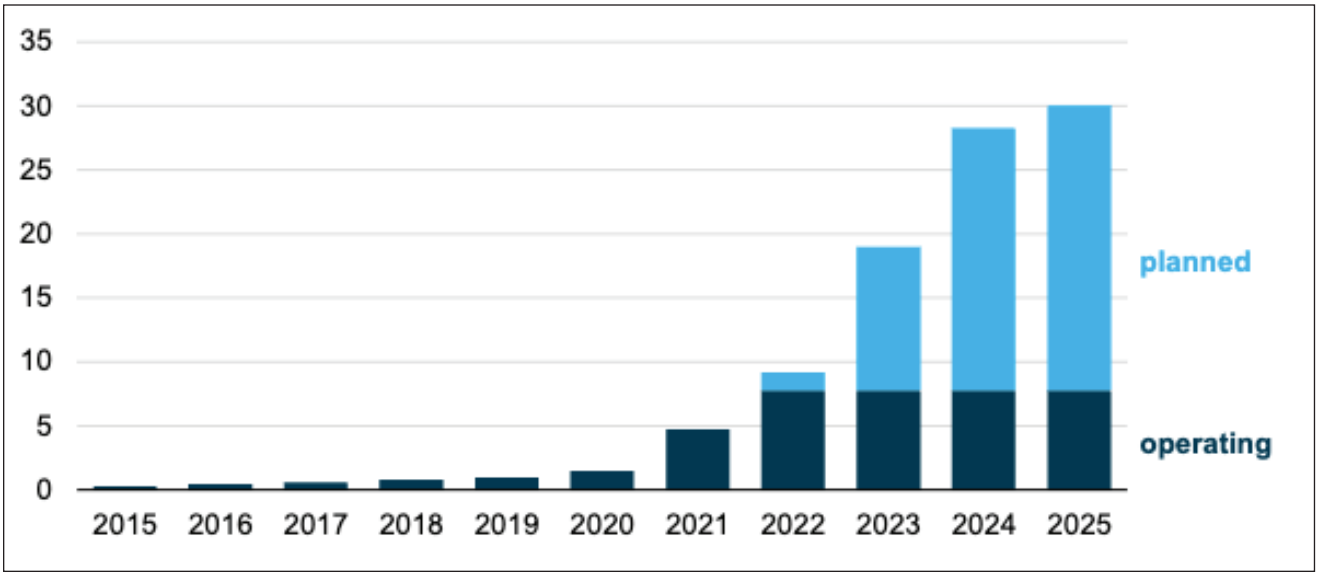
Source: Solar Energy Industries Association, Solar Market Insight Report Q3 2024

b. U.S. Energy Storage Industry Growth

The U.S. energy storage industry is composed primarily of large-scale BESS and is a recent addition to the electrical grid system. As shown in Figure 2.4, the large-scale battery capacity has grown rapidly since 2015 and is expected to see accelerated growth over the next few years. The U.S. Energy Information Administration (U.S. EIA) expects the installation of 10,000 megawatts of BESS in the next few years – 10 times the capacity installed in 2019 (U.S. EIA, 2021). The primary driver of this overall sharp pace of growth is large price declines in BESS equipment. Battery systems are used for price arbitrage, to store electricity when prices are low, and discharge electricity when prices are high. Batteries also maintain grid reliability through frequency regulation, ramp generation, spinning reserves, absorbing excess generation, and in some cases, black start capabilities.

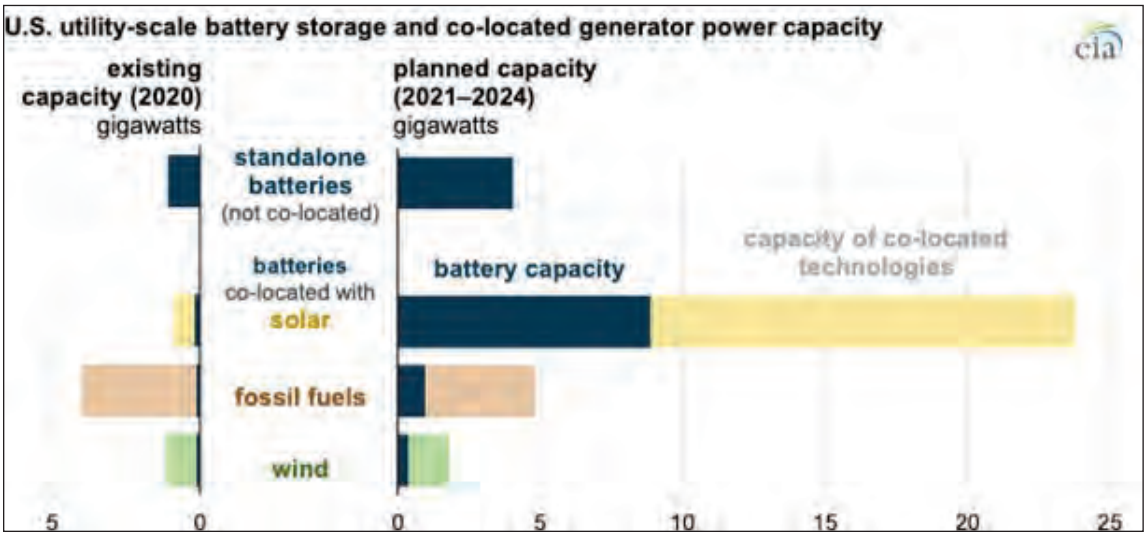
Some battery storage systems are paired with solar energy generators, wind energy generators, or fossil fuel generators. Standalone battery storage systems are increasingly common according to Figure 2.5.

Figure 2.4 – Large-Scale Battery Storage Cumulative Power Capacity, 2015-2025E



Source: U.S. Energy Information Administration, U.S. Battery Storage Capacity, 2022

Figure 2.5 – U.S. Large-Scale Battery Storage Power Capacity Additions, Standalone and Co-located



Source: U.S. Energy Information Administration, Battery Storage Additions, 2021

c. Illinois Solar PV Industry

According to the Solar Energy Industries Association (SEIA), Illinois is ranked 15th in the U.S. in cumulative installations of solar PV. California, Texas, and Florida are the top 3 states for solar PV which may not be surprising because of the high solar irradiation that they receive. However, there are other states with similar solar irradiation to Illinois that rank highly, including New York (8th), Virginia (9th), New Jersey (10th), and Massachusetts (11th). In 2022, Illinois installed 571 MW of solar electric capacity bringing its cumulative capacity to 2,347 MW.

Illinois has great potential to expand its solar installations. Illinois has several utility-scale solar farms in operation, including Prairie Wolf Solar (200 MW) in Coles County; Big River Solar (149 MW) in White County; Amazon Solar (100 MW) in Lee County; Dressor Plains Solar (99 MW) in Fayette County; Prairie State Solar (99 MW) in Perry County; and Mulligan Solar (70 MW) in Logan County.[3]

There are 356 solar companies in Illinois including 75 manufacturers, 110 installers/developers, and 171 others.[4] Figure 2.6 shows the locations of solar companies in Illinois as of the time of this report. Currently, there are 5,652 solar jobs in the State of Illinois according to SEIA.

Figure 2.7 shows the Illinois historical installed capacity by year according to the SEIA. Huge growth was seen in 2021 and 2023. Over the next five years, solar in Illinois is projected to grow by 7,688 MW.

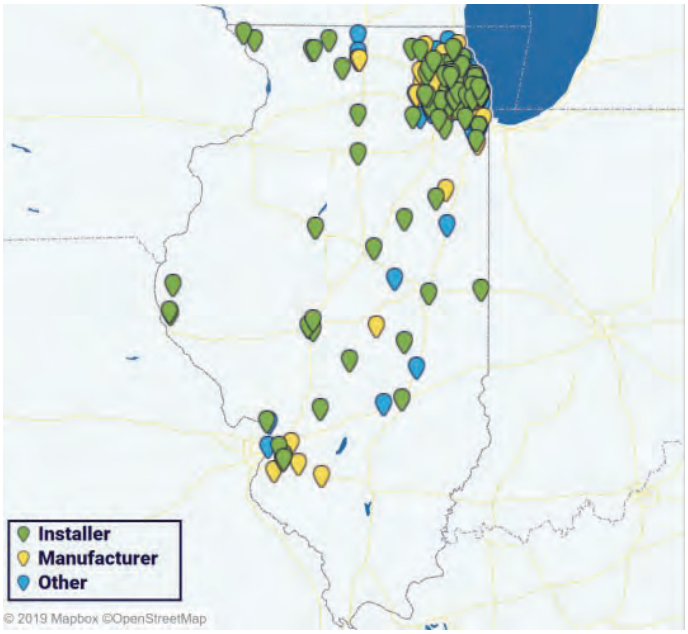
The Energy Information Administration (EIA) calculated the number of megawatt-hours generated from different energy sources in 2022. As shown in Figure 2.8, the greatest percentage of electricity generated in Illinois comes from nuclear energy with 52.1%, followed by coal with 21.5% and natural gas with 12.8%. Approximately 0.9% of the total electricity power generated in Illinois came from solar thermal and solar PV in 2022.

The U.S. Department of Energy sponsors the U.S. Energy and Employment Report each year. Electric Power Generation covers all utility and non-utility employment across electric generating technologies, including fossil fuels, nuclear, and renewable technologies. It also includes employees engaged in facility construction, turbine and other generation equipment manufacturing, operations and maintenance, and wholesale parts distribution for all electric generation technologies. According to Figure 2.9, employment in Illinois in the solar energy industry (6,579) falls behind wind electric generation (9,285) but is larger than natural gas electric generation (4,340) and nuclear electric generation (4,099).

[3] The megawatts listed in this paragraph are MWac. To convert to MWdc, multiply the MWac by 1.3 to get the approximate MWdc capacity.

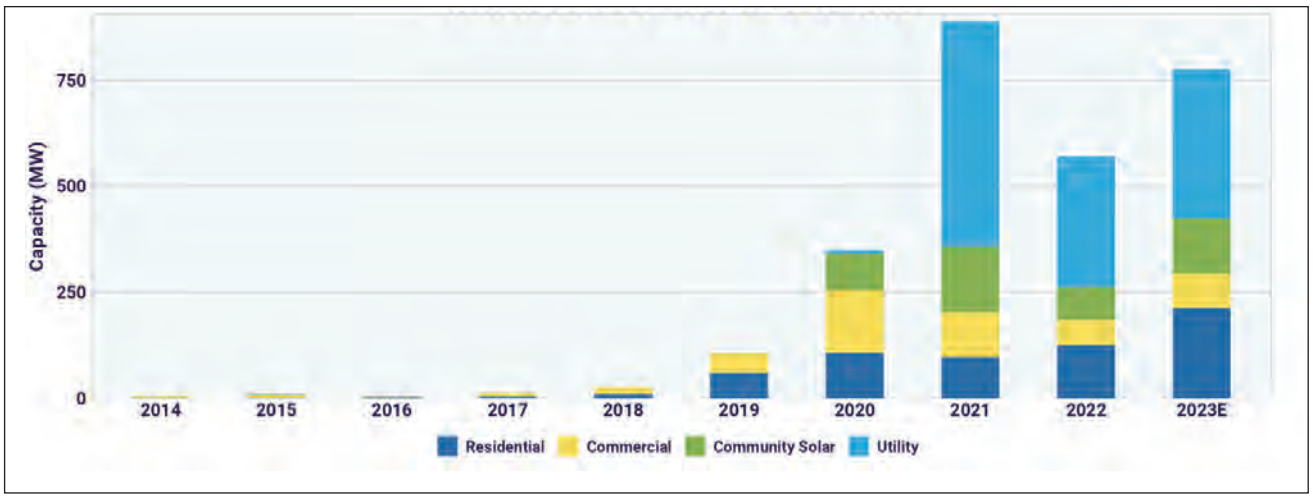
[4] "Other" includes Sales and Distribution, Project Management, and Engineering.

Figure 2.6 – Solar Company Locations in Illinois



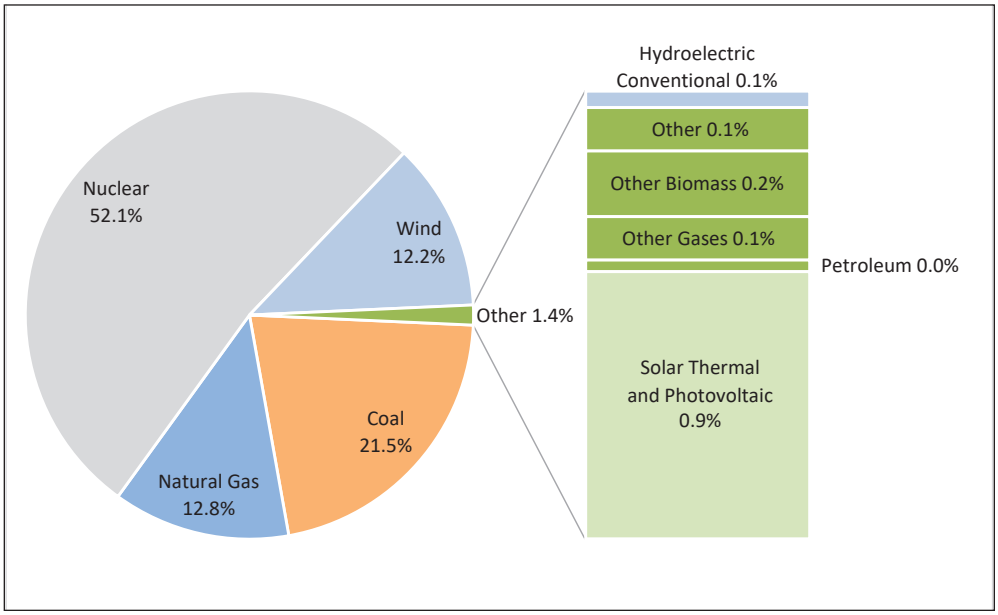
Source: Solar Energy Industries Association, Solar Spotlight: Illinois, Q3 2023

Figure 2.7 – Illinois Annual Solar Installations



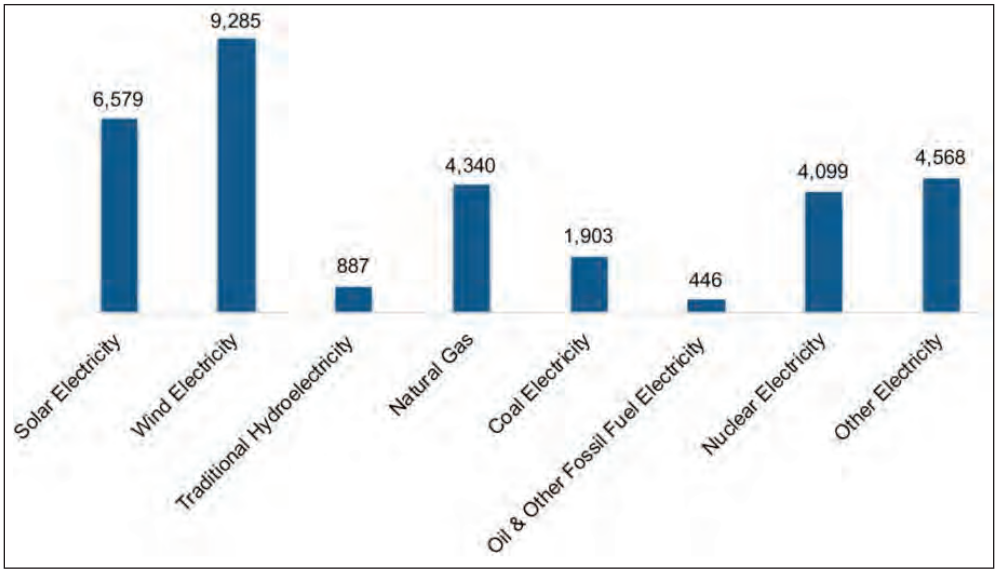
Source: Solar Energy Industries Association, Solar Spotlight: Illinois, Q3 2023

Figure 2.8 - Electric Generation by Fuel Type for Illinois in 2022



Source: U.S. Energy Information Association (EIA): Illinois, 2022

Figure 2.9 - Electric Generation Employment by Technology



Source: U.S. Energy and Employment Report 2023: Illinois

d. Economic Benefits of Utility-Scale Solar PV Energy

Utility-scale solar powered-electric generation facilities have numerous economic benefits. Solar PV installations create job opportunities in the local area during both the short-term construction phase and the long-term operational phase. In addition to the workers directly involved in the construction and maintenance of the solar energy project, numerous other jobs are supported through indirect supply chain purchases and the higher spending that is induced by these workers. Solar PV projects strengthen the local tax base, and help improve county services and local infrastructure, such as public roads.

Bessette et al. (2024) state that the potential economic benefits of a utility-scale solar project would include "increased property tax revenue, landowner payments, and increased employment" (Bessette et al., 2024, 7). They highlight the fact that the tax benefits have been difficult for residents to understand – perhaps because they have not been quantified clearly. They also mention both the direct and indirect (supply chain) economic impacts.

Numerous studies have quantified the economic benefits of solar PV projects across the United States and have been published in peer-reviewed academic journals using the same methodology as this report. Some of these studies examine smaller-scale solar systems, and some examine utility-scale solar energy.

More recently, Michaud et al. (2020) performed an analysis of the economic impact of utility-scale solar energy projects in the State of Ohio. They detail three scenarios: low (2.5 GW), moderate (5 GW), and high (7.5 GW). Using the Jobs and Economic Development Impacts (JEDI) model, they find that between 18,039 and 54,113 jobs would be supported during construction, and between 207 and 618 jobs would be supported annually during operations. In addition, between $22.5 million and $67.5 million annually in tax revenues would come from these projects.

Loomis et al. (2016) estimates the economic impact for the State of Illinois if the state were to reach its maximum potential for solar PV. The study estimates the economic impact of three different scenarios for Illinois – building new solar installations of either 2,292 MW, 2,714 MW or 11,265 MW. The study assumes that 60% of the capacity is utility-scale solar, 30% of the capacity is commercial, and 10% of the capacity is residential. It was found that employment impacts vary from 26,753 to 131,779 job years during construction and from 1,223 to 6,010 job years during operating years.

Loomis (2020) estimates the economic impact of wind and solar energy in Illinois resulting from the Path to 100 proposal which later became the Climate & Equitable Jobs Act which was enacted in 2021. The legislation is expected to result in constructing over 15,000 MW of wind and solar over the next 15 years yielding over 53,000 jobs during construction and over 3,200 jobs during operations. The analysis also looks at the 39 largest existing wind farms in Illinois and finds that they supported 29,295 jobs during construction and 1,307 jobs during operations for a total economic benefit of $10.2 billion over the life of the projects. In addition, a review of historical property tax records finds that existing utility-scale wind and solar projects paid over $305 million in property taxes statewide since 2003 and over $41.4 million in 2019 alone.

Several other reports quantify the economic impact of solar energy. Bezdek (2006) estimates the economic impact for the State of Ohio and finds the potential for PV market in Ohio to be $25 million with 200 direct jobs and 460 total jobs. The Center for Competitive Florida (2009) estimates the impact if the state were to install 1,500 MW of solar and finds that 45,000 direct jobs and 50,000 indirect jobs could be created. The Solar Foundation (2013) uses the JEDI modeling methodology to show that Colorado's solar PV installation to date created 10,790 job-years. They also analyze what would happen if the state were to install 2,750 MW of solar PV from 2013 to 2030 and find that it would result in nearly 32,500 job years. Berkman et al. (2011) estimates the economic and fiscal impacts of the 550 MWac Desert Sunlight Solar Farm. The project creates approximately 440 construction jobs over a 26-month period, $15 million in new sales tax revenues, $12 million in new property revenues for Riverside County, CA, and $336 million in indirect benefits to local businesses in the county.

Finally, Jenniches (2018) performed a review of the literature assessing the regional economic impacts of renewable energy sources. After reviewing all of the different techniques for analyzing the economic impacts, he concludes "for assessment of current renewable energy developments, beyond employment in larger regions, IO [Input-Output] tables are the most suitable approach" (Jenniches, 2018, 48). Input-Output analysis is the basis for the methodology used in the economic impact analysis of this report.

e. Economic Benefits of Energy Storage

Battery storage facilities have numerous economic benefits. BESS installations create job opportunities in the local area during both the construction phase and the operational phase. In addition to the workers directly involved in the construction and maintenance of the project, numerous other jobs are supported through indirect supply chain purchases and the higher spending that is induced by these workers. Battery storage projects strengthen the local tax base and help improve county services and local infrastructure, such as public roads.

Several studies have quantified the economic benefits of battery storage projects across the United States. Gorman et. al. (2020) demonstrates the economic value that battery storage brings to the electric grid. Using wholesale market prices, they find that the additional revenues from adding batteries to solar are higher than the additional costs. They do not quantify the economic impact that battery storage will make.

Truitt et. al. (2022) is an NREL study that makes state-level employment projections for battery storage (along with wind, solar and energy storage). For the total U.S., they find that 66,751 were employed in the battery storage sector in 2020 and that 126,000-181,000 jobs will be in the sector by 2025 and 197,000-376,000 jobs will be in the sector by 2030 (Truitt, 2022, vi). The study used the IMPLAN model multipliers which are the same multipliers used in this present study.

The Energy Storage Association (2020) predicted that energy storage would create at least 200,000 jobs by 2030. They cite a "2017 Navigant analysis that assumed that industry jobs per new MW of storage capacity installed would decline from 50 per MW in 2021 to 34 per MW by 2025. The attainment of 100 GW by 2030 would involve rapidly growing annual installations between 2025 and 2030, but a continued decline in jobs/MW as the industry continues to refine construction techniques and management" (ESA, 2020, p. 8-9). We avoid such projections by analyzing the company's costs of construction and operation rather than using broad industry assumptions.

Although not directly aimed at battery storage impacts, Jenniches (2018) performed a review of the literature assessing the regional economic impacts of renewable energy sources. After reviewing all of the different techniques for analyzing the economic impacts, he concludes "for assessment of current renewable energy developments, beyond employment in larger regions, IO [Input-Output] tables are the most suitable approach" (Jenniches, 2018, 48). Input-Output analysis is the basis for the methodology used in the economic impact analysis of this report.

III. Project Description and Location

a. Little Prairie Solar Project

BayWa r.e. is developing the Little Prairie Solar Project in Champaign County, Illinois. The Project consists of an estimated 135-megawatt alternative current (MWac) utility-scale solar powered-electric generation facility that will utilize photovoltaic (PV) panels installed on a single-axis tracking system. The Project will also include a 135 MW battery energy storage system (BESS). The total Project represents an investment in excess of $402 million.

b. Champaign County, Illinois

Champaign County is located in the eastern part of Illinois (see Figure 3.1). It has a total area of 998 square miles, and the U.S. Census estimates that the 2022 population was 206,542 with 95,234 housing units. The county has a population density of 210 (persons per square mile) compared to 232 for the State of Illinois (2020). Median household income in the county was $61,090 in 2022 (U.S. Census Bureau, 2024).

Figure 3.1 – Location of Champaign County, Illinois

i. Economic and Demographic Statistics

As shown in Table 3.1, the largest industries in the county are "Administrative Government" followed by "Health Care and Social Assistance," "Accommodation and Food Services," and "Retail Trade." These data for Table 3.1 come from IMPLAN covering the year 2022 (the latest year available).

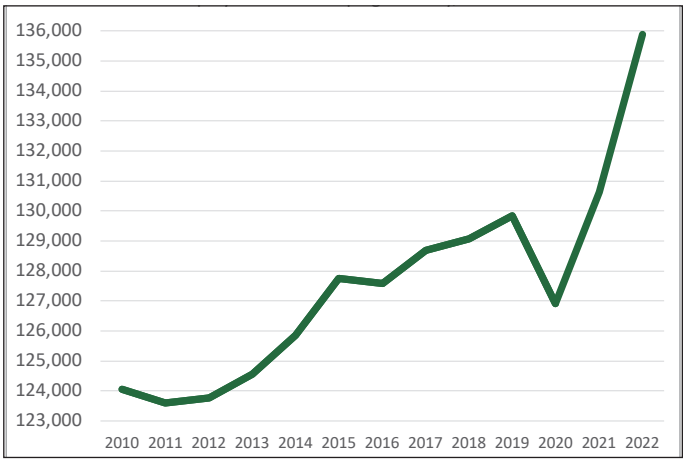
Table 3.1 provides the most recent snapshot of total employment but does not examine the historical trends within the county. Figure 3.2 shows employment from 2010 to 2022. Total employment in Champaign County was at its lowest at 123,595 in 2011 and its highest at 135,897 in 2022 (BEA, 2024).

Table 3.1 – Employment by Industry in Champaign County

Industry	Number	Percent
Administrative Government	32,474	24.6%
Health Care and Social Assistance	17,803	13.5%
Accommodation and Food Services	10,903	8.3%
Retail Trade	9,998	7.6%
Professional, Scientific, and Technical Services	7,707	5.8%
Manufacturing	7,556	5.7%
Other Services (except Public Administration)	7,451	5.6%
Construction	5,782	4.4%
Administrative and Support and Waste Management and Remediation Services	5,620	4.3%
Finance and Insurance	5,455	4.1%
Transportation and Warehousing	4,899	3.7%
Real Estate and Rental and Leasing	4,723	3.6%
Arts, Entertainment, and Recreation	2,427	1.8%
Wholesale Trade	2,412	1.8%
Information	2,313	1.8%
Agriculture, Forestry, Fishing and Hunting	1,676	1.3%
Educational Services	1,464	1.1%
Government Enterprises	881	0.7%
Utilities	156	0.1%
Management of Companies and Enterprises	141	0.1%
Mining, Quarrying, and Oil and Gas Extraction	45	0.0%

Source: Impact Analysis for Planning (IMPLAN), County Employment by Industry, 2022

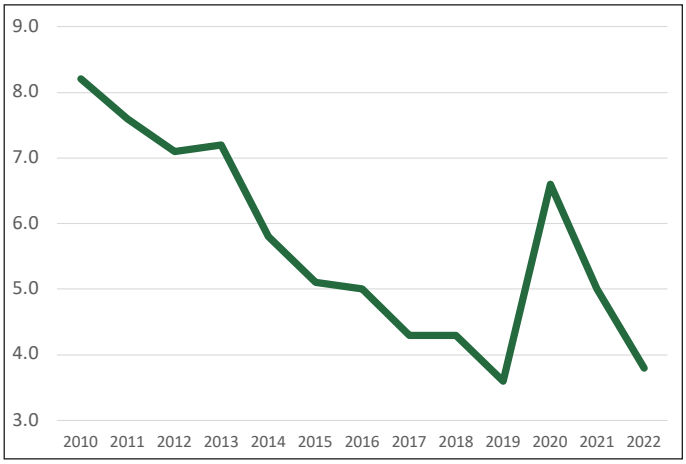
Figure 3.2 - Total Employment in Champaign County from 2010 to 2022



Source: Bureau of Economic Analysis, Regional Data, GDP and Personal Income, 2010-2022

The unemployment rate signifies the percentage of the labor force without employment in the county. Figure 3.3 shows the unemployment rates from 2010 to 2022. Unemployment in Champaign County was at its highest at 8.2% in 2010 and at its lowest at 3.6% in 2019 (FRED, 2024). The unemployment rate spiked to 6.6% in 2020 but normalized to 3.8% in 2022.

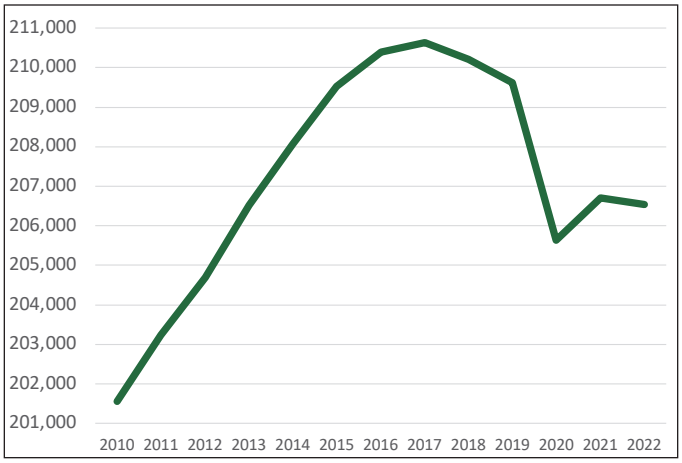
Figure 3.3 – Unemployment Rate in Champaign County from 2010 to 2022



Source: Federal Reserve Bank of St. Louis Economic Data, U.S. Census Bureau, Unemployment Rates, 2010-2022

The overall population in the county has fluctuated significantly, as shown in Figure 3.4. Champaign County's population was at its lowest of 201,558 in 2010 and its highest of 210,630 in 2017, a gain of 9,072 people in 7 years (FRED, 2024). The population decreased to 206,542 people by 2022.

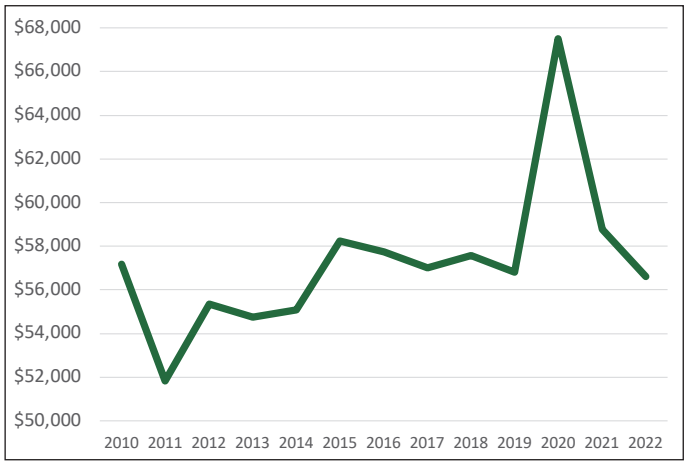
Figure 3.4 - Population in Champaign County from 2010 to 2022



Source: Federal Reserve Bank of St. Louis Economic Data, U.S. Census Bureau, Population Estimates, 2010-2022

Similar to the population trend, household income has fluctuated significantly in the county. Figure 3.5 shows the real median household income in Champaign County from 2010 to 2022. Using the national Consumer Price Index (CPI), the nominal median household income for each year was adjusted to 2022 dollars. Household income was at its lowest at $51,832 in 2011 and its highest at $67,498 in 2020 (FRED, 2024).

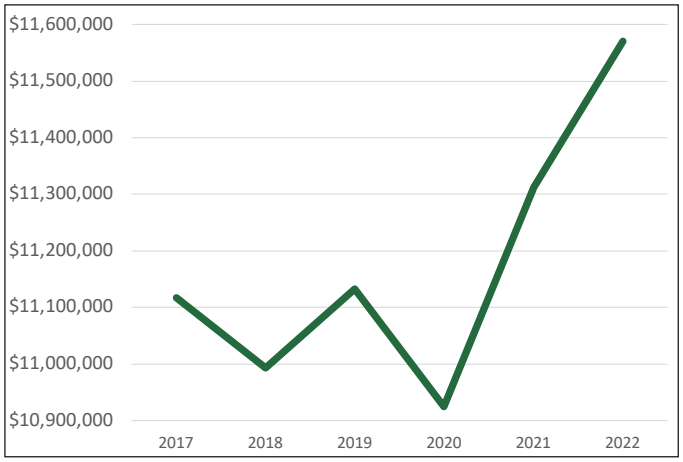
Figure 3.5 - Real Median Household Income in Champaign County from 2010 to 2022



Source: Federal Reserve Bank of St. Louis Economic Data, U.S. Census Bureau, Estimate of Median Household Income, 2010-2022

Real Gross Domestic Product (GDP) is a measure of the value of goods and services produced in an area and adjusted for inflation over time. The Real GDP for Champaign County has increased since hitting a low in 2020, as shown in Figure 3.6 (FRED, 2024).

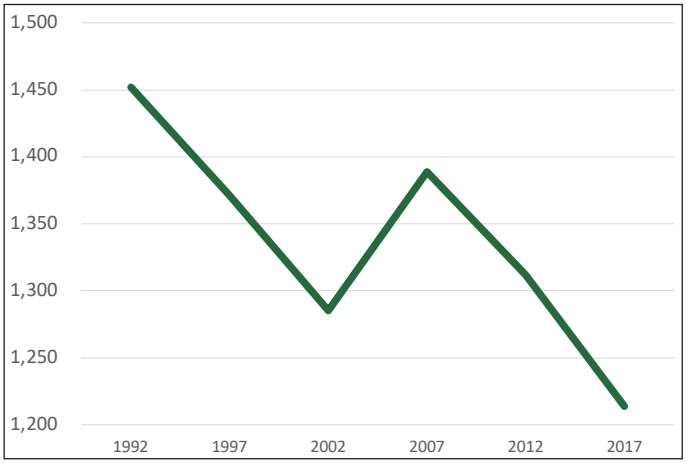
Figure 3.6 - Real Gross Domestic Product (GDP) in Champaign County from 2017 to 2022



Source: Federal Reserve Bank of St. Louis Economic Data, U.S. Census Bureau, Real Gross Domestic Product, 2017-2022

The farming industry has fluctuated in Champaign County. As shown in Figure 3.7, the number of farms hit a high of 1,452 in 1992 and a low of 1,214 in 2017.

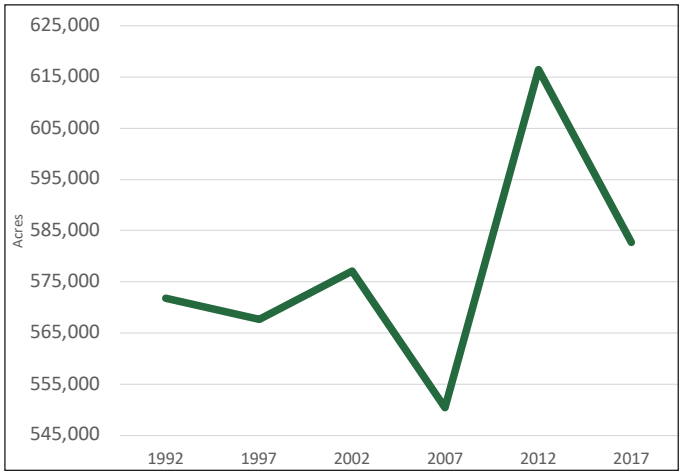
Figure 3.7 - Number of Farms in Champaign County from 1992 to 2017



Source: USDA National Agricultural Statistics Service, Census of Agriculture, 1992-2017

The amount of land in farms has fluctuated significantly. The county farmland hit a low of 550,481 acres in 2007 and a high of 616,493 acres in 2012, according to Figure 3.8.

Figure 3.8 - Land in Farms in Champaign County from 1992 to 2017



Source: USDA National Agricultural Statistics Service, Census of Agriculture, 1992-2017

ii. Agricultural Statistics

According to the 2017 Census of Agriculture, Illinois is ranked seventh among U.S. states in total value of agricultural products sold (USDA NASS, 2019). It is ranked twenty-fourth in the value of livestock and second in the value of crops (USDA NASS, 2019). In 2022, Illinois had 70,700 farms and 27 million acres in operation with the average farm being 382 acres (USDA NASS, 2023). Illinois had 80 thousand cattle and produced 1.71 billion pounds of milk (USDA NASS, 2023). In 2022, Illinois yields averaged 214 bushels per acre for corn with a total market value of $14.7 billion (USDA NASS, 2023). Soybean yields averaged 63 bushels per acre with a total market value of $9.75 billion (USDA NASS, 2023). The average net cash farm income per farm is $69,418 (USDA NASS, 2019).

In 2017, Champaign County had 1,214 farms covering 582,689 acres for an average farm size of 480 acres. The total market value of products sold was $375 million, with 4% coming from livestock sales and 96% coming from crop sales. The average net cash farm income of operations was $114,220 (USDA NASS, 2019).

Solar energy projects are compatible with agricultural land use by benefiting the land while solar farms are in operation. Some of these benefits include increased pollination, improved soil quality, and increased future production from soil fallowing.

Recent research has shown that pollinating insects can help soybean yields and improvement in pollinator habitats has been shown to boost soybean production (Garibaldi et. al. 2021; de O. Milfant, 2013). Walston, et. al. (2018) shows the potential for agricultural benefits from pollinator habitats in the United States. Using native plant species in the land around solar projects can improve pollinator habitats which leads to increased yields, and the partial shading caused by solar panels can be quite beneficial to pollinators (Graham, et. al. 2021). Additionally, BRE (2014) shows that utility-scale solar can increase biodiversity.

Solar energy projects built on agricultural lands will allow the soil to rest for around 30 years. The U.S. Department of Energy (2022) states that "land can be reverted back to agricultural uses at the end of the operational life for solar installations. A life of a solar installation is roughly 20-25 years and can provide a recovery period, increasing the value of that land for agriculture in the future. Giving soil rest can also maintain soil quality and contribute to the biodiversity of agricultural land. Planting crops such as legumes underneath the solar installation can increase nutrient levels in the soil."

Several studies have shown that leaving the soil fallow for an extended period of time increases the productivity of the land when it is returned to crop production. Cusimano et. al. (2014) found that the use of land fallowing can induce significant improvements to soil quality and crop production in California. Kozak and Pudelko (2021) studied abandoned land in Poland and showed that fallowed land could be restored to agricultural production.

IV. Economic Impact Methodology

The economic analysis of the Project uses IMPLAN (IMpact analysis for PLANning). IMPLAN software and parameters are based on government data collected at federal, state, and local levels. IMPLAN is a leading provider of economic development software that is widely used by economists and economic development professionals. More information about IMPLAN can be found at implan.com.

IMPLAN is an input-output model that measures the spending patterns and location-specific economic structures that reflect expenditures supporting varying levels of employment, income, and output. That is, IMPLAN takes into account that the output of one industry can be used as an input for another. For example, when a PV system is installed, there are both soft costs consisting of permitting, installation, and customer acquisition costs and hardware costs, of which the PV module is the largest component. The purchase of a module not only increases demand for manufactured components and raw materials, but also supports labor to build and install a module. When a module is purchased from a manufacturing facility, the manufacturer uses some of that money to pay employees.[5] The employees use a portion of their compensation to purchase goods and services within their community. Likewise, when a developer pays workers to install the systems, those workers spend money in the local economy that boosts economic activity and employment in other sectors. The goal of economic impact analysis is to quantify all of those reverberations throughout the local and state economy.

The IMPLAN model utilizes county-specific and state-specific industry multipliers in the analysis. This study analyzes the gross jobs that the new solar energy project development supports and does not analyze the potential loss of jobs due to declines in other forms of electric generation.

The total economic impact can be broken down into three distinct types: direct impacts, indirect impacts, and induced impacts. **Direct impacts** during the construction period refer to the changes that occur in the onsite construction industries in which the direct final demand (i.e., spending on construction labor and services) change is made. Onsite construction-related services include installation labor, engineering, design, and other professional services. Direct impacts during operating years refer to the final demand changes that occur in the onsite spending for the solar operations and maintenance workers.

The initial spending on the construction and operation of the solar PV installation will create a second layer of impacts, referred to as "supply chain impacts" or "indirect impacts." **Indirect impacts** during the construction period consist of changes in inter-industry purchases resulting from the direct final demand changes and include construction spending on materials and PV equipment, as well as other purchases of goods and offsite services. Utility-scale solar PV indirect impacts include PV modules, invertors, tracking systems, cabling, and foundations.

Induced impacts during construction refer to the changes that occur in household spending as household income increases or decreases as a result of the direct and indirect effects of final demand changes. Local spending by employees working directly or indirectly on the Project that receive their paychecks and then spend money in the community is included. The model includes additional local jobs and economic activity that are supported by the purchases of these goods and services.

The majority of jobs during construction are construction workers but there are other occupations involved as well. In addition, during operations there are other occupations involved besides solar technicians. A sample of those occupations, the education/training needed, and wages percentiles is contained in Table 7.1 in the Appendix. A larger description of those occupations, their work environment, and future job growth is found in Table 7.2 in the Appendix.

[5] In this analysis, we assumed that none of the solar modules were manufactured in Champaign County or the State of Illinois.

V. Economic Impact Results

The economic impact results were derived from detailed project cost estimates supplied by BayWa r.e. In addition, BayWa r.e. also estimated the percentages of project materials and labor that will be coming from within Champaign County and the State of Illinois.

Two sets of models were produced to show the economic impact of the Little Prairie Solar Project. The first set of models examines the construction costs, and the second set of models examines the operating expenses. The first model uses capital expenditures and the 2022 IMPLAN Champaign County dataset. The second model uses the 2022 IMPLAN dataset for the State of Illinois and the same project costs. The third model uses the operating expenditures and the 2022 IMPLAN Champaign County dataset. The fourth model uses the 2022 IMPLAN dataset for the State of Illinois and the same project costs. The latest dataset from IMPLAN and specific project cost data from the Little Prairie Solar Project are used, and SER translated the project costs into IMPLAN sectors.

Tables 5.1 to 5.3 show the output from these models. Table 5.1 lists the total employment impact from the Little Prairie Solar Project for Champaign County and the State of Illinois. Table 5.2 shows the impact on total earnings, and Table 5.3 contains the impact on total output.

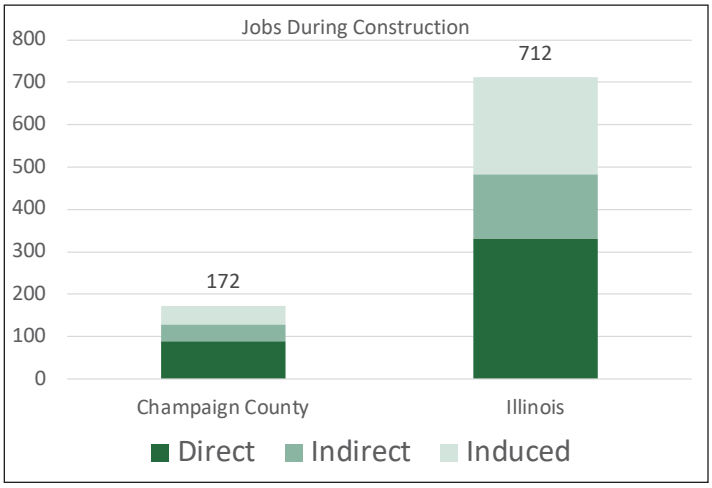
Table 5.1 – Total Employment Impact from the Little Prairie Solar Project

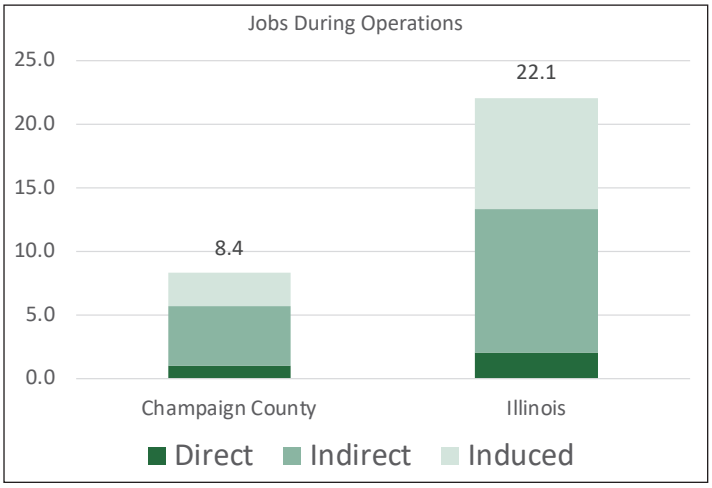
	Champaign County	State of Illinois
Construction		
Direct Impacts	88	331
Indirect Impacts	40	152
Induced Impacts	44	229
Local Jobs during Construction	172	712
Operations (Annual/Ongoing)		
Onsite Direct Impacts	1.0	2.1
Indirect Impacts	4.8	11.3
Induced Impacts	2.6	8.7
Local Long-Term Jobs	8.4	22.1

The results from the IMPLAN model show significant employment impacts from the Little Prairie Solar Project. Employment impacts can be broken down into several different components. Direct jobs created during the construction phase typically last anywhere from 12 to 18 months depending on the size of the project; however, the direct job numbers present in Table 5.1 from the IMPLAN model are based on a full time equivalent (FTE) basis for a year. In other words, 1 job = 1 FTE = 2,080 hours worked in a year. A part time or temporary job would constitute only a fraction of a job according to the model. For example, the IMPLAN model results show 88 new direct jobs during construction in Champaign County, though the construction of the solar center could involve closer to 196 workers working half-time for a year. Thus, due to the short-term nature of construction projects, IMPLAN often significantly understates the actual number of people hired to work on the project. It is important to keep this fact in mind when viewing or reporting the numbers.

As shown in Table 5.1, new local jobs created or retained during construction total 172 for Champaign County and 712 for the State of Illinois. New local long-term jobs created from the Little Prairie Solar Project total 8.4 for Champaign County and 22.1 for the State of Illinois.

Figure 5.1 – Total Employment Impact from the Little Prairie Solar Project





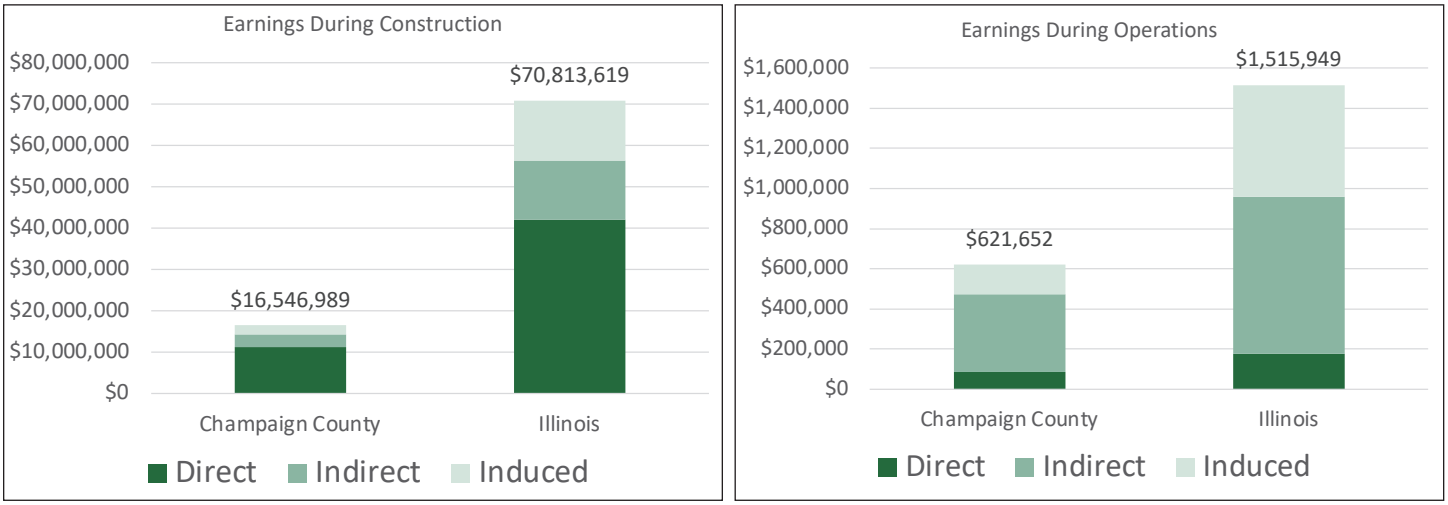
Direct jobs created during the operational phase last the life of the solar PV project, typically 20-30 years. Both direct construction jobs, and operations and maintenance jobs require highly skilled workers in the fields of construction, management, and engineering. For a list of occupations expected to be employed, their wages, benefits, total compensation, and hours worked, please see Tables 7.3 to 7.5 in the Appendix.

Accordingly, it is important to not just look at the number of jobs but also the earnings that they produce. Table 5.2 shows the earnings impacts from the Little Prairie Solar Project, which are categorized by construction impacts and operations impacts. The new local earnings during construction total over $16.5 million for Champaign County and over $70.8 million for the State of Illinois. The new local long-term earnings total over $621 thousand for Champaign County and over $1.5 million for the State of Illinois.

Table 5.2 – Total Earnings Impact from the Little Prairie Solar Project

	Champaign County	State of Illinois
Construction		
Direct Impacts	$11,231,702	$42,118,885
Indirect Impacts	$2,949,108	$14,146,945
Induced Impacts	$2,366,179	$14,547,789
Local Earnings during Construction	$16,546,989	$70,813,619
Operations (Annual/Ongoing)		
Onsite Direct Impacts	$87,258	$174,516
Indirect Impacts	$385,998	$785,997
Induced Impacts	$148,396	$555,436
Local Long-Term Earnings	$621,652	$1,515,949

Figure 5.2 – Total Earnings Impact from the Little Prairie Solar Project

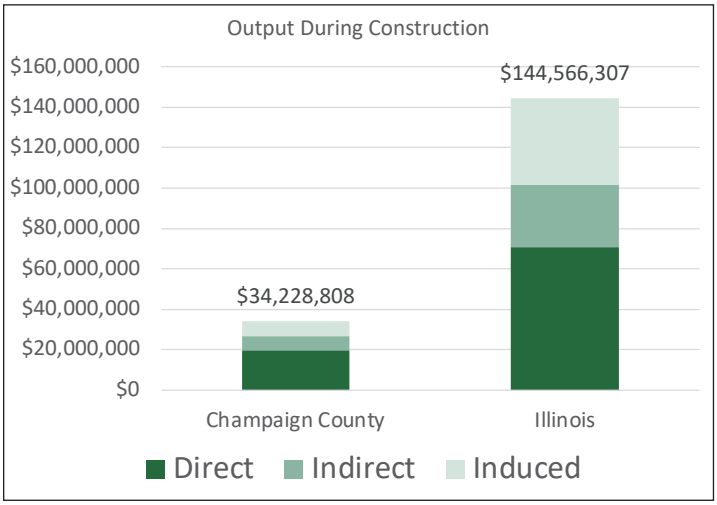


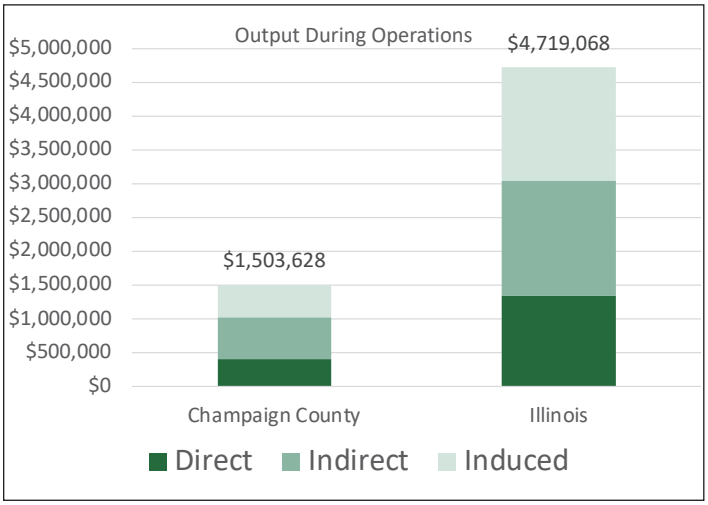
Output refers to economic activity or the value of production in the state or local economy. It is an equivalent measure to the Gross Domestic Product, which measures output on a national basis. According to Table 5.3, the new local output during construction totals over $34.2 million for Champaign County and over $144 million for the State of Illinois. The new local long-term output totals over $1.5 million for Champaign County and over $4.7 million for the State of Illinois.

Table 5.3 – Total Output Impact from the Little Prairie Solar Project

	Champaign County	State of Illinois
Construction		
Direct Impacts	$19,543,916	$70,752,028
Indirect Impacts	$7,120,819	$30,761,692
Induced Impacts	$7,564,073	$43,052,587
Local Output during Construction	$34,228,808	$144,566,307
Operations (Annual/Ongoing)		
Onsite Direct Impacts	$404,759	$1,347,381
Indirect Impacts	$620,366	$1,697,956
Induced Impacts	$478,503	$1,673,731
Local Long-Term Output	$1,503,628	$4,719,068

Figure 5.3 – Total Output Impact from the Little Prairie Solar Project





VI. Tax Benefits

Solar energy projects increase the property tax base of a county, creating a new revenue source for education and other local government services, such as fire protection, park districts, and road maintenance. New legislation, Public Act 100-0781, sets a uniform formula for the fair cash value of a solar farm similar to the uniform formula used for wind farms. This bill was signed into law by Governor Rauner in August 2018. According to this law, the fair cash value for a utility-scale solar farm in Illinois is $218,000 per megawatt of nameplate capacity beginning in 2018 and is annually adjusted for inflation and depreciation. The inflation adjustment, as known as the Trending Factor, increases each year according to the Bureau of Labor Statistics' Consumer Price Index for all cities for all items. Depreciation is allowed at 4% per year up to a maximum total depreciation of 70% of the trended real property cost basis (calculated by taking the fair cash value of the solar project and multiplying by the Trending Factor).

Tables 6.1 to 6.4 detail the tax implications of the Little Prairie Solar Project. There are several important assumptions built into the analysis in these tables.

- The analysis assumes that the fair cash value of the solar farm is $218,000/MW on January 1, 2017, and adjusted annually for inflation.
- The tables assume future inflation is constant at 2.33% and the depreciation is 4% until it reaches the maximum of 70%.
- All tax rates are assumed to stay constant at their current rates.
- The analysis assumes that the Project is placed in service on January 1st, 2028 at a fair cash value of $40.3 million and that the taxable value is 1/3 of the fair cash value.
- The analysis assumes that the taxes for Heritage CUSD #8 are abated by 25% for the first ten years of commercial operations.
- The analysis assumes a donation to Heritage CUSD #8 of $100,000 in the first year of commercial operations.
- It assumes that the Project is decommissioned in 40 years and pays no more taxes after that date.
- No comprehensive tax payment was calculated, and these calculations are only to be used to illustrate the economic impact of the Project.
- The names of the taxing bodies used in this section come from county and state tax websites.
- The comprehensiveness and accuracy of the analysis below is dependent upon the assumptions listed above and used to calculate the property tax results. The analysis is to serve as a projection of property tax benefits to the local community and is not a guarantee of property tax revenue.
- If the inputs received from BayWa r.e., the laws surrounding renewable energy taxation in Illinois, or the tax rates in Champaign County change in a material way after the completion of this report, this analysis may no longer accurately reflect the property taxes to be paid by the Little Prairie Solar Project.
- No comprehensive tax payment was calculated, and these calculations are only to be used to illustrate the economic impact of the Project.

Figure 6.1 – Percentages of Property Taxes Paid to Taxing Jurisdictions

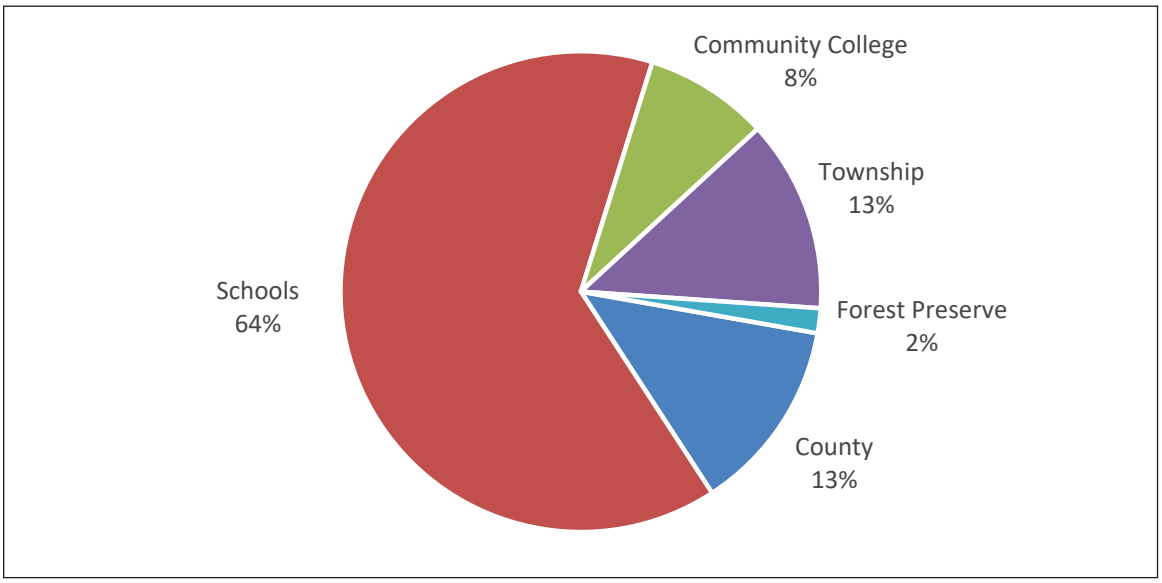


Table 6.1 – Total Property Taxes Paid by the Little Prairie Solar Project

Year	Total Property Taxes
2028	$871,562
2029	$757,958
2030	$743,301
2031	$727,550
2032	$710,660
2033	$692,589
2034	$673,290
2035	$652,716
2036	$630,817
2037	$607,544
2038	$689,157
2039	$658,200
2040	$625,427
2041	$590,768
2042	$554,156
2043	$515,516
2044	$474,775
2045	$431,855
2046	$414,297
2047	$423,951
2048	$433,829
2049	$443,937
2050	$454,281
2051	$464,865
2052	$475,697
2053	$486,780
2054	$498,122
2055	$509,729
2056	$521,605
2057	$533,759
2058	$546,195
2059	$558,922
2060	$571,944
2061	$585,271
2062	$598,908
2063	$612,862
2064	$627,142
2065	$641,754
2066	$656,707
2067	$672,008
TOTAL	$23,340,406
AVG ANNUAL	$583,510

As shown in Table 6.1 a conservative estimate of the total property taxes paid by the Project starts out at over $871 thousand the first year and declines due to depreciation (and offset by the trending factor) until it reaches the maximum depreciation in 2046. After that, the Project is fully depreciated, and the trending factor causes the taxable value and taxes to increase. The expected total property taxes paid over the 40-year lifetime of the Project are over $23.3 million, and the average annual property taxes paid will be over $583 thousand.

Table 6.2 shows an estimate of the likely taxes paid to the following taxing bodies: Champaign County Government, Sidney Township, Sidney Road & Bridge, Sidney Fire Protection, the Forest Preserve District, and Parkland College 505.

According to Table 6.2, the total amounts paid over 40 years are over $3.0 million for Champaign County Government, over $780 thousand for Sidney Township, over $1.3 million for Sidney Road & Bridge, over $876 thousand for Sidney Fire Protection, over $389 thousand for the Forest Preserve District, and over $1.9 million for Parkland College 505 over the life of the Project.

Table 6.2 – Tax Benefits from the Little Prairie Solar Project for the County, Township, & Other Taxing Bodies[6]

Year	Champaign County Government	Sidney Township	Sidney Road & Bridge	Sidney Fire Protection	Forest Preserve District	Parkland College 505
2028	$113,197	$29,048	$50,834	$32,638	$14,510	$72,525
2029	$111,201	$28,536	$49,938	$32,063	$14,255	$71,246
2030	$109,051	$27,984	$48,972	$31,443	$13,979	$69,868
2031	$106,740	$27,391	$47,934	$30,776	$13,683	$68,388
2032	$104,262	$26,755	$46,821	$30,062	$13,365	$66,800
2033	$101,611	$26,075	$45,631	$29,298	$13,025	$65,102
2034	$98,780	$25,348	$44,359	$28,481	$12,662	$63,288
2035	$95,761	$24,574	$43,004	$27,611	$12,275	$61,354
2036	$92,548	$23,749	$41,561	$26,685	$11,863	$59,295
2037	$89,134	$22,873	$40,028	$25,700	$11,426	$57,108
2038	$85,510	$21,943	$38,400	$24,655	$10,961	$54,786
2039	$81,669	$20,957	$36,675	$23,548	$10,469	$52,325
2040	$77,602	$19,914	$34,849	$22,375	$9,948	$49,719
2041	$73,302	$18,810	$32,918	$21,135	$9,396	$46,964
2042	$68,759	$17,644	$30,878	$19,825	$8,814	$44,054
2043	$63,965	$16,414	$28,725	$18,443	$8,199	$40,982
2044	$58,910	$15,117	$26,455	$16,985	$7,551	$37,743
2045	$53,584	$13,750	$24,063	$15,450	$6,869	$34,331
2046	$51,406	$13,191	$23,085	$14,822	$6,590	$32,935
2047	$52,603	$13,499	$23,623	$15,167	$6,743	$33,703
2048	$53,829	$13,813	$24,173	$15,521	$6,900	$34,488
2049	$55,083	$14,135	$24,736	$15,882	$7,061	$35,292
2050	$56,367	$14,464	$25,313	$16,252	$7,225	$36,114
2051	$57,680	$14,801	$25,903	$16,631	$7,394	$36,955
2052	$59,024	$15,146	$26,506	$17,018	$7,566	$37,816
2053	$60,399	$15,499	$27,124	$17,415	$7,742	$38,697
2054	$61,807	$15,860	$27,756	$17,821	$7,923	$39,599
2055	$63,247	$16,230	$28,402	$18,236	$8,107	$40,522
2056	$64,720	$16,608	$29,064	$18,661	$8,296	$41,466
2057	$66,228	$16,995	$29,741	$19,096	$8,490	$42,432
2058	$67,771	$17,391	$30,434	$19,541	$8,687	$43,421
2059	$69,351	$17,796	$31,143	$19,996	$8,890	$44,432
2060	$70,966	$18,211	$31,869	$20,462	$9,097	$45,468
2061	$72,620	$18,635	$32,612	$20,939	$9,309	$46,527
2062	$74,312	$19,069	$33,371	$21,426	$9,526	$47,611
2063	$76,043	$19,514	$34,149	$21,926	$9,748	$48,721
2064	$77,815	$19,968	$34,945	$22,436	$9,975	$49,856
2065	$79,628	$20,434	$35,759	$22,959	$10,207	$51,017
2066	$81,484	$20,910	$36,592	$23,494	$10,445	$52,206
2067	$83,382	$21,397	$37,445	$24,042	$10,688	$53,423
TOTAL	$3,041,355	$780,451	$1,365,789	$876,915	$389,861	$1,948,579
AVG ANNUAL	$76,034	$19,511	$34,145	$21,923	$9,747	$48,714

6 The assumed tax rates are 0.8355% for Champaign County Government, 0.2144% for Sidney Township, 0.3752% for Sidney Road & Bridge, 0.2409% for Sidney Fire Protection, 0.1071% for the Forest Preserve District, and 0.5353% for Parkland College 505.

Table 6.3 – Tax Benefits from the Little Prairie Solar Project for the School Districts[7]

Year	Heritage CUSD #8	Tolono CUSD #7
2028	$522,212	$36,598
2029	$414,767	$35,953
2030	$406,747	$35,257
2031	$398,127	$34,510
2032	$388,885	$33,709
2033	$378,996	$32,852
2034	$368,436	$31,937
2035	$357,177	$30,961
2036	$345,194	$29,922
2037	$332,458	$28,818
2038	$425,255	$27,646
2039	$406,153	$26,404
2040	$385,929	$25,090
2041	$364,543	$23,699
2042	$341,951	$22,231
2043	$318,107	$20,681
2044	$292,967	$19,046
2045	$266,483	$17,324
2046	$255,649	$16,620
2047	$261,605	$17,007
2048	$267,701	$17,404
2049	$273,938	$17,809
2050	$280,321	$18,224
2051	$286,852	$18,649
2052	$293,536	$19,083
2053	$300,376	$19,528
2054	$307,374	$19,983
2055	$314,536	$20,448
2056	$321,865	$20,925
2057	$329,364	$21,412
2058	$337,038	$21,911
2059	$344,891	$22,422
2060	$352,927	$22,944
2061	$361,151	$23,479
2062	$369,565	$24,026
2063	$378,176	$24,586
2064	$386,988	$25,159
2065	$396,005	$25,745
2066	$405,232	$26,345
2067	$414,673	$26,958
TOTAL	$13,954,152	$983,303
AVG ANNUAL	$348,854	$24,583

The largest taxing jurisdictions for property taxes are local school districts. However, the tax implications for school districts are more complicated than for other taxing bodies. School districts receive state aid based on the assessed value of the taxable property within their district. As assessed value increases, the state aid to the school district is decreased.

Although the exact amount of the reduction in state aid to the school districts is uncertain, local project tax revenue is superior to relying on state aid for the following reasons: (1) the solar project can't relocate – it is a permanent structure that will be within the school district's footprint for the life of the Project; (2) the school district can raise the tax rate and increase its revenues as needed; (3) the school district does not have to deal with the year-to-year uncertainty of state aid amounts; (4) the school district does not have to wait for months (or even into the next Fiscal Year) for payment; (5) the Project does not increase the overall cost of education in the way that a new residential development would.

Table 6.3 shows the direct property tax revenue coming from the Project to Heritage Community Unit School District #8 and Tolono Community Unit School District #7. This tax revenue uses the assumptions outlined earlier to calculate the other tax revenue and assumes that 92% of the Project area is in the Heritage Community School District #8 and 8% of the Project area is in the Tolono Community School District #7. Over the 40-year life of the Project, the school districts are expected to receive over $14.8 million in tax revenue.

7 The assumed tax rates are 4.5216% for Heritage Community School District #8 and 3.3324% for Tonolo Community School District #7.

Having considered all these benefits, it is still important to determine the net impact of the solar energy project after taking into account the reduction in school funding from the State of Illinois. Determining the reduction in state aid is complicated by the fact that there is a new law for distributing state funds to education.

On August 31, 2017, Governor Rauner signed into law PA 100-0465 that fundamentally changes the way that the state distributes state aid to school districts. The "Evidence Based Funding" (EBF) consists of two parts – a Base Funding Minimum and a Tier Funding. The Base Funding Minimum is based on what the district received in the previous fiscal year. Some call this the "Hold Harmless" provision and ensures that there were no "losing" districts in the transition to the new funding formula. The Tier Funding is additional money and goes in higher portion to the districts that demonstrate a higher need under the new formula. Because of the "Hold Harmless" provision, no school district will see a reduction in their GSA from what they received in the year before the solar farm was installed. However, the higher EAV caused by the solar farm will reduce its eligibility for new money allocated in the state budget.

There are several sources of uncertainty with the new school funding formula concerning this new money. First, the total amount of new funding to be distributed over the ten years from the passage of the law is unknown at this point. It will be determined year-by-year in the state budget passed by the legislature and signed by the governor. For FY21, no new money was allocated for the school funding formula in the state budget. For FY22, new money was restored in the state budget. Second, data for the formula funding changes each year based on the school's student population and its "need" and it is difficult to forecast its school's student population over time. Third, each school district is competing with all other school districts for this new funding and so the EAV and student population for all other school districts in the state will impact what a single school district receives. Fourth, the school district's EAV could also change due to other property changes in the district.

For FY25, Heritage Community Unit School District #8 had 111% adequacy, was assigned Tier 4 status, and will receive $308 in "new money," and Tolono Community Unit School District #7 had 73% adequacy, was assigned Tier 1 status, and will receive $472,692 in "new money." If new money is allocated in the future, these districts will only lose any of the "new money" if the additional tax revenue pushes them into a higher tier. Heritage Community Unit School District #8 is already at the highest tier and Tolono Community Unit School District #7 would need to move to 78% adequacy to move to Tier 2 status. In addition, their EBF funding cannot go down from the previous year. Thus, the school districts will receive a net positive flow of funds because of the solar project if "new money" remains the same.

Lastly, since the land beneath the solar project will not pay real property taxes while the Project is active, it is important to calculate the net property taxes generated by the solar project. Table 6.4 shows the total taxes generated by solar use, the forecasted taxes generated by agricultural use of the land associated with the Project, and the incremental taxes expected by replacing agricultural use with the solar farm. It is assumed that taxes for agricultural use start with the current taxes paid on the parcels used for the Project and increase at an annual inflation rate of 2.4%.

Table 6.4 – Tax Comparison of Solar Use Versus Agriculture Use

Year	Taxes with Solar	Taxes with Agriculture	Incremental Taxes
2028	$871,562	$81,066	$790,496
2029	$757,958	$82,955	$675,003
2030	$743,301	$84,887	$658,414
2031	$727,550	$86,865	$640,684
2032	$710,660	$88,889	$621,771
2033	$692,589	$90,960	$601,629
2034	$673,290	$93,080	$580,211
2035	$652,716	$95,249	$557,468
2036	$630,817	$97,468	$533,350
2037	$607,544	$99,739	$507,805
2038	$689,157	$102,063	$587,095
2039	$658,200	$104,441	$553,760
2040	$625,427	$106,874	$518,553
2041	$590,768	$109,364	$481,404
2042	$554,156	$111,913	$442,243
2043	$515,516	$114,520	$400,996
2044	$474,775	$117,188	$357,586
2045	$431,855	$119,919	$311,936
2046	$414,297	$122,713	$291,584
2047	$423,951	$125,572	$298,378
2048	$433,829	$128,498	$305,330
2049	$443,937	$131,492	$312,445
2050	$454,281	$134,556	$319,725
2051	$464,865	$137,691	$327,174
2052	$475,697	$140,899	$334,797
2053	$486,780	$144,182	$342,598
2054	$498,122	$147,542	$350,581
2055	$509,729	$150,979	$358,749
2056	$521,605	$154,497	$367,108
2057	$533,759	$158,097	$375,662
2058	$546,195	$161,781	$384,415
2059	$558,922	$165,550	$393,371
2060	$571,944	$169,407	$402,537
2061	$585,271	$173,355	$411,916
2062	$598,908	$177,394	$421,514
2063	$612,862	$181,527	$431,335
2064	$627,142	$185,757	$441,385
2065	$641,754	$190,085	$451,669
2066	$656,707	$194,514	$462,193
2067	$672,008	$199,046	$472,962
40 Year Total	$23,340,406	$5,262,574	$18,077,832
40 Year Average	$583,510	$131,564	$451,946

VII. Appendix

Table 7.1 – Local and Statewide Compensation by Occupation

BLS Occupation Code	Job Type	Education/ Training Required	Illinois 10th Percentile of Wages	Illinois 90th Percentile of Wages	Illinois Mean Wages	Champaign-Urbana, IL 10th Percentile of Wages	Champaign-Urbana, IL 90th Percentile of Wages	Champaign-Urbana, IL Mean Wages	US Fringe Benefits Median	Total Compensation Local mean wages plus US Fringe
	Jobs during Construction									
47-2231	Solar Photovoltaic Installers	High school diploma or equivalent	$36,030	$74,190	$46,860	N/A	N/A	N/A	$27,394	N/A
47-3013	Helpers – Electricians	High school diploma or equivalent	$24,960	$59,170	$39,820	N/A	N/A	N/A	$27,394	N/A
47-2111	Electricians	High school diploma or equivalent	$46,950	$116,340	$84,790	$46,420	$103,940	$78,090	$27,394	$105,484
47-2061	Construction Laborers	No formal educational credential	$36,250	$100,000	$65,590	$35,980	$81,410	$56,680	$27,394	$84,074
47-2073	Operating Engineers and Other Construction Equipment Operators	High school diploma or equivalent	$44,860	$112,220	$82,280	$47,080	$104,610	$83,200	$27,394	$110,594
47-1011	First-Line Supervisors of Construction Trades	High school diploma or equivalent	$49,790	$123,870	$89,470	$51,410	$110,030	$85,870	$27,394	$113,264
13-1082	Project Management Specialists and Business Operations Specialists		$52,840	$154,070	$99,210	$50,010	$123,790	$82,080	$27,394	$109,474
49-9071	Maintenance and Repair Workers, General (Operations)	High school diploma or equivalent	$30,210	$77,900	$52,160	$27,890	$63,780	$47,660	$27,394	$75,054
13-1111	Management Analysts	Bachelor's degree	$62,050	$176,900	$116,650	$54,720	$167,230	$103,500	$27,394	$130,894
11-1021	General and Operations Managers	Bachelor's degree	$42,200	$228,630	$124,510	$40,630	$204,210	$107,380	$27,394	$134,774
17-2071	Electrican Engineers		$64,910	$138,360	$101,210	$62,450	$127,570	$89,880	$27,394	$117,274
41-3091	Sales Representatives of Services		$36,600	$126,290	$74,130	$32,830	$102,980	$61,960	$27,394	$89,354
53-7062	Laborers and Freight, Stock and Material Movers	No formal educational credential	$27,970	$49,350	$37,710	$27,030	$45,800	$35,920	$27,394	$63,314
43-3031	Bookkeeping, Accounting and Auditing	Some college, no degree	$31,570	$72,800	$49,810	$29,890	$63,430	$45,790	$27,394	$73,184
	Jobs during Operations									
51-8013	Power Plant Operators	High school diploma or equivalent	$59,080	$123,480	$93,800	N/A	N/A	N/A	$27,394	N/A
37-3011	Landscaping and Groundskeeping	No formal educational credential	$28,290	$49,810	$38,940	$28,200	$54,840	$39,370	$27,394	$66,764
51-1011	First-Line Supervisors of Production and Operating Workers	High school diploma or equivalent	$40,680	$96,900	$67,080	$38,950	$85,550	$61,740	$27,394	$89,134

Table 7.2 – Occupational Description and Future Outlook

Occupation Code	Occupation Title	Description	Work Environment	Current Employment	Job Growth, 2021-2031 (percent)
11-1021	General and Operations Managers	Plan, direct, or coordinate the operations of public or private sector organizations, overseeing multiple departments or locations. Duties and responsibilities include formulating policies, managing daily operations, and planning the use of materials and human resources, but are too diverse and general in nature to be classified in any one functional area of management or administration, such as personnel, purchasing, or administrative services. Usually manage through subordinate supervisors. Excludes First-Line Supervisors.	Top executives work in nearly every industry, for both small and large organizations. They often have irregular schedules, which may include working evenings and weekends. Travel is common, particularly for chief executives.	3,328,200	209,800 (7%)
13-1082	Project Management Specialists and Business Operations Specialists	Analyze and coordinate the schedule, timeline, procurement, staffing, and budget of a product or service on a per project basis. Lead and guide the work of technical staff. May serve as a point of contact for the client or customer. Excludes "Management Occupations" (11-0000), "Logisticians" (13-1081), "Meeting, Convention, and Event Planners" (13-1121), and "Production, Planning, and Expediting Clerks" (43-5061).	Project management specialists usually work in an office setting. Although project management specialists may collaborate on teams, some work independently. Project management specialists also may travel to their clients' places of business.	781,400	56,300 (7%)
13-1111	Management Analysts	Conduct organizational studies and evaluations, design systems and procedures, conduct work simplification and measurement studies, and prepare operations and procedures manuals to assist management in operating more efficiently and effectively. Includes program analysts and management consultants. Excludes "Computer Systems Analysts" (15-1211) and "Operations Research Analysts" (15-2031).	Management analysts may travel frequently to meet with clients. Some work more than 40 hours per week.	950,600	108,400 (11%)
17-2071	Electrical Engineers	Research, design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use. Excludes "Computer Hardware Engineers" (17-2061).	Electrical and electronics engineers work in industries including research and development, engineering services, manufacturing, telecommunications, and the federal government. Electrical and electronics engineers generally work indoors in offices. However, they may have to visit sites to observe a problem or a piece of complex equipment.	303,800	9,800 (3%)
37-3011	Landscaping and Groundskeeping	Landscape or maintain grounds of property using hand or power tools or equipment. Workers typically perform a variety of tasks, which may include any combination of the following: sod laying, mowing, trimming, planting, watering, fertilizing, digging, raking, sprinkler installation, and installation of mortarless segmental concrete masonry wall units. Excludes "Farmworkers and Laborers, Crop, Nursery, and Greenhouse" (45-2092).	Most grounds maintenance work is done outdoors in all weather conditions. Some work is seasonal, available mainly in the spring, summer, and fall. The work may be repetitive and physically demanding, requiring frequent bending, kneeling, lifting, or shoveling.	1,299,000	61,300 (5%)
41-3091	Sales Representatives of Services	Sell services to individuals or businesses. May describe options or resolve client problems. Excludes "Advertising Sales Agents" (41-3011), "Insurance Sales Agents" (41-3021), "Securities, Commodities, and Financial Services Sales Agents" (41-3031), "Travel Agents" (41-3041), "Sales Representatives, Wholesale and Manufacturing" (41-4010), and "Telemarketers" (41-9041).	Wholesale and manufacturing sales representatives work under pressure because their income and job security depend on the amount of merchandise they sell. Some sales representatives travel frequently.	1,597,600	63,300 (4%)
43-3031	Bookkeeping, Accounting and Auditing	Compute, classify, and record numerical data to keep financial records complete. Perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records. May also check the accuracy of figures, calculations, and postings pertaining to business transactions recorded by other workers. Excludes "Payroll and Timekeeping Clerks" (43-3051).	Most accountants and auditors work full time. Overtime hours are typical at certain periods of the year, such as for quarterly audits or during tax season.	1,449,800	81,800 (6%)
47-1011	First-Line Supervisors of Construction Trades	Directly supervise and coordinate activities of construction or extraction workers.	N/A	735,500	29,900 (4%)

Table 7.2 – Occupational Description and Future Outlook (Cont.)

47-2061	Construction Laborers	Perform tasks involving physical labor at construction sites. May operate hand and power tools of all types: air hammers, earth tampers, cement mixers, small mechanical hoists, surveying and measuring equipment, and a variety of other equipment and instruments. May clean and prepare sites, dig trenches, set braces to support the sides of excavations, erect scaffolding, and clean up rubble, debris, and other waste materials. May assist other craft workers. Construction laborers who primarily assist a particular craft worker are classified under "Helpers, Construction Trades" (47-3010). Excludes "Hazardous Materials Removal Workers" (47-4041).	Most construction laborers and helpers typically work full time and do physically demanding work. Some work at great heights or outdoors in all weather conditions. Construction laborers have one of the highest rates of injuries and illnesses of all occupations.	1,572,200	69,500 (4%)
47-2073	Operating Engineers and Other Construction Equipment Operators	Operate one or several types of power construction equipment, such as motor graders, bulldozers, scrapers, compressors, pumps, derricks, shovels, tractors, or front-end loaders to excavate, move, and grade earth, erect structures, or pour concrete or other hard surface pavement. May repair and maintain equipment in addition to other duties. Excludes "Extraction Workers" (47-5000) and "Crane and Tower Operators" (53-7021).	Construction equipment operators may work even in unpleasant weather. Most operators work full time, and some have irregular work schedules that include nights.	466,900	22,000 (5%)
47-2111	Electricians	Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems. Excludes "Security and Fire Alarm Systems Installers" (49-2098).	Almost all electricians work full time. Work schedules may include evenings and weekends. Overtime is common.	711,200	50,200 (7%)
47-2231	Solar Photovoltaic Installers	Assemble, install, or maintain solar photovoltaic (PV) systems on roofs or other structures in compliance with site assessment and schematics. May include measuring, cutting, assembling, and bolting structural framing and solar modules. May perform minor electrical work such as current checks. Excludes solar PV electricians who are included in "Electricians" (47-2111) and solar thermal installers who are included in "Plumbers, Pipefitters, and Steamfitters" (47-2152).	Most solar panel installations are done outdoors, but PV installers sometimes work in attics and crawl spaces to connect panels to the electrical grid. Installers also must travel to jobsites.	17,100	4,600 (27%)
47-3013	Helpers – Electricians	Help electricians by performing duties requiring less skill. Duties include using, supplying, or holding materials or tools, and cleaning work area and equipment. Construction laborers who do not primarily assist electricians are classified under "Construction Laborers" (47-2061). Apprentice workers are classified with the appropriate skilled construction trade occupation (47-2011 through 47-2231).	Most construction laborers and helpers typically work full time and do physically demanding work. Some work at great heights or outdoors in all weather conditions. Construction laborers have one of the highest rates of injuries and illnesses of all occupations.	1,572,200	69,500 (4%)
49-9071	Maintenance and Repair Workers, General (Operations)	Perform work involving the skills of two or more maintenance or craft occupations to keep machines, mechanical equipment, or the structure of a building in repair. Duties may involve pipe fitting; HVAC maintenance; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs. Excludes "Facilities Managers" (11-3013) and "Maintenance Workers, Machinery" (49-9043).	General maintenance and repair workers often carry out many different tasks in a single day. They could work at any number of indoor or outdoor locations. They may work inside a single building, such as a hotel or hospital, or be responsible for the maintenance of many buildings, such as those in an apartment complex or on a college campus.	1,539,100	76,300 (5%)
51-1011	First-Line Supervisors of Production and Operating Workers	Directly supervise and coordinate the activities of production and operating workers, such as inspectors, precision workers, machine setters and operators, assemblers, fabricators, and plant and system operators. Excludes team or work leaders.	N/A	646,800	12,200 (2%)
51-8013	Power Plant Operators	Control, operate, or maintain machinery to generate electric power. Includes auxiliary equipment operators. Excludes "Nuclear Power Reactor Operators" (51-8011).	Most power plant operators, distributors, and dispatchers work full time. Many work rotating 8- or 12-hour shifts.	43,700	(6,500) (-15%)
53-7062	Laborers and Freight, Stock and Material Movers	Manually move freight, stock, luggage, or other materials, or perform other general labor. Includes all manual laborers not elsewhere classified. Excludes "Construction Laborers" (47-2061) and "Helpers, Construction Trades" (47-3011 through 47-3019). Excludes "Material Moving Workers" (53-7011 through 53-7199) who use power equipment.	Most hand laborers and material movers work full time. Because materials are shipped around the clock, some workers, especially those in warehousing, work overnight shifts.	6,473,000	358,300 (6%)

Table 7.3 – Occupational Output from IMPLAN Construction Model, Direct Jobs, Employment Greater than 1.0

Occ Code	Occupation	Wage and Salary Employment	Wage and Salary Income	Supplements to Wages and Salaries	Employee Compensation	Hours Worked
47-2000	Construction Trades Workers	26.00	$2,247,652.69	$387,113.71	$2,634,766.39	50,278.28
49-9000	Other Installation, Maintenance, and Repair Occupations	20.72	$2,107,605.30	$362,993.31	$2,470,598.62	43,813.30
47-1000	Supervisors of Construction and Extraction Workers	6.90	$867,784.49	$149,458.71	$1,017,243.20	14,919.72
49-1000	Supervisors of Installation, Maintenance, and Repair Workers	4.98	$680,840.80	$117,261.36	$798,102.15	10,834.68
13-1000	Business Operations Specialists	4.24	$552,781.74	$95,205.72	$647,987.47	8,521.42
11-9000	Other Management Occupations	3.32	$601,370.30	$103,574.13	$704,944.43	7,138.34
11-1000	Top Executives	2.46	$557,416.02	$96,003.88	$653,419.90	5,408.36
43-9000	Other Office and Administrative Support Workers	1.76	$112,056.74	$19,299.55	$131,356.29	2,847.92
43-3000	Financial Clerks	1.48	$117,058.01	$20,160.93	$137,218.94	2,652.18
49-2000	Electrical and Electronic Equipment Mechanics, Installers, and Repairers	1.36	$131,554.45	$22,657.66	$154,212.11	2,815.56
43-6000	Secretaries and Administrative Assistants	1.28	$93,562.98	$16,114.37	$109,677.35	2,249.70
53-3000	Motor Vehicle Operators	1.26	$103,972.01	$17,907.12	$121,879.12	2,560.26
53-7000	Material Moving Workers	1.22	$87,973.22	$15,151.64	$103,124.86	2,161.22
49-3000	Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	1.16	$111,055.65	$19,127.13	$130,182.78	2,473.50

Table 7.4 – Occupational Output from IMPLAN Construction Model, Indirect Jobs, Employment Greater than

Occ Code	Occupation	Wage and Salary Employment	Wage and Salary Income	Supplements to Wages and Salaries	Employee Compensation	Hours Worked
47-2000	Construction Trades Workers	6.97	$374,756.89	$64,986.59	$439,743.48	13,358.78
13-1000	Business Operations Specialists	2.84	$249,629.17	$41,649.11	$291,278.28	5,786.92
17-2000	Engineers	2.32	$205,111.16	$31,761.70	$236,872.86	4,729.58
11-9000	Other Management Occupations	2.00	$221,993.10	$37,608.60	$259,601.69	4,344.88
47-1000	Supervisors of Construction and Extraction Workers	1.95	$141,724.89	$24,482.30	$166,207.19	4,278.29
17-3000	Drafters, Engineering Technicians, and Mapping Technicians	1.17	$64,353.79	$9,844.88	$74,198.66	2,279.00
11-1000	Top Executives	1.07	$151,573.47	$26,404.81	$177,978.28	2,376.18

Table 7.5 – Occupational Output from IMPLAN Construction Model, Induced Jobs, Employment Greater than 1.0

Occ Code	Occupation	Wage and Salary Employment	Wage and Salary Income	Supplements to Wages and Salaries	Employee Compensation	Hours Worked
35-3000	Food and Beverage Serving Workers	3.57	$77,152.45	$10,591.81	$87,744.25	3,929.97
41-2000	Retail Sales Workers	3.04	$74,710.70	$15,727.76	$90,438.46	4,083.20
29-1000	Healthcare Diagnosing or Treating Practitioners	2.72	$361,761.96	$72,175.43	$433,937.40	5,081.18
35-2000	Cooks and Food Preparation Workers	1.67	$43,740.10	$6,238.00	$49,978.12	2,270.40
31-1100	Home Health and Personal Care Aides; and Nursing Assistants, Orderlies, and Psychiatric Aides	1.56	$49,048.23	$9,924.75	$58,972.98	2,541.70
43-4000	Information and Record Clerks	1.21	$48,448.46	$8,965.71	$57,414.17	1,995.15
29-2000	Health Technologists and Technicians	1.19	$69,092.19	$13,969.93	$83,062.11	2,149.62
53-7000	Material Moving Workers	1.13	$36,315.27	$7,299.73	$43,615.00	1,798.91
37-2000	Building Cleaning and Pest Control Workers	1.06	$26,702.72	$4,637.26	$31,339.98	1,690.73
13-1000	Business Operations Specialists	1.05	$77,100.33	$13,211.91	$90,312.24	1,997.06

VIII. Glossary

Bb

Battery Energy Storage Systems (BESS)

An array of hundreds or thousands of small batteries that enable energy from renewables, like solar and wind, to be stored and released at a later time.

Cc

Consumer Price Index (CPI)

An index of the changes in the cost of goods and services to a typical consumer, based on the costs of the same goods and services at a base period.

Dd

Direct impacts

During the construction period: the changes that occur in the onsite construction industries in which the direct final demand change is made.

During operating years: the final demand changes that occur in the onsite spending for the solar operations and maintenance workers.

Ee

Equalized Assessed Value (EAV)

The product of the assessed value of property and the state equalization factor. This is typically used as the basis for the value of property in a property tax calculation.

Ff

Farming profit

The difference between total revenue (price multiplied by yield) and total cost regarding farmland.

Full-time equivalent (FTE)

A unit that indicates the workload of an employed person. One FTE is equivalent to one worker working 2,080 hours in a year. One half FTE is equivalent to a half-time worker or someone working 1,040 hours in a year.

Hh

HV line extension

High-voltage electric power transmission links used to connect generators to the electric transmission grid.

Ii

IMPLAN (IMpact analysis for PLANning)

A business who is the leading provider of economic impact data and analytic applications. IMPLAN data is collected at the federal, state, and local levels and used to create state-specific and county-specific industry multipliers.

Indirect impacts

Impacts that occur in industries that make up the supply chain for that industry.

During the construction period: the changes in inter- industry purchases resulting from the direct final demand changes, including construction spending on materials and wind farm equipment and other purchases of good and offsite services.

During operating years: the changes in inter-industry purchases resulting from the direct final demand changes.

Induced impacts

The changes that occur in household spending as household income increases or decreases as a result of the direct and indirect effects of final demand changes.

Inflation

A persistent rise in the general level of prices related to an increase in the volume of money and resulting in the loss of value of currency. Inflation is typically measured by the CPI.

Mm

Median Household Income (MHI)

The income amount that divides a population into two equal groups, half having an income above that amount, and half having an income below that amount.

Millage rate

The tax rate, as for property, assessed in mills per dollar.

Multiplier

A factor of proportionality that measures how much a variable changes in response to a change in another variable.

MW

A unit of power, equal to one million watts or one thousand kilowatts.

MWac (megawatt alternating current)

The power capacity of a utility-scale solar PV system after its direct current output has been fed through an inverter to create an alternating current (AC). A solar system's rated MWac will always be lower than its rated MWdc due to inverter losses. AC is the form in which electric energy is delivered to businesses and residences and that consumers typically use when plugging electric appliances into a wall socket.

MWdc (megawatt direct current)

The power capacity of a utility-scale solar PV system before its direct current output has been fed through an inverter to create an alternating current. A solar system's rated MWdc will always be higher than its rated MWac.

Nn

Net economic impact

Total change in economic activity in a specific region, caused by a specific economic event.

Net Present Value (NPV)

Cash flow determined by calculating the costs and benefits for each period of investment.

National Renewable Energy Laboratory's (NREL) Jobs and Economic Development Impacts (JEDI) Model

An input-output model that measures the spending patterns and location-specific economic structures that reflect expenditures supporting varying levels of employment, income, and output.

Oo

Output

Economic output measures the value of goods and services produced in a given area. Gross Domestic Product is the economic output of the United States as a whole.

Pp

PV (photovoltaic) system

Solar modules, each comprising a number of solar cells, which generate electrical power.

Rr

Real Gross Domestic Product (GDP)

A measure of the value of goods and services produced in an area and adjusted for inflation over time.

Real-options analysis

A model used to look at the critical factors affecting the decision to lease agricultural land to a company installing a solar powered electric generating facility.

Ss

Stochastic

To have some randomness.

Tt

Tax rate

The percentage (or millage) of the value of a property to be paid as a tax.

Total economic output

The quantity of goods or services produced in a given time period by a firm, industry, county, or country.

Uu

Utility-scale solar

Solar powered-electric generation facilities intended for wholesale distribution typically over 5MW in capacity.

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X. Curriculum Vitae (Abbreviated)

David G. Loomis
Strategic Economic Research, LLC
2705 Kolby Court
Bloomington, IL 61704
815-905-2750
dave@strategiceconomic.com

Education

Doctor of Philosophy, Economics, Temple University, Philadelphia, Pennsylvania, May 1995.

Bachelor of Arts, Mathematics and Honors Economics, Temple University, Magna Cum Laude, May 1985.

Experience

2011-present Strategic Economic Research, LLC
President

- Performed economic impact analyses on policy initiatives and energy projects such as wind energy, solar energy, natural gas plants and transmission lines at the county and state level
- Provided expert testimony before state legislative bodies, state public utility commissions, and county boards
- Wrote telecommunications policy impact report comparing Illinois to other Midwestern states

1996-2023 Illinois State University, Normal, IL
Professor Emeritus – Department of Economics (2023 - present)
Full Professor – Department of Economics (2010-2023)
Associate Professor - Department of Economics (2002-2009)
Assistant Professor - Department of Economics (1996-2002)

- Taught Regulatory Economics, Telecommunications Economics and Public Policy, Industrial Organization and Pricing, Individual and Social Choice, Economics of Energy and Public Policy and a Graduate Seminar Course in Electricity, Natural Gas and Telecommunications Issues
- Supervised as many as 5 graduate students in research projects each semester
- Served on numerous departmental committees

1997-2023 Institute for Regulatory Policy Studies, Normal, IL
Executive Director (2005-2023)
Co-Director (1997-2005)

- Grew contributing membership from 5 companies to 16 organizations
- Doubled the number of workshop/training events annually
- Supervised 2 Directors, Administrative Staff and internship program
- Developed and implemented state-level workshops concerning regulatory issues related to the electric, natural gas, and telecommunications industries

2006-2018 Illinois Wind Working Group, Normal, IL
Director

- Founded the organization and grew the organizing committee to over 200 key wind stakeholders
- Organized annual wind energy conference with over 400 attendees
- Organized strategic conferences to address critical wind energy issues
- Initiated monthly conference calls to stakeholders
- Devised organizational structure and bylaws

2007-2018 Center for Renewable Energy, Normal, IL
Director

- Created founding document approved by the Illinois State University Board of Trustees and Illinois Board of Higher Education
- Secured over $150,000 in funding from private companies
- Hired and supervised 4 professional staff members and supervised 3 faculty members as Associate Directors
- Reviewed renewable energy manufacturing grant applications for Illinois Department of Commerce and Economic Opportunity for a $30 million program
- Created technical "Due Diligence" documents for the Illinois Finance Authority loan program for wind farm projects in Illinois
- Published 40 articles in leading journals such as AIMS Energy, Renewable Energy, National Renewable Energy Laboratory Technical Report, Electricity Journal, Energy Economics, Energy Policy, and many others
- Testified over 80 times in formal proceedings regarding wind, solar and transmission projects
- Raised over $7.7 million in grants
- Raised over $2.7 million in external funding

Bryan A. Loomis
Strategic Economic Research, LLC
Vice President

Education

Master of Business Administration (M.B.A.), Marketing and Healthcare, Belmont University, Nashville, Tennessee, 2017.

Experience

2019-present Strategic Economic Research, LLC, Bloomington, IL
Vice President
(2021-present)
Property Tax Analysis and Land Use Director
(2019-2021)

- Directed the property tax analysis by training other associates on the methodology and overseeing the process for over twenty states
- Improved the property tax analysis methodology by researching various state taxing laws and implementing depreciation, taxing jurisdiction millage rates, and other factors into the tax analysis tool
- Executed land use analyses by running Monte Carlo simulations of expected future profits from farming and comparing that to the solar lease
- Performed economic impact modeling using JEDI and IMPLAN tools
- Improved workflow processes by capturing all tasks associated with economic modeling and report-writing, and created automated templates in Asana workplace management software

2019-2021 Viral Healthcare Founders LLC, Nashville, TN
CEO and Founder

- Founded and directed marketing agency for healthcare startups
- Managed three employees
- Mentored and worked with over 30 startups to help them grow their businesses
- Grew an email list to more than 2,000 and LinkedIn following to 3,500
- Created a Slack community and grew to 450 members
- Created weekly video content for distribution on Slack, LinkedIn and Email

Christopher Thankan
Strategic Economic Research, LLC
Director of Economic Analysis

Education

Bachelor of Science in Sustainable & Renewable Energy (B.S.), Minor in Economics, Illinois State University, Normal, IL, 2021

Experience

2021-present Strategic Economic Research, LLC, Bloomington, IL
Economic Analyst

- Create economic impact results on numerous renewable energy projects Feb 2021-Present
- Utilize IMPLAN multipliers along with NREL's JEDI model for analyses
- Review project cost Excel sheets
- Conduct property tax analysis for different US states
- Research taxation in states outside research portfolio
- Complete ad hoc research requests given by the president
- Hosted a webinar on how to run successful permitting hearings
- Research school funding and the impact of renewable energy on state aid to school districts
- Quality check coworkers JEDI models
- Started more accurate methodology for determining property taxes that became the main process used

Strategic Economic Research, LLC

by Dr. David G. Loomis,
Bryan Loomis, and Chris Thankan
Strategic Economic Research, LLC
strategiceconomic.com
815-905-2750

ILLINOIS PRESBYTERIAN HOME COMMUNITIES
Fair Hills Residence Fair Hills Apartments & Cottages DeCastro Apartments
Serving Seniors of all Faiths Since 1954

12/17/2024

IL Presbyterian Home

Little Prairie Solar – Participating Landowner

2705 Bayhill Drive

Champaign, IL, 61822

Dear County Representatives,

We are participating as landowners in the Little Prairie Solar project being developed by BayWa r.e. Our participating property includes Parcel ID: **242824100001** and Parcel ID: **242823100002**. As project participants, we are excited for the opportunity to be included and value the benefits to the County through increased property tax revenue during project operations.

Regarding the development design process undertaken by BayWa r.e. and our existing personal drain tile infrastructure on our property, we are respectfully requesting that any existing drain tile infrastructure on our property not be completely redesigned, replaced or otherwise modified to incorporate what could be considered a comprehensive pattern drain tile system.

We understand that the project may need to make upgrades to the system to maintain water flow regionally, and to make repairs during construction, operations, and decommissioning. Repairs shall be made in accordance with the applicable County permits and the Agriculture Impact Mitigation Agreement that exists for the Little Prairie Solar project.

Thank you for respecting our request regarding our existing drain tile infrastructure on our property. We do not desire to replace existing infrastructure with a pattern drain tile system.

Sincerely,

Maryann Walker

Executive Director

12/30/2024

Don & Susan Akers
Little Prairie Solar – Participating Landowners
2705 Bayhill Drive
Champaign, IL, 61822

Dear County Representatives,

We are participating landowners in the Little Prairie Solar project being developed by BayWa r.e. Our participating property includes Parcel ID: **242812300005** and Parcel ID: **242813100001**. As project participants, we are excited for the opportunity to be included and value the benefits to the County through increased property tax revenue during project operations.

Regarding the development design process undertaken by BayWa r.e. and our existing personal drain tile infrastructure on our property, we are respectfully requesting that any existing drain tile infrastructure on our property not be completely redesigned, replaced or otherwise modified to incorporate a comprehensive pattern drain tile system. We understand that the project may need to make upgrades to the system to maintain water flow regionally, and also to make repairs during construction, operations, and decommissioning. Repairs shall be made in accordance with applicable County permits and the Agriculture Impact Mitigation Agreement that exists for the Little Prairie Solar project. Thank you for respecting our request with regard to our existing drain tile infrastructure on our property and not completely redesigning the system to replace with a pattern drain tile system.

Sincerely,

Don & Susan Akers

18 December 2024

Zoning Board of Appeals
County of Champaign, Illinois

Dear Zoning Board of Appeals Members:

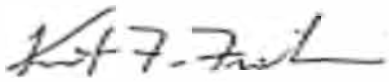
My brothers Matt, Mark, and I are participating landowners in the Little Prairie Solar project being developed by BayWa r.e. The participating property we three co-own includes Parcel ID: 242824400003. We are excited by the opportunity to participate in the Little Prairie Solar project. My brother Matt's email dated 04 September 2024 and my email dated 08 September 2024, both sent to the Zoning Department, describe our rationale for committing to lease land to Little Prairie Solar, outlining in particular the project's very significant benefits that we eagerly anticipate.

Regarding the development design process undertaken by BayWa r.e. and the existing drain tile infrastructure on our property: We respectfully request that complete redesign, replacement, or other modification of the existing drain tile infrastructure to incorporate a comprehensive pattern drain tile system **not** be done on our property as part of the Little Prairie Solar project. We understand that the Little Prairie Solar project may need to make upgrades to the system to maintain water flow regionally, and to make repairs during construction, operations, and decommissioning. We further understand that repairs shall be made in accordance with applicable County permits and the Agriculture Impact Mitigation Agreement that exists for the Little Prairie Solar project.

We appreciate the Drainage Commission facilitating in 2022 a drainage tile repair project on our property. We are unaware of any repairs needed today. If future repairs are needed, we will be in touch with our district's Drainage Commissioner.

Please let us know at the email or postal address below if further clarity on this matter is needed.

Respectfully,



Kurt Fischer
On behalf of brothers Mark and Matt Fischer, LLC co-owners
Coffeen-Fischer Farm LLC
Little Prairie Solar – Participating Landowner
858 San Juan Drive
Pagosa Springs, CO 81147
coffeenfarm@gmail.com

Charles W. Campo

Subject: FW: Schools closed and 500 businesses evacuated…battery fire problems

-----Original Message-----
From: Ted Hartke <tedhartke@hartke.pro>
Sent: Friday, September 6, 2024 9:34 AM
To: John Hall <jhall@champaigncountyil.gov>
Subject: Schools closed and 500 businesses evacuated…battery fire problems

CAUTION: External email, be careful when opening.

Dear John,

Please include this with documents regarding disapproval of battery storage in Champaign County. A three mile evacuation for a battery fire impacts a lot of residents!

Here's the link below.

Best regards,

Ted HARTKE

https://www.nbcsandiego.com/news/local/lithium-ion-battery-fire-in-escondido-prompts-large-response/3615328/?fbclid=IwZXh0bgNhZW0CMTEAAR0n2sHRwhAMBWuGjEqZT2t62OZe_4k0oxuDv05Q3Icqydn_hbPt0fkWX2A_aem_4hCfLBvnJbWvUI-y0NV-6Q#m0qt8965x4vvzdp9dql

Sent from my iPhone

ESCONDIDO

Lithium-ion battery fire at SDG&E facility in Escondido prompts school closures, evacuations

The fire is burning in the 500 block of Enterprise Street in Escondido, just a few blocks from where Interstate 15 crosses paths with state Route 78

By **Eric S. Page** and **Danielle Smith** • Published September 5, 2024 • Updated on September 5, 2024 at 11:15 pm

The fire forced nearby businesses to evacuate, and the Escondido Union School District announced it's canceling school operations at a number of sites. NBC 7's Dave Summers reports.

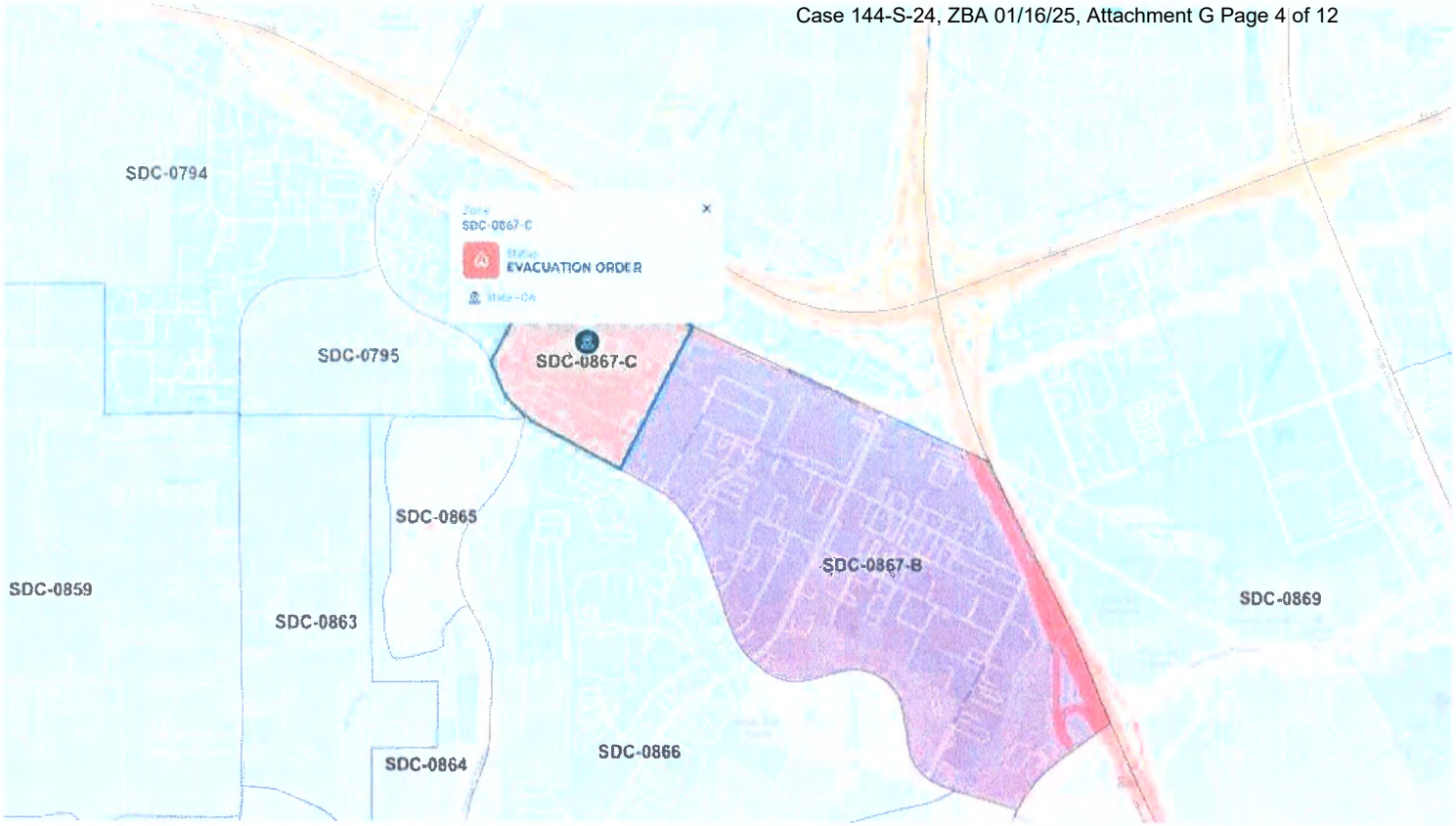
What to Know

- A lithium-ion battery fire broke out at an SDG&E facility in the 500 block of Enterprise Street
- **Evacuations**: North of Auto Park Way, south of Mission Road, east of Auto Park Way and Alpine Way, west of Enterprise Street. An evacuation point is at Pala Casino
- **School closures:** Carolyn Gilbert Education Center, the Del Dios Academy of Arts and Sciences and Rock Springs Elementary schools will be closed Friday. Limitless Learning will offer remote instruction
- **Road closures**: Enterprise Street between Mission Road and Auto Park Way

A fire that began Thursday afternoon at SDG&E's Northeast Operations Center has prompted a major callout of first responders, evacuations and school closures in Escondido.

The blaze sparked just after noon and is burning in the 500 block of Enterprise Street, just a few blocks from where Interstate 15 intersects with state Route 78.

This fire comes a little more than a week after the Escondido City Council took up the issue of battery energy storage within or adjacent to the North County city. Read more about the city council discussion below.



Residents in the pink highlighted area are under a mandatory evacuation order, while those in the purple area have been ordered to shelter in place.

School closures, evacuations, shelter-in-place orders

The Escondido Union School District said on its website that the Carolyn Gilbert Education Center, the Del Dios Academy of Arts and Sciences and Rock Springs Elementary schools will be closed on Friday "due to the fires in the area." Limitless Learning will cancel on-campus activities but offer remote instruction, the district added.

Local

SEP 2

These San Diego senior pets are still searching for their forever homes

21 HOURS AGO

Clear the shelters pet of the day, Thursday, Sept. 5: Sebastian

The schools listed are all within three miles of the battery fire and were placed on an evacuation order at around 3:15 p.m. on Thursday.

"Operations were paused, families were contacted to pick up any remaining students on campus, and staff safely left the sites," the district said.

The impacted schools are expected to be back open on Monday, according to EUSD.

A fire burns at a SDG&E lithium-ion battery facility in Escondido, prompting evacuations, Sept. 5, 2024.

Escondido Fire Department Battalion Chief Tyler Batson told NBC 7 that officials put together a plan to evacuate the nearby area, which includes approximately 500 businesses. About 1,500 SDG&E business customers were also affected, Batson added.

According to fire officials, police officers were going door-to-door to make sure everybody has left in the approximately six-square-block area.

Those who are evacuated will have to remain out of the area until the fire is out, which could take hours or longer. As of 4:30 p.m., Batson said that the best case scenario for the fire would be 12 hours, but it could take as long as 48 hours before evacuation orders are lifted.

"Immediate threat to life," a notification on the city's website states, in part. "This is a lawful order to leave now. The area is lawfully closed to public access."

"The area east of Alpine Street, south of Mission Road, west of Enterprise Street and north of Auto Park Way is under a mandatory evacuation orders," according to the city of Escondido. "Please leave the area and head to a location away from the incident. (Notifications have been sent to those in this area)."

Officials have established an evacuation point at Pala Casino, out east on SR-76.

A large area to the south and west of the area has been put under a shelter-in-place order. Anybody in that area should stay in the building they're in with the windows and doors closed.

"Go indoors," reads the county notification, in part. "Shut and lock doors and windows. Prepare to self-sustain until further notice and/or contacted by emergency personnel for additional direction.

The battalion fire chief at the scene told NBC 7 that the smoke is so toxic that you would need a self-contained breathing apparatus like the ones firefighters use to protect yourself if you're within 100 meters of it.

SDG&E said an outage in the area beginning shortly after 4 p.m. was impacting 1,050 customers, but the utility company later said the outage was not related to the battery fire.

What's on fire in Escondido?

Batson said that firefighters arrived for a smoke check and found that one of the battery banks, which are the size of a small RV trailer, was on fire. Firefighters were making efforts to prevent the fire from spreading to the other banks by saturating them and keeping them cool.

SkyRanger 7 arrived over the scene around 3:15 p.m. and easily located the fire with brilliant orange flames escaping the sides of the bank, which is in an area where two dozen banks are located. A half-

dozen or so firefighters were located about 20-30 feet away, with the water from a pair of hoses spraying over the bank that ignited.

A pair of large air-conditioning units is located on the roof of each of the banks. Escondido, like the rest of the region, is in the grip of the biggest heat wave of the summer, with the National Weather Service reporting that temperatures in the area were hitting 103 degrees at 11:15 a.m. and staying in triple digits as late as 3:45 p.m.

A spokeswoman for Cal ISO (the California Independent System Operator), which operates the power grid in the state, told NBC 7 that the blaze has caused "no impacts to the bulk electric grid."

Around the same time, SDG&E released a statement regarding the fire:

"This afternoon, safety crews responded to a fire at SDG&E's battery storage facility in Escondido. Advanced fire suppression systems were activated immediately, and the event was limited to one of 24 battery storage containers. There are no reported injuries and emergency responders are on the scene. SDG&E is working with first responders to ensure safety of our employees and the community and will be conducting a thorough review of the events to determine the cause of the accident."

The fire was still burning after the utility issued the statement.

Lithium battery fires

According to a fact sheet from SDG&E, when it was built in 2017, the 30MW/120MWh battery facility was the largest in the world.

SDGEnews.com
https://www.sdgenews.com › media-kit › worlds-largest...

World's Largest Lithium Ion Battery Storage Facility ...

We unveiled the world's largest **lithium ion** battery **storage** facility in **Escondido** ... CONTACT US. For media inquires only: 877-866-2066. **sdgecommunications@sdge**.

Lithium-ion fires are notoriously difficult to extinguish since they undergo a process called thermal runaway and can't use water to put it out. A recent such fire took place earlier this year down by the border.

Essentially, when a battery cell combusts, the immense heat transfers to the next cell, leading it to catch fire. That heat then transfers to the next cell, and so on.

“Thermal runaway is that the battery goes into ignition and combustion and it keeps going in this process until it uses up all its energy,” Neil Schultz, executive director of VTEC Laboratories told NBC 4 in New York last year. “During that period of time it gives off a large amount of heat and high temperature and it’s a good source of ignition for other objects around it or in contact with it.”

Escondido City Council takes up issue of battery energy storage

Just last week, the Escondido City Council passed a resolution on battery energy storage system projects in or near the city.

The resolution, introduced by Escondido Mayor Dane White and Councilmember Mike Morasco, comes after energy company AES proposed the Seguro energy storage project, which would be built near Escondido and San Marcos.

"I want to make clear we're not opposed to battery energy storage ... I don't believe that this one in particular is located in a reasonable location," White said about the Seguro project during the Aug. 28 meeting.

The mayor said that a fire at an Otay Mesa energy storage facility that burned for more than a dozen days earlier this year prompted him to propose the resolution.

"I thought, 'I better start paying a little bit more attention to this before the next one comes to the city of Escondido,'" White said.

Although the resolution passed 4-1, this doesn't mean the Seguro project won't move forward. White, however, instructed his staff to consider a temporary ban on battery energy storage systems until "proper zoning requirements are put in."

A lithium fire burned for days by the border

On May 15, a fire broke out at the Gateway Energy Storage facility in Otay Mesa, prompting evacuation orders and warnings in the surrounding areas that affected multiple businesses.

Despite crews getting the blaze under control and lifting evacuation orders roughly 24 hours later, evacuations were underway again after a flare-up on May 17. A shelter-in-place order was, at one point, issued for nearby Richard J. Donovan Correctional Facility.

Evacuations were lifted again on May 28, 13 days after the fire ignited, according to Cal Fire San Diego.

A fire at a lithium-ion batery storage facility has flared up again, prompting evacuations.

This article tagged under:

ESCONDIDO

Weather Forecast

SAN DIEGO, CA

72°

TONIGHT

72°

Partly Cloudy
0% Precip

TONIGHT

91°

SAN DIEGO

SUBMIT TIPS FOR INVESTIGATIONS

NEWSLETTERS

ABOUT NBC 7 SAN DIEGO

OUR NEWS STANDARDS

XFINITY: INTERNET, TV, STREAMING, MORE

KNSD Public Inspection File
KNSD Accessibility
KNSD Employment Information
Send Feedback
FCC Applications
Terms of Service
Privacy Policy
Your Privacy Choices
Advertise with us
Careers at NBC 7
CA Notice
Ad Choices

Charles W. Campo

From: Jo Mazik <hello.jomazik@gmail.com>
Sent: Friday, September 6, 2024 1:39 PM
To: zoningdept
Subject: Comments about Case 144-S-24 Special Use Permit-forward to C. Campo

Greetings!

I own 82.5 acres (two parcels) of farm ground near the future Bay Wa Solar Project.

I am troubled about the Special Use Permit (Parts A-D). Zoning Ordinances are meant to keep the area uniform to the benefit of the community. Allowing this Special Use Permit goes against that benefit. It determines that Bay Wa is "special" and above the ordinances. Granting of Special Use permits should be rare, if at all.

I had the opportunity to be a part of this solar project. I declined because taking rich soil out of food production should be a "no brainer". There are other places that don't have this rich soil that would be better locations for a solar farm. If I owned 80 acres of desert, I would be asking solar farms to use it.

I realize that this project will, in all likelihood, come to fruition. Then I will be concerned about weed seeds blowing in my direction. When land is in production, everyone in the area is against weeds that bring down the yield. Bay Wa will do what it can about weeds (sheep? really?). But not like a farmer would.

Thank you for this opportunity to express my opinion.

Linda Jo Mazik
6907 Sconfinato Drive
Hartford, WI 53027

Charles W. Campo

From: Kurt Fischer <kurt.f.fischer@gmail.com>
Sent: Monday, September 9, 2024 8:17 AM
To: zoningdept; County Board
Subject: Why This Landowner Committed to Lease Land to Little Prairie Solar, LLC

RE: Little Prairie Solar

Greetings County Board and Zoning Board of Appeals Members,

Last fall, after much consideration, I chose, in concert with two brothers, to commit to lease land we own in Champaign County to Little Prairie Solar, LLC. I'd like to share with you a bit of background, briefly explain my own reasons for this choice, and ask for your support of Little Prairie Solar.

Background
My brothers and my property comprises 78 acres of corn & soybean farm plus a rented farmhouse on 2 acres. Our maternal great-great grandfather, Alva Martin Coffeen, purchased this land from the Illinois Central Railroad Trustees on July 31, 1869—just 36 years after Champaign County's incorporation. The property is known as Coffeen Farm and is an Illinois Heritage Farm.

Though I don't live in Illinois today, my Illinois and Champaign County roots are deep and wide. I (and my brothers / farm co-owners) grew up in Carbondale. We are all graduates of the University of Illinois U-C. My brother Mark is a long-time Professor of Geology at Northern Illinois University. Our mother and nine other relatives are buried at Mt. Hope cemetery in Urbana, six of our ancestors are buried at the Old Homer Cemetery, and three more of our kin are buried at Lost Grove Cemetery near our farm. Notably, our ancestor Michael Doctor Coffeen purchased land in 1836 to establish Champaign County's first general store (according to family history), effectively founding the town of Homer. Today, the people we regularly hire to support our farming / rental farmhouse business live, work, and school their kids in Champaign County. In short, I'm connected to and care about Champaign County.

My Reasons for Committing to a Little Prairie Solar Lease
I first shuddered at the thought of abandoning a 160-year agricultural tradition on Coffeen Farm. But given that about a third of the U.S. corn crop feeds ethanol plants, I realized that the free market had already put our farm in the energy business, only disguised as agriculture. In contrast, in the case of Little Prairie Solar, I am *choosing* to be in the energy business, and it would be cleaner energy.

Further, due to setbacks and drainages, I expect 20-25 acres of our land would still support agriculture outside the Little Prairie Solar footprint. If any of this land won't accommodate large farming machinery, I'd like to see us pursue new agricultural opportunities on Coffeen Farm such as organic vegetable and fruit farming. So I expect jobs-supporting, people-feeding agriculture would persist, possibly in new and exciting ways, on Coffeen Farm if the Little Prairie Solar installation is built.

I considered the wisdom of removing acreage, even temporarily, from food production. But, again, that a third of the US corn crop feeds ethanol plants, not people or livestock, tells me there's plenty of cropland to support more food production if boosting food-making becomes a policy priority.

By relying on crop farming for income, I think our business is at climate change risk. Imagine the impact on Champaign County's rural economy if heat, drought, regular severely damaging storms, and pest spread make farming in the county

more and more challenging, even infeasible. Economic resiliency—for Coffeen Farm and for rural Champaign County—depends on economic base diversification.

I consider myself a steward of our property, a temporary co-owner until the next generation of our family takes over. The significant boost in per acre rent Little Prairie Solar offers means more funds for needed reinvestment in the farmhouse on Coffeen Farm, using local businesses and workers. And I'm hopeful the improved cash flow will encourage future family owners to be stewards, not sellers, of our property.

The growers who have farmed our land and their families have been among the finest people I've known over my 67+ years. I respect and admire very much their love of farming and the farm lifestyle. That's why it stung when one of these folks implied to me that I don't care about our land because I committed to leasing it to Little Prairie Solar. But the sting changed to bewilderment as I pondered how growing corn & soybeans seemingly has become the only way, in some folks' minds, to love the land. I do understand—and share—the pain that changes to cherished tradition and lifestyle can cause. For me, part of the appeal of leasing to Little Prairie Solar is the opportunity, at this point in our farm's long history, to love our land by letting natural processes replenish it, without economic sacrifice.

In sum, your support of Little Prairie Solar will in my view help: diversify our business, making it more resilient; contribute to the local economy; help preserve Coffeen Farm family ownership; naturally restore our land's soil; and slash our business' carbon footprint.

Thank you for reading and your thoughtful consideration.

Kurt Fischer
Member, Coffeen-Fischer Farm, LLC


COFFEEN FARM
Est. 1869 by
Alva M. Coffeen
One Family Owned - 150+ Years

Charles W. Campo

From: Steven Herriott <stevenherriott@hotmail.com>
Sent: Thursday, September 12, 2024 1:37 PM
To: zoningdept
Subject: Case 144-s-24.

Champaign County Department of Planning & Zoning, I am unable to be at the meeting this evening so I am voicing my concerns in an email. As BayWa Solar was putting this project together many of us spent several months and hours coming to meetings and working out issues. The Solar company seemed fine with what was approved at these meetings. Now once again we are dealing with the Solar companies wanting to change what was agreed upon by asking for waivers. Luckily, I don't live by this Solar farm but I do farm and own ground next door. I would ask that the Zoning Board NOT approve these waivers. I think the Zoning Board did its job back when this all began.

I do have a question for clarification on the drainage issue for those of us who own and farm the upper elevations to the Solar farm. At the time of this Solar farm being started many of us had concerns how tile would be fixed and or damaged by the company putting in the posts. My and others memory was the Solar company would tile these fields. That way they could guarantee that our drainage uphill would not be affected. Could you please verify if this is correct by going back into past records.

Thanks for your help and confederation
Steven Herriott

Sent from my Verizon, Samsung Galaxy smartphone
Get Outlook for Android

Charles W. Campo

From: John Hall
Sent: Friday, November 15, 2024 9:07 AM
To: Charles W. Campo
Cc: Jacob C. Hagman
Subject: FW: BayWAre phases 1 and 2 issues

Please include this email in the next mailing for Case 144-S-24.

-----Original Message-----
From: Ted Hartke <tedhartke@hartke.pro>
Sent: Friday, November 15, 2024 12:02 AM
To: John Hall <jhall@champaigncountyil.gov>
Subject: BayWAre phases 1 and 2 issues

CAUTION: External email, be careful when opening.

Dear John,

These are the AIMA items phase 1 construction has been non-compliant:

1: Doing earthwork during saturated conditions.
2: Changing grade “contours” of the topsoil surface.

The intention of the topsoil removal was to move off the topsoil, conduct trenching operations, backfill with trenched subsoil, then place the topsoil back over the top to its original grade.

Champaign county best prime farmland is not protected when mixed fill material is hauled in from off-site. If Champaign County allows massive areas of topsoil to be stripped and stockpiled and spread to different areas, then there should be zero acreage restrictions for rural homesites. A double-standard should not punish/restrict rural residents while giving solar companies a free pass.

I did ask similar (but different) topsoil questions for the developers, and I certainly asked a lot of questions about fire evacuation zones mostly because we were getting “non answers” from the developer. The solar developer doesn’t have a hazard response plan. If the panels are non-toxic and non-hazardous, proof of that should come in the form of a users manual and MSDS for all of the components.

Lastly, I asked difficult and uncomfortable “tough” questions this evening. This made Cindy Cunningham attempt to shut down my line of questioning while I was trying to formulate my question to get truthful answers with no wiggle room for the developer. These developers are capable of standing for themselves, they have legal representation on standby to object to my line of questions, and therefore do not need Cindy’s personal agenda or her help to intervene on their behalf. Instead of being a neutral party, she picked sides tonight and became clearly biased in the eyes of the citizens in attendance. During the closing comments made by the zoning board, Cindy said she wanted to protect neighbors “BUT WE NEED TO REDUCE FOSSIL FUELS FOR THE FUTURE.” The task of the zoning board is to protect rural residents and harming rural folks in favor of a political opinion regarding climate change (some would say “climate hoax”) is not a zoning land use justification for harming neighbors. The same argument for the tax revenue and the use of union workers. The trade-off for money/taxes/jobs should not be part of our zoning decisions.

BayWAre has sold the phase 1 project. They will not be impacted if the county suspends/revokes the construction permit for gross violation of the AIMA. BayWAre representatives are also proven liars because they repeated a dozen or more times that their project would simply drill posts into the ground and that mass excavation and re-grading was never going to occur. I can understand access roads being installed, but the topsoil removal is happening in swaths being hundreds of feet wide. This is NOT minimal disturbance and not best prime farmland topsoil preservation.

One of the last comments from board members tonight was about board members being kept in the dark or being lied to by energy developers or Ameren. I am telling you right now that our board members will never hear a lie from me, but I will tell them the bad news which they don't want to hear or believe as the honest truth. The truth has no agenda. I might not be the best at delivering a terribly uncomfortable message, but with some leeway and restraint from attacking the messenger, decisionmakers will avoid huge problems. Tonight's episode reminds me of regulatory capture through restriction of public participation. These folks who live in/near the solar farm do not deserve a life-changing property-changing impact because board members have an attitude problem towards me because I'm so worked up and unnerved after experiencing a loss of my wonderful home at the hands of a wind energy company and a handful of elected smug and gullible people. In Boone County Illinois, the wind developer was bragging on his phone at a gas station while refueling his car on the pump adjacent to one of the zoning board members. He said, "do you know what I love about county officials in this part of Illinois? They are so gullible, they will believe whatever I tell them, and they don't ask questions." I think that wind developer was wrong…he should have added "and then they shut down the concerned citizens for asking questions."

Please share this with the zoning board and the ELUC members. They need some encouragement to work on behalf of the citizens instead of being solar/wind/battery advocates.

Best regards,

Ted Hartke

Charles W. Campo

From: John Hall
Sent: Monday, December 30, 2024 1:19 PM
To: Charles W. Campo
Subject: FW: InvEnergy project in New York nighttime noise maximum is 40dBA

FYI

From: Ted Hartke <tedhartke@hartke.pro>
Sent: Monday, December 30, 2024 12:27 PM
To: John Hall <jhall@champaigncountyil.gov>
Subject: InvEnergy project in New York nighttime noise maximum is 40dBA

Dear John,

In New York, InvEnergy is applying for a project with a 40 dBA nighttime noise limit.

Here's the article from yesterday:

- December 27, 2024
- 8:45 pm

Alle-Catt Wind Energy hearings scheduled for Monday by IDA

By RICK MILLER

Olean Star

Three public hearings on Alle-Catt Wind Energy's application for tax benefits from the Cattaraugus County Industrial Development Agency will be held Monday.

The public hearings in Farmersville, Freedom and Yorkshire come at a time when public officials in the affected towns and leaseholders are ratcheting up pressure on the IDA and the Cattaraugus County Legislature.

In 2018, the county legislature, much to the delight of opponents of the wind farm and its 600-foot towers, approved a resolution asking the IDA not to approve tax incentives for large industrial wind farms. Last month, the legislature reversed course and asked the IDA to hold a public hearing on the Alle-Catt's application for local tax benefits.

The IDA set the hearings for Monday throughout the day at the Farmersville Town Hall, 8963 Lake Ave., Farmersville, at 10 a.m.; the Freedom Town Hall, 1188 Eagle St., Sandusky, at 2:30 p.m., and the Yorkshire Town Hall, 82 S. Main St., Delevan, at 6:30 p.m.

After earlier indicating to the IDA board members that the project would not proceed in Cattaraugus County without a payment in lieu of taxes (PILOT) agreement, Alle-Catt is now saying it will seek state financing if an agreement with the IDA is not made soon.

That, municipal officials are afraid, might mean an end to not only host community agreements — that were contingent on a PILOT and increase each year — but can affect school, county and town payments.

The town of Farmersville is looking at PILOT payments of about $380,000 a year or $7.6 million over the 20-year PILOT and Freedom would get about $735,000 a year or a total of $14.7 million. The total over 20 years is $20.7 million.

Alle-Catt is emphasizing several hundred jobs that would be created enduring construction. It states up to 10 jobs would be created or retained, suggesting the inspectors/technicians would work on other Invenergy projects in the region.

Alle-Catt has requested a deviation from the IDA's 15-year wind/solar PILOT which amounts to $5,000 per megawatt. The company is also weekin.

g $6.4 million in sales tax exemptions, a $7.5 million mortgage tax exemption and a PILOT valued at $38.7 million.

The Public Service Commission last week gave approval to a number of Alle-Catt compliance issues, but withheld final noise and flicker approval. Opponents state that Alle-Catt cannot demonstrate an ability to limit nighttime noise to 40dBA.

The New York State Board on Electric Generation Siting and the Environment gave Alle-Catt initial approval with conditions on June 3, 2020, three years after it began its public efforts to site the state's

largest wind farm across northern Cattaraugus and Allegany counties, as well as near Arcade in neighboring Wyoming County.

The Public Service Commission also announced on Dec. 19 that it had approved an environmental management and construction plan for a 10.2-mile 345kV transmission line to connect the wind farm to the grid.

Environmental attorney Gary Abraham of Great Valley, who represents to the Coalition of Concerned Citizens, a group of local residents opposed to the wind farm's harmful effects, is calling on the IDA not to offer Alle-Catt tax incentives.

Abraham, in an Op-Ed to the Olean Star, said the project is an "environmental disaster" and cited 41 eagles likely to be struck by the turbine blades over 20 years plus thousands of birds and bats that would be killed. The project will require drilling under a large number of streams and wetlands and destroy 1,500 acres of mature trees, he added.

Under state Department of Health standards, the Alle-Catt project would endanger the health of residents living nearby the wind turbines from nighttime noise of the turbines and daytime flicker, or shadow from the turbine blades, Abraham maintains.

It will take a decade of operating the wind farm to offset the carbon that went into mining and building machines and equipment to connect to the grid, the attorney points out. The power isn't needed in Western New York and there's no way to get the power downstate where it is needed, Abraham points out.

"Alle-Catt will not advance the goal of reducing greenhouse gas in the world's atmosphere," he stated.

The state Department of Health staff recommended a noise limit of 45dBA during daylight hours and 40dBA at night at all non-participating residences that do not have wind leases. The DOH suggested that based on World Health Organization data, the Public Service Commission limit of 42dBA would be highly annoying to about 10% of those impacted, which could cause health impacts.

For residences with wind leases, the limits would be 55dBA during the day and 55dBA at night.

Those unable to attend the public hearings may send written comments to Corey Wiktor, executive director Cattaraugus County Industrial Development Agency, 9 E. Washington St.,. Ellicottville, N.Y. 14731; telephone (716) 699-2005 or email at corey@cattcoida.com.

Sent from my iPhone

BayWa r.e.

r.e.think energy

Little Prairie Solar Project

Champaign County, IL

Zoning Use Case: 144-S-24

ZBA: Thursday – Nov. 14, 2024

Team Introductions

1

David Holly
BayWa r.e.
Development Manager

2

John Crosby
BayWa r.e.
Senior Permitting Manager

3

Patrick Fitzgerald
Meyer Capel
Local Counsel

4

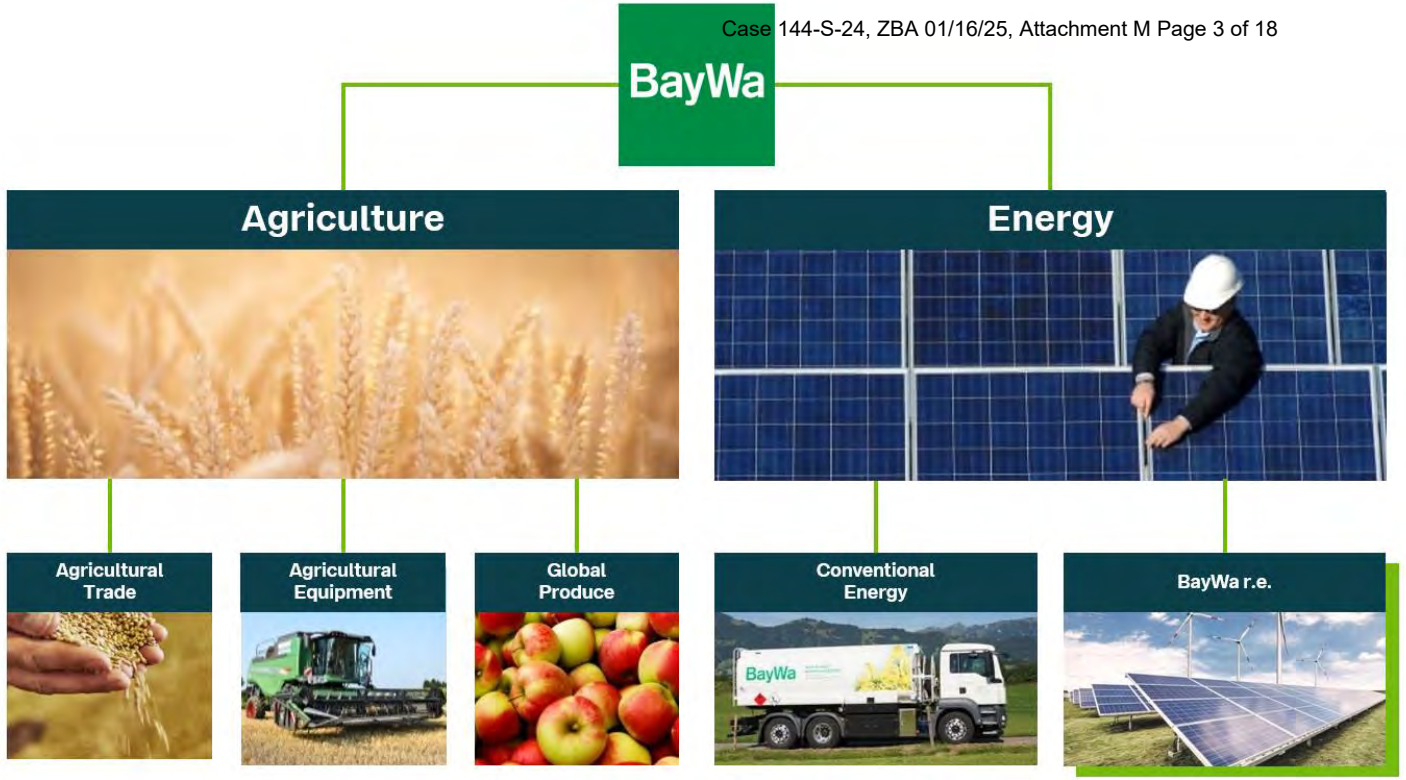
Liam Sawyer, PE
Kimley-Horn
Project Manager

5

Eric Wood
ESRG
BESS Safety Consultant

BayWa r.e. Americas – Who We Are

- **1923** BayWa is founded as an agricultural co-op, commencing operations with 400 agricultural warehouses in Bavaria, Germany.
- **1950** BayWa is a leading supplier of tractors, combine harvesters, milking machines, and animal feed.
- **1972** BayWa's building materials and retail home, garden and car product markets boom. BayWa's network of diesel fuel stations began to take shape.
- **2009** **BayWa enters renewable energy as BayWa r.e.**
- **2011** **BayWa enters the Americas.**
- **2012** BayWa, Europe's largest agricultural trader, becomes a global player in grain markets. BayWa r.e. becomes one of the world's leading developers, service providers, PV wholesalers and energy solutions providers in the field of renewable energies, with branches in 29 countries.
- **2023** Celebrating 100 Years of BayWa! BayWa r.e. is active in 31 countries with 5.5 GW installed and 10.5 GW managed worldwide.



- BayWa r.e. Americas is a solar, wind, and battery energy storage developer and service provider.
- We value long-term partnerships and work closely with communities to develop, construct, and operate our projects. As energy experts with over 100 years of agricultural experience woven into our DNA, we are uniquely positioned to understand the needs of farmers and landowners who partner with us.

Project Highlights

Up to **135 megawatts** of renewable energy

Enough electricity to power **approximately 35,505 American homes ***

Increase of an est. **$19 million in property** taxes **to** Champaign County **compared to taxes under existing Ag Use**

Will support an est. **176 jobs in Champaign County** during peak construction

Proposed project includes up to 135MW of accessory battery energy storage

Champaign County can continue to be a leader in the regional landscape by investing in a diversified power generation portfolio

* Calculation Source: Clean Power Annual Market Report | 2023 | American Clean Power

Development Timeline

*Development Schedule Highly Dependent on MISO DPP Study Schedule

Community Engagement Activities

- Tailgate meeting for Prairie Solar 1 and Little Prairie Solar projects held on 3/21/2024 at Witt park in Sidney
- Little Prairie project notification letters from BayWa sent 5/15/2024
- Second Little Prairie project notification letters (after SUP submission and prior to ZBA hearing) from BayWa sent 8/16/2024
- In-person meetings with adjacent landowners: 8/20/2024 - 8/21/2024
- Project Open House - Sept 19th at 6pm – 211 E. Main St. in Sidney
- Battery Storage Safety Webinar – 11/7/2024 (recording shared on project website)

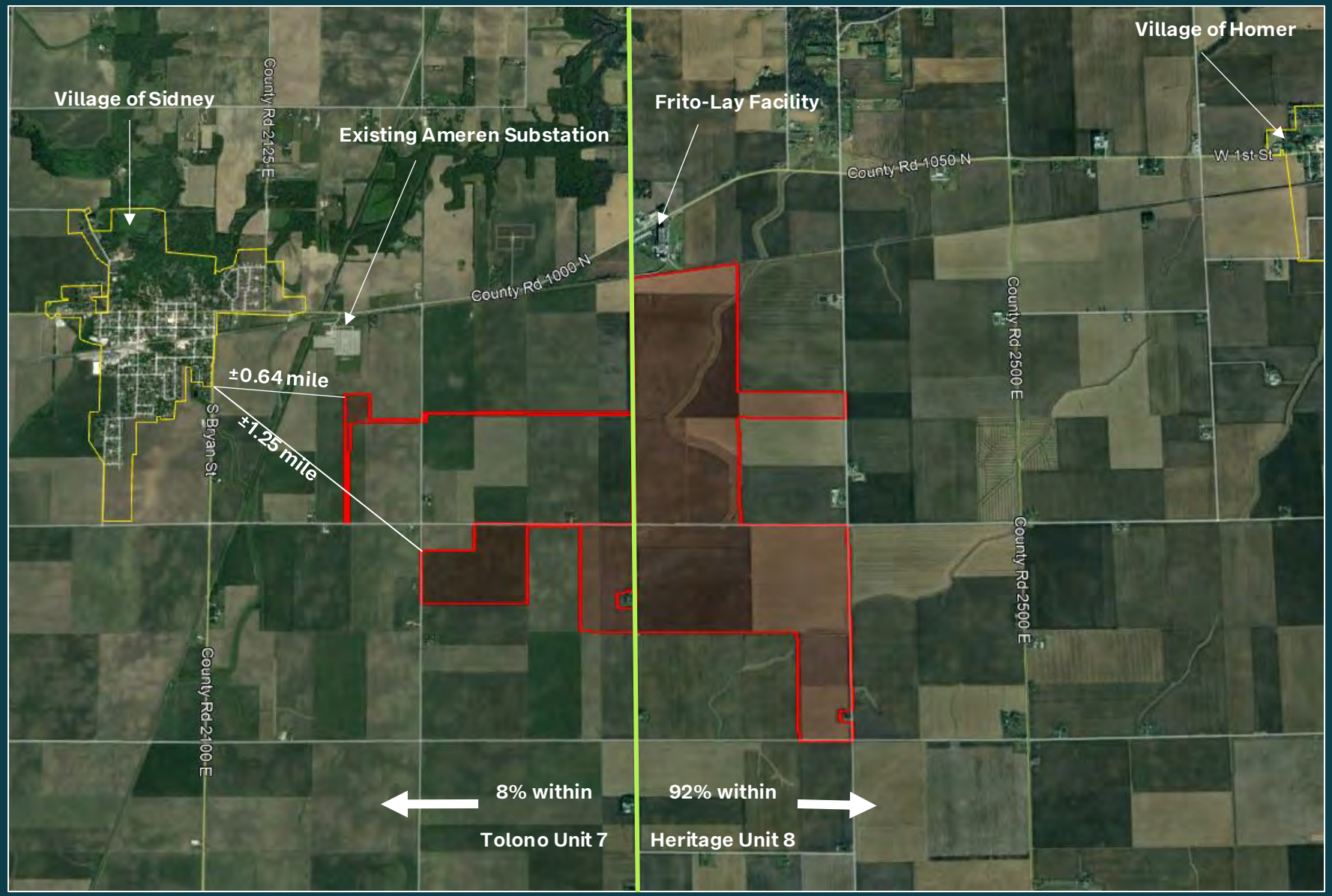
Project Location

LEGEND

- Little Prairie Solar Project Boundary
- School District Boundary

Project Specifications

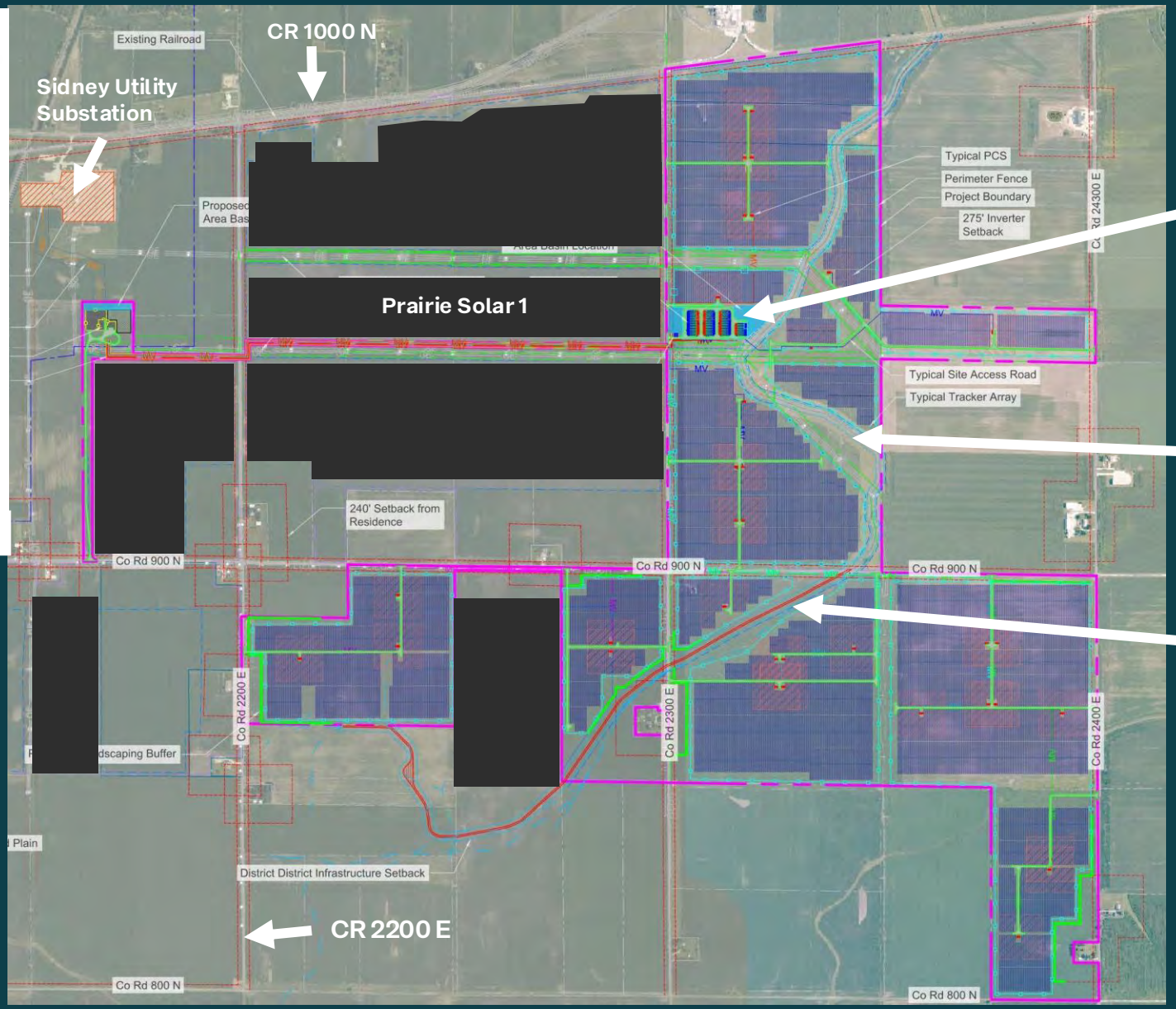
- Project Boundary: 1,047.0 acres
- Total PV Array Acres: 655.8
- PV Array Fenced Acres: 785.4
- Total BESS Acres: 4.1
- BESS Fenced Acres: 6.8



Conceptual Project Site Plan

LEGEND

- Project Boundary / Special Use Permit Boundary
- OE — Existing Overhead Line
- Existing Easement
- Existing RailRoad
- Existing Contours
- HV — High Voltage Line
- Proposed Fence
- MV — Proposed MV Cable
- 0.5 Mile Sidney Village Municipal Setback
- 65' Road Setback
- 10/20' Side and Rear Setback
- 20' Fence Setback
- 50' District Drain Tile Setback
- 75' Overhead C/L Setback
- 240' Setback from Residence
- 275' Inverter Setback
- Solar Array
- Access Roads
- Proposed Landscape Buffer
- FEMA Flood Plain
- Project Substation
- PCS Station (35)
- Prairie Solar 1 - Permitted SUP in 2019



Accessory Battery Storage Facility

Avoiding & Buffering Open Drainage Ditches

Avoiding & Buffering Underground Main Lines

Setbacks and Vegetative Screening Buffers Throughout per Ordinance

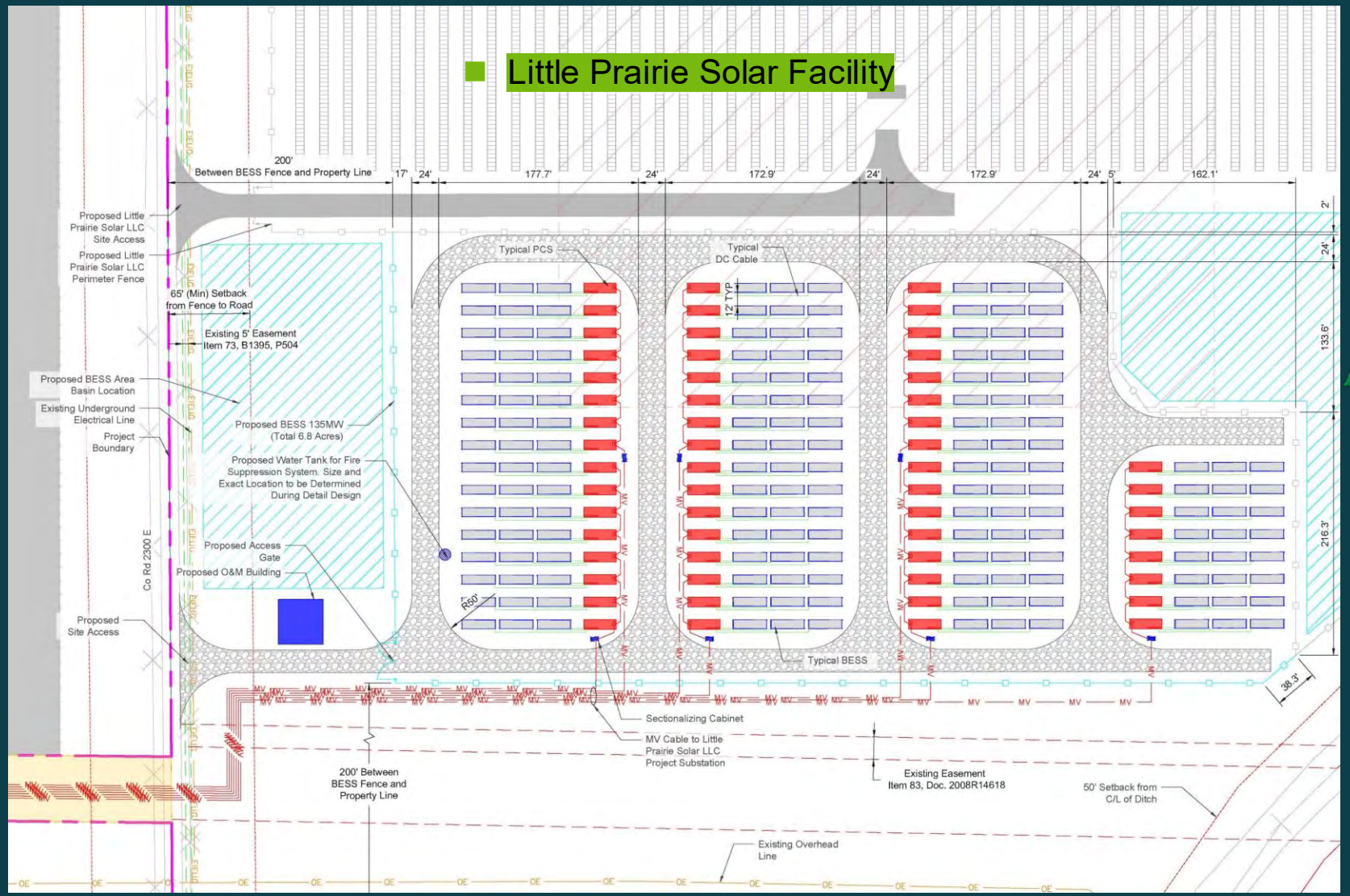
Project Specifications

- Project Boundary: 1,047.0 acres
- PV Array Fenced Acres: 785.4
- BESS Fenced Acres: 6.8

BESS Facility Site Plan

BESS Specifications

- 135MW BESS facility
- BESS Fenced Acres: 6.8
- ±0.35-mile from closest non-participating Ag property
- BESS unit specs compliant with:
  - Current industry system standards
  - Current industry fire protection & safety standards



LEGEND

- Project Boundary
- OE — Existing Overhead Line
- Existing Easement
- Setback
- Existing Contours
- Proposed Fence
- MV — Proposed MV Cable
- Access Roads
- Project Substation
- PCS Station (Inverter &Transformer)
- BESS (Battery Energy Storage System)
- BESS Basin Location

Requested Waivers

Waiver Requested:

Applicant Reasoning:

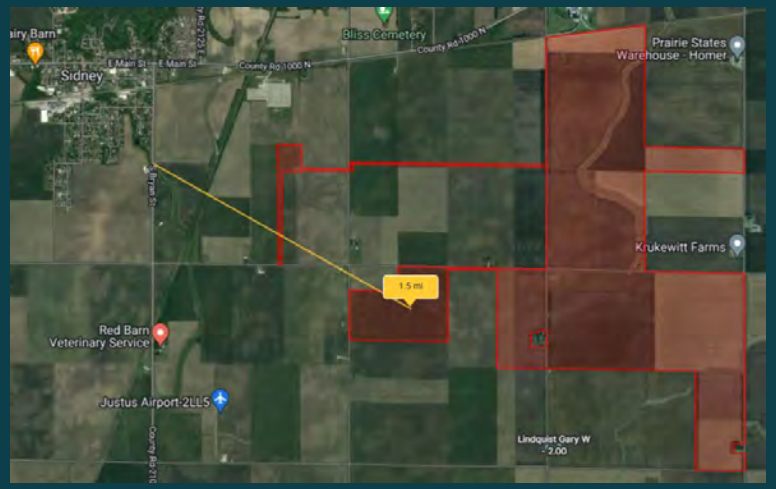
Part A

Waiver of standard conditions for not entering into a Roadway Upgrade & Maintenance Agreement with relevant local highway authority prior to consideration of the SUP.

→ Stakeholder feedback indicated that greater levels of protections could be provided to the applicable highway authorities by monitoring construction of Prairie Solar 1. Then capture unforeseen protection needs in the Little Prairie Solar Road Use Agreements prior to a Zoning Use Certificate. Same request was granted for Prairie Solar 1 (Zoning Use Case 898-S-18) in 2019.

Part B

Locating Project less than 1.5-mile of the Village of Sidney Municipal Boundary.



→ Applicant Notified the Village of Sidney: No Response Received

- Project Boundary no closer than previously permitted Prairie Solar 1 Project
- Application provided via email on 6/14/24
- Application provided again via email on 8/2/24

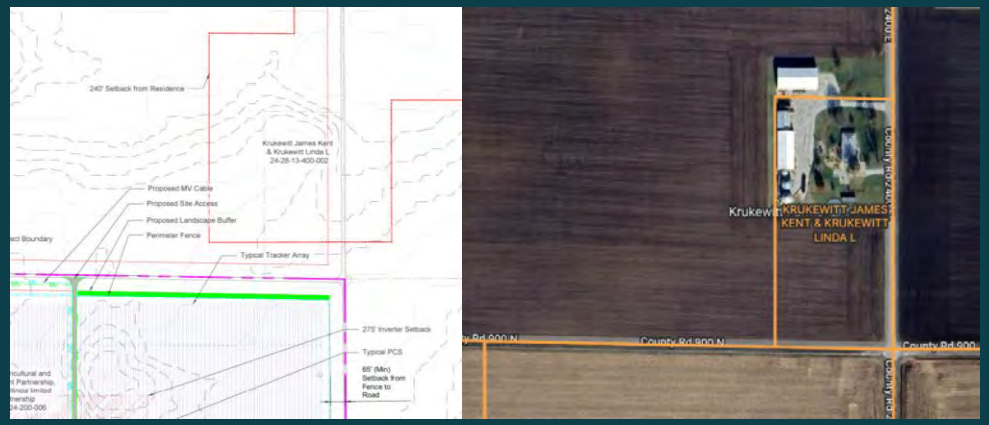
Project is farther away than previously permitted Prairie Solar 1 (Zoning Use Case 898-S-18) in 2019.

Requested Waivers

Waiver Requested:

Part C

Waiver for setback of 65' from southern boundary, centerline of Parcel ID: **24-28-13-400-002** in lieu of 240'.

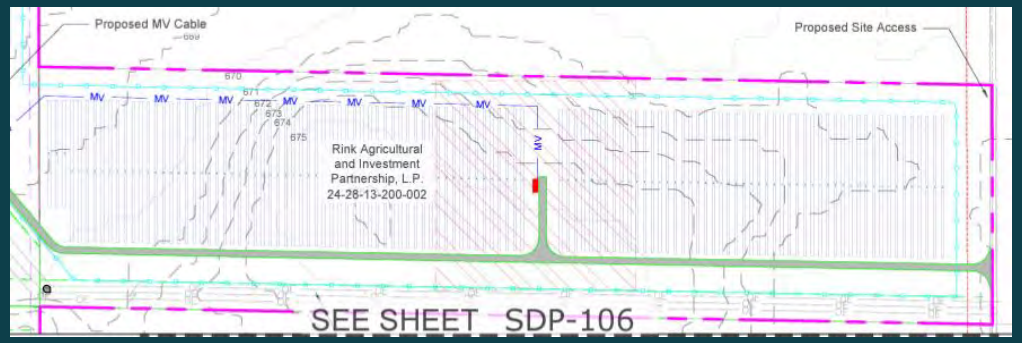


Applicant Reasoning:

Unique parcel configuration since 7 acres total and includes some Ag acreage beyond the residence/structures. The farm ground extends to the centerline of CR 900 N and a setback of 240 feet would carve out the SW corner of the intersection (±3.3 acres) and disrupt the aesthetics of the linear vegetative screening buffer for purposes of buffering farm ground, not a physical residence directly across CR 900 N. Small area is not desired to be farmed by tenant farmer given isolated small size and scale of commercial equipment.

Part D

Waiver for separation of 225 feet for one solar inverter to fence line in lieu of 275 feet in ordinance.

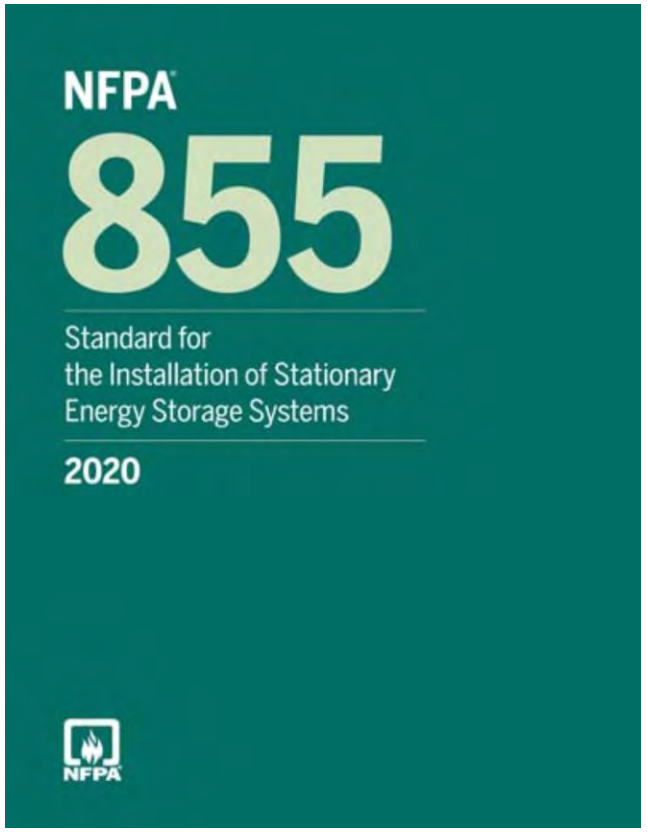


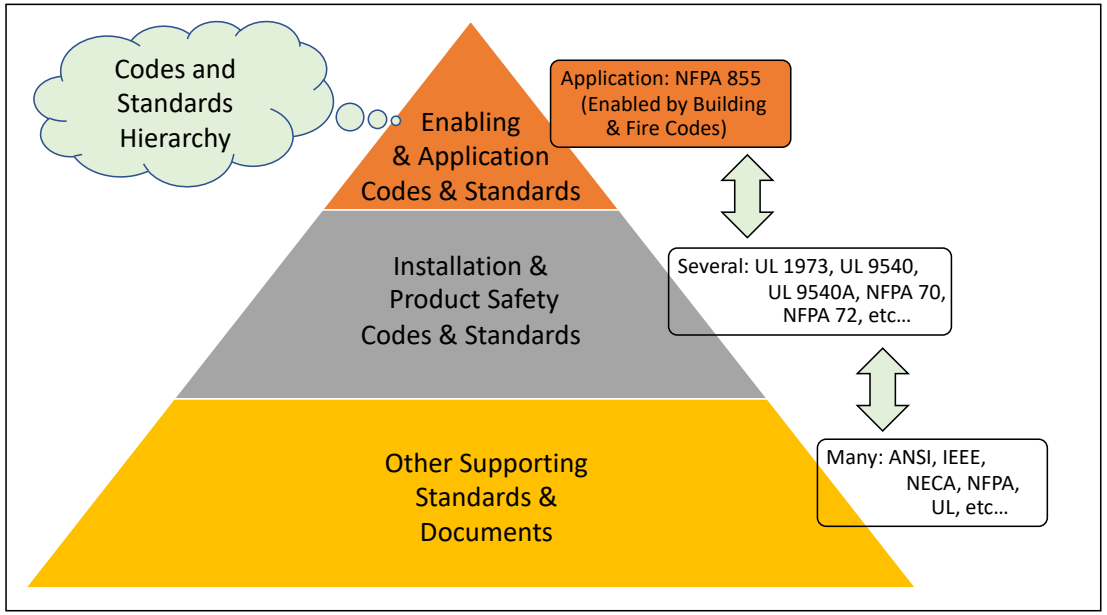
Following good engineering practice and siting the inverter in the center of the parcel. The 275-foot inverter setback remains within the Project boundary and still offers 225 feet setback from fence line. Nearest structure is over 2,000 feet away.

Energy Safety Response Group

Experts in training, testing and response…

- Experts: ESRG is comprised of battery engineers, former AHJs, investigators, and active and retired firefighters from volunteer and professional departments from the midwestern US to New York City.
- Training: With the experience of over 300 medium and large-scale battery fire tests, ESRG is an industry leader in the training of fire fighters, SMEs, and code officials on risks related to ESS fires and overhaul.
- Testing: This experience also supports product development, permitting, hazard assessment, operational safety, and disposal—working with Hazmat handlers to dispose of ESS in legal and environmentally proper ways.
- Unmatched: Our experience allows ESRG to be the industry's only cradle to grave provider of safety services from the inception of product or project development to end of life support and disposal.





Regulatory Safety Infrastructure
BESS Safety Codes & Standards Hierarchy

- On emerging technology applications like BESS, NFPA 855 has the most up-to-date requirements.
- The IFC and NFPA 1 follow NFPA 855, with a revision cycle time lag.

Preliminary Landscape Plan

Vegetative Screening Buffers - 25' wide

- Mix of native evergreen trees & large shrubs w/pollinator groundcover
- Proposed within 1,000' of dwellings to meet ordinance requirements

Bee and Butterfly Fund

Solar Synergy Program

Enrolled in the **'Solar Synergy Program'** to produce and document multiple environmental benefits.

Pollinator & Soil Enhancement

Seed Mixture: Two permanent seed mixtures to improve pollinator health and habitat.

Soil & Carbon Gains: Monitors soil health and increases in carbon storage.

Pollinator Monitoring: Observes and records pollinator habitat and population changes.

Vegetation Management Plan: Guides the design, establishment, and care of vegetative cover on the site.

Project will Preserve and Return the Site to its Current Condition

Removal Guarantee: Third-party letter of credit will provide financial assurance for the cost of removing the project and be re-assessed for life of the project

Ongoing Financial Assurance: Financial assurance reviewed and updated every five years (for first 25 years) to stay sufficient, and every two years thereafter.

Land Restoration: After the project, the land will be fully restored to its original agricultural use, including soil decompaction according to the executed AIMA.

Safety Assurance: Studies show that even in extreme cases, broken panels do not contaminate the soil.

We're contractually obligated to return the land to its original condition.

Benefits of Solar Development

Jobs

- Approximately 176 jobs local to Champaign County during peak construction

Low impact on County Services, roads, and school system

- Little operational impacts on the public services and resources including schools, roads, water, sewer, etc.

Passive land use

- No emissions, limited water use, no traffic during operations

Temporary land use

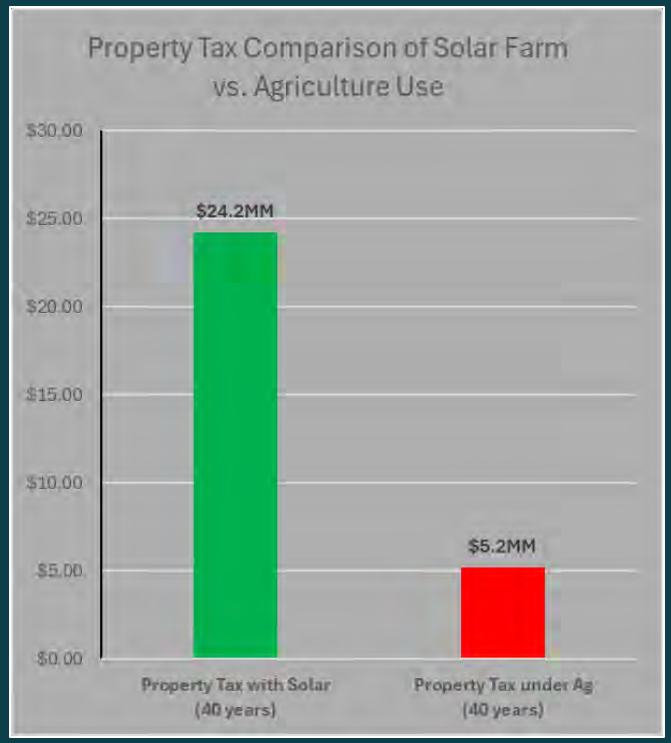
- Unlike traditional forms of development, the land can be returned to previous agricultural use (as required by AIMA)

Economic Analysis Projection

- Delta of **+$19MM** of projected property tax revenue over 40 years from passive solar farm existing at the proposed location

Taxing Jurisdiction	Year 1	40 Years
County Govt.	$112,154	$3,013,321
Sidney TWP	$28,780	$773,257
Sidney Road & Bridge	$50,365	$1,353,199
Sidney Fire Protection	$32,337	$868,832
Forest Preserve District	$14,377	$386,268
Parkland College 505	$71,856	$1,930,617
Heritage CUSD #8	$557,760	$14,985,732
Tolono CUSD #7	$36,261	$974,240
	$903,890	**$24,285,466**

*Projections do not consider tax abatement from any taxing jurisdictions



*Total projected taxes to County inclusive of all taxing jurisdictions
*Source: SER Economic Analysis report; dated August 2024

Thank you.

Little Prairie Solar Project Team

Copyright

TECHNICAL CHARACTERISTICS

FREEMAQ MULTI PCSM

REFERENCES		FP4200M2	FP4201M2	FP4200M4	FP4201M4
AC	AC Output Power (kVA/kW) @40°C [1]	4200			
	AC Output Power (kVA/kW) @50°C [1]	3900			
	Operating Grid Voltage (kV)	34.5 kV ±10%	13.8 kV ±10%	34.5 kV ±10%	13.8 kV ±10%
	Operating Grid Frequency (Hz)	60 Hz			
	Current Harmonic Distortion (THDi)	< 3% per IEEE 519			
	Power Factor (cos phi) [2]	0.5 leading ... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Range [3]	934 V - 1500 V			
	Maximum DC Voltage	1500 V			
	DC Voltage Ripple	< 3%			
	Max. DC Continuous Current per Input (A)	2295		1148	
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3 ms			
	Battery Technology	All type of batteries (BMS required)			
	Number of Separate DC Inputs	2		4	
EFFICIENCY & AUX. SUPPLY	Efficiency (Max) (η)	98.00% including MV transformer			
	CEC (η)	97.53% including MV transformer			
CABINET	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2			
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2			
	Weight (lbs)	30865			
	Weight (kg)	14000			
	Type of Ventilation	Forced air cooling			
ENVIRONMENT	Degree of Protection	NEMA 3R			
	Operating Temperature Range [4]	From -25 °C to +60 °C, >50 °C power derating			
	Operating Relative Humidity Range	From 4% to 100% non-condensing			
	Storage Temperature Range	From -15 °C to +40 °C			
	Max. Altitude (above sea level) [5]	2000 m			
CONTROL INTERFACE	Communication Protocol	Modbus TCP			
	Power Plant Controller	Optional. Third party SCADA systems supported.			
	Keyed ON/OFF Switch	Standard			
PROTECTIONS	Ground Fault Protection	Insulation monitoring device			
	Humidity Control	Active heating			
	General AC Protection & Disconn.	MV switchgear (20 or 25 kA)			
	General DC Protection & Disconn.	DC switch-disconnectors [6]			
	Overvoltage Protection	Type II for AC and Type I+II for DC			
CERTIFICATIONS & STANDARDS	Safety	UL 1741 / CSA 22.2 No.107.1-16			
	Installation	NEC 2020			
	Utility Interconnect [7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020			

[1] Values at 1.00·Vac nom and cosφ=1.
Consult Power Electronics for derating curves.

[2] Consult P-Q charts available: $Q(kVAr)=\sqrt{(S(kVA)^2-P(kW)^2)}$.

[3] Consult Power Electronics for derating curves.

[4] Optional available for temperatures down to -35 ºC.

[5] Consult Power Electronics for altitudes above 1000 m.

[6] Battery short circuit disconnection must be done on the battery side.

[7] Consult Power Electronics for other applicable standards / grid codes.

TECHNICAL CHARACTERISTICS

FREEMAQ MULTI PCSM

REFERENCES		FP4105M2	FP4105M4
AC	AC Output Power (kVA/kW) @40°C [1]	4105	
	AC Output Power (kVA/kW) @50°C [1]	3810	
	Operating Grid Voltage (kV)	34.5 kV ±10%	
	Operating Grid Frequency (Hz)	60 Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE 519	
	Power Factor (cos phi) [2]	0.5 leading … 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range [3]	913 V - 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	< 3%	
	Max. DC Continuous Current per Input (A)	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3 ms	
	Battery Technology	All type of batteries (BMS required)	
	Number of Separate DC Inputs	2	4
EFFICIENCY & AUX. SUPPLY	Efficiency (Max) (η)	97.93% including MV transformer	
	CEC (η)	97.50% including MV transformer	
CABINET	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2	
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2	
	Weight (lbs)	30865	
	Weight (kg)	14000	
	Type of Ventilation	Forced air cooling	
ENVIRONMENT	Degree of Protection	NEMA 3R	
	Operating Temperature Range [4]	From -25 °C to +60 °C, >50 °C power derating	
	Operating Relative Humidity Range	From 4% to 100% non-condensing	
	Storage Temperature Range	From -15 °C to +40 °C	
	Max. Altitude (above sea level) [5]	2000 m	
CONTROL INTERFACE	Communication Protocol	Modbus TCP	
	Power Plant Controller	Optional. Third party SCADA systems supported.	
	Keyed ON/OFF Switch	Standard	
PROTECTIONS	Ground Fault Protection	Insulation monitoring device	
	Humidity Control	Active heating	
	General AC Protection & Disconn.	MV switchgear (20 or 25 kA)	
	General DC Protection & Disconn.	DC switch-disconnectors [6]	
	Overvoltage Protection	Type II for AC and Type I+II for DC	
CERTIFICATIONS & STANDARDS	Safety	UL 1741 / CSA 22.2 No.107.1-16	
	Installation	NEC 2020	
	Utility Interconnect [7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020	

[1] Values at 1.00·Vac nom and cosφ=1.
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[6] Battery short circuit disconnection must be done on the battery side.

[7] Consult Power Electronics for other applicable standards / grid codes.

TECHNICAL CHARACTERISTICS

FREEMAQ MULTI PCSM

REFERENCES		FP4010M2	FP4010M4
AC	AC Output Power (kVA/kW) @40°C [1]	4010	
	AC Output Power (kVA/kW) @50°C [1]	3720	
	Operating Grid Voltage (kV)	34.5 kV ±10%	
	Operating Grid Frequency (Hz)	60 Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE 519	
	Power Factor (cos phi) [2]	0.5 leading … 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range [3]	891 V – 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	< 3%	
	Max. DC Continuous Current per Input (A)	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3 ms	
	Battery Technology	All type of batteries (BMS required)	
	Number of Separate DC Inputs	2	4
EFFICIENCY & AUX. SUPPLY	Efficiency (Max) (η)	97.91% including MV transformer	
	CEC (η)	97.49% including MV transformer	
CABINET	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2	
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2	
	Weight (lbs)	30865	
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	Type of Ventilation	Forced air cooling	
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[3] Consult Power Electronics for derating curves.

[4] Optional available for temperatures down to -35 ºC.

[5] Consult Power Electronics for altitudes above 1000 m.

[6] Battery short circuit disconnection must be done on the battery side.

[7] Consult Power Electronics for other applicable standards / grid codes.

DECOMMISSIONING PLAN

Little Prairie Solar
Champaign County, IL

Prepared for:

Little Prairie Solar, LLC

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Attn: David Holly

Prepared By:

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Prepared on: June 3, 2024

Revised on: August 28, 2024

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1.0 INTRODUCTION

Background

Little Prairie Solar, LLC (Project Company) is developing the Little Prairie Solar Project (Project) on approximately 1,047 acres of land. The Project will be located within Sidney Township, Champaign County, Illinois. Refer to **Exhibit B: Special Use Permit Plans** of the Special Use Permit Application Package for general location and Project layout.

The Project is located north of County Road 800 N Road, west of County Road 2400 E, east of County Road 2100 E (S Bryant St), and south of County Road 1000 N. In existing conditions, the site is agricultural land. The Project area is located within a Zone X, area of minimal flood risk, as classified by the Federal Emergency Management Agency (FEMA).

This Decommissioning Plan is developed in compliance with the Agricultural Impact Mitigation Agreement (AIMA) as well as the Champaign County Zoning Ordinance. Refer to **Exhibit O** of the Special Use Permit Application Package for the Project's executed AIMA.

This Plan covers the following elements:

- Removal of structures and foundations
- Stabilization and restoration of soil and vegetation
- Repairing any damage to drain tiles and other drainage systems
- Repairs to any streets that damage occurs from a result of decommissioning, which is not already covered in the road maintenance agreement

Per section 17.B. of the signed AIMA, if the Project ceases to perform its intended function for more than six (6) consecutive months, the Project will be removed within twelve (12) months, and the site restored in accordance with the decommissioning plan.

Kimley»Horn

2.0 PROJECT COMPONENTS

The Project Components that are subject to decommissioning include the equipment summarized below. The decommissioning activities associated with these components are discussed in Section 3.0 of this Plan.

PV Equipment Installation

The Project will use approximately 335,634 Solar Photovoltaic (PV) modules mounted on single axis trackers installed on steel pile foundations.

Internal Power Collection System

Since the final engineering design has not been completed as of the date of this decommissioning plan, a site of similar size was used to derive potential quantities for AC/DC cables (scaling from 150 MW to 135 MW). The PV-generated DC power will be collected from each of the multiple rows of PV modules through one or more combiner boxes and conveyed to inverters. The inverters will convert the DC power to AC power. Project substations will be constructed to convert the electricity voltage, as necessary. A proposed battery storage yard will also be constructed as part of this Project. The Project Substation will connect to Ameren's Sidney Switchyard. All 35 Inverters, 58 PCS Stations, and PV combining switchgear will be mounted on concrete pad or steel pile foundations.

Earthwork

It is anticipated that the site will require minimal grading for the Project. Site grading and drainage will be conducted in accordance with Final Civil Construction plans. The project aims to minimize earthwork to the greatest extent possible in the final civil plans to best protect existing topsoil and align with the requirements of AIMA. To comply with Section 5. of the AIMA during grading, topsoil will be removed and stockpiled, then later applied to the graded areas to preserve topsoil. The same grading procedure will occur for any grading that may be required during decommissioning.

Roads

There will be multiple access points to the Project via County Road 2200 E, County Road 2300 E, County Road 2400 E, and County Road 900 N. The site access points will be constructed in accordance with Champaign County and/or Township requirements. The total surface area of on-site access roads equates to approximately 20 acres and will be comprised of compacted dirt or gravel in accordance with the Final Geotechnical Report. Culverts may be required at each entrance and will be determined/designed as part of final engineering.

Fencing

The Project site will be fenced with 82,307 linear feet of at least a seven-foot-high cyclone type or chain link type fence for security purposes. An entry gate will be provided at all site access points.

3.0 PROJECT DECOMMISSIONING AND RECYLCING

Decommissioning includes removal of above-ground and below-ground structures as well as proper soil restoration relating to the Solar PV portions of the Project. Temporary erosion and sedimentation control Best Management Practices will be implemented during the decommissioning phase of the Project. The age of decommissioning of this estimate is 40 years.

Decommissioning Preparation

The first step in the decommissioning process will be to assess existing site conditions and prepare the site for demolition. Onsite storage area(s) will be established, for collection and temporary storage of demolition debris, pending final transportation and disposal and/or recycling according to the procedures below.

Permits and Approvals

It is anticipated that an NPDES Permit from the Illinois Environmental Protection Agency (IEPA) and a SWPPP will be required. The site is not anticipated to impact Waters of the United States. Appropriate applications for permits will be submitted and approved prior to decommissioning activities, including any permits required through the Soil and Water Conservation District, Sidney Township, and Champaign County.

PV Equipment Removal and Recycling

During decommissioning, Project components that are no longer needed will be removed from the site and recycled or disposed of at an appropriately licensed disposal facility. Above ground portions of the PV module supports will be removed. Below ground portions of the PV module supports will be removed entirely where practical, but to a depth of five feet at a minimum per AIMA requirements. Those supports that are more firmly anchored (e.g., such as embedded in bedrock) may be cut off at least five feet below ground or to the depth of bedrock, and the remaining support left in place. This depth will avoid impact of underground equipment on future farming or other construction activities. The demolition debris and removed equipment may be cut or dismantled into pieces that can be safely lifted or carried with the onsite equipment being used. The debris and equipment will be processed for transportation and delivery to an appropriately licensed disposal facility or recycling center. Modules will be disposed of or recycled in accordance with local, state, and federal regulations.

Internal Power Collection System

The combiner boxes, cables, inverters, and transformers will be dismantled. The concrete foundations will be broken up, removed, and recycled. Per Section 6.1.5.Q.(3)h. of the Champaign County Zoning Ordinance, the Project's removal depth of concrete foundations does not need to be certified and submitted to the zoning administrator since this plan proposes the removal of all concrete foundation in its entirety.

If ground-screw or steel foundations are used, they will be removed and recycled. The underground cable and conduit will be removed at a depth up to five feet, per the AIMA and Section 6.1.5.Q.(3)i. of Champaign County code. Overhead conductors will be removed from the poles, and the poles and pole foundations will be removed. Aluminum from the conductors will be recycled or removed from the site to an appropriately licensed disposal facility. All components of the Project substation and battery energy storage system including, but not limited to, foundations, buildings, batteries, gravel yard rock, fences, machinery, equipment, cabling, and connections to transmission lines will be removed.

Roads

Unless requested in writing by the landowner, gravel from on-site access roads will be removed and recycled. Once the gravel is removed, the soil below the gravel along compacted dirt access roads shall be scarified a depth of 18-inches and blended, as noted in the Site Restoration section below. Per Section 6.1.5.Q.(2) of the Champaign County Zoning Ordinance, the Project Company acknowledges financial responsibility to repair any public street damaged during the reclamation of the solar farm.

Fencing

Unless requested in writing by the landowner, Project site perimeter fence will be removed at the end of the decommissioning Project. Since the Project site is not currently fenced, this includes removal of all posts, footings, fencing material, gates, etc. to return the site to pre-Project condition.

Landscaping

Unless requested in writing by the landowner to be removed, all vegetative landscaping and screening installed as part of the Project will be left in place. Landscape areas in which landscaping is removed will be restored as noted in the Site Restoration section below.

Site Restoration

Once removal of all Project equipment and landscaping is complete, all areas of the Project site that were traversed by vehicles and construction and/or decommission equipment that exhibit compaction and rutting will be restored by the Project Company. All prior agricultural land shall be ripped at least 18 inches deep or to the extent practicable and all pasture will be ripped at least 12 inches deep or to the extent practicable. The existence of drain tile lines or underground utilities may necessitate less ripping depth. Once this is complete, seed will be distributed for the establishment of vegetative land cover.

4.0 FUTURE LAND USE

Per the requirements of the Illinois Department of Agriculture (IDOA), an Agricultural Impact Mitigation Agreement (AIMA) must be signed by the Facility owner and filed the County Board prior to the Commencement of Construction. The IDOA prepared the AIMA to help preserve the integrity of any Agricultural Land that is impacted by the Construction and Decommission of a Commercial Solar Energy Facility. Per the AIMA, all solar panels shall be removed from the property and the land must be restored to its pre-existing condition for agricultural use at the end of the Project life cycle. This Decommission Plan is consistent with the AIMA requirements to return the land to its pre-Project conditions, suitable for agricultural use.

5.0 ADDITIONAL CHAMPAIGN COUNTY REQUIREMENTS

The Project Company shall comply with all decommissioning requirements of the Champaign County Zoning Ordinance (as amended through 02/23/2023), pertinent sections as follows.

General Decommissioning Acknowledgments

Per Section 6.1.5.Q.(3), the Project Company acknowledges that:

a. They must notify the governing body by certified mail of the commencement of voluntary or involuntary bankruptcy proceeding, naming the Project Company as debtor, within ten days of commencement of proceeding.

b. They agree that the sale, assignment in fact or law, or such other transfer of Project Company's financial interest in the PV Solar Farm shall in no way affect or change the Project Company's obligation to continue to comply with the terms of this plan. Any successor in interest, assignee, and all parties to the decommissioning and site reclamation plan shall assume the terms, covenants, and obligations of this plan and agrees to assume all reclamation liability and responsibility for the PV Solar Farm.

c. They must authorize the governing body and its authorized representatives to enter the PV Solar Farm premises for the purpose of inspecting the methods of reclamation or for performing actual reclamation if necessary.

d. They must enter into a Roadway Use and Repair Agreement with the relevant highway authority at the time of decommissioning. *(Requirement for the Project Company, its successors in interest, and all parties to the decommissioning and site reclamation plan)*

e. They must provide evidence of any new, additional, or substitute financing or security agreement to the Zoning Administrator throughout the operating lifetime

of the project. *(Requirement for the Project Company, its successors in interest, and all parties to the decommissioning and site reclamation plan).*

f. They must oblige to perform the work in the decommissioning and site reclamation plan before abandoning the PV Solar Farm or prior to ceasing production of electricity from the PV Solar Farm, after it has begun, other than in the ordinary course of business. This obligation shall be independent of the obligation to pay financial assurance and shall not be limited by the amount of financial assurance. The obligation to perform the reclamation work shall constitute a covenant running with the land. *(Requirement for the Project Company, its successors in interest, and all parties to the decommissioning and site reclamation plan).*

g. They must provide payment for any associated costs that Champaign County may incur in the event that decommissioning is actually required. Associated costs include all administrative and ancillary costs associated with drawing upon the financial assurance and performing the reclamation work and shall include but not be limited to: attorney's fees; construction management and other professional fees; and the costs of preparing requests for proposals and bidding documents required to comply with State law or Champaign County purchasing policies.

h. *See proof of compliance in Section 3.0 of this Decommissioning Plan*.

i. *See proof of compliance in Section 3.0 of this Decommissioning Plan*.

j. Any holes left behind as a result of concrete foundation removal during decommissioning must be backfilled as follows:
   (a) The excavation resulting from the removal of foundation concrete shall only be backfilled with subsoil and topsoil in similar depths and similar types as existed at the time of the original PV Solar Farm construction except that a lesser quality topsoil or a combination of a lesser quality topsoil and a subsoil that is similar to the native subsoil may be used at depths corresponding to the native subsoil but not less than 12 inches below grade
   (b) The native soils excavated at the time of the original PV Solar Farm construction may be used to backfill the concrete foundation excavations at the time of decommissioning provided that the soils are adequately stored throughout the operating lifetime of the PV Solar Farm. The methods for storing the excavated native soils during the operating lifetime of the PV Solar Farm shall be included in the decommissioning and site reclamation plan.
   (c) If the excavated native soils are not stored for use for backfilling the concrete foundation excavations, a qualified soil scientist of Illinois Licensed Professional Engineer shall certify that the actual soils used to backfill the concrete foundation excavations are of equal or greater quality than the native soils or that, in the case of subsoil, the backfill soil meets the requirements of this paragraph. The certification shall be submitted to the Zoning Administrator.

(d) An Illinois Licensed Professional Engineer shall certify in writing that the concrete foundation excavations have been backfilled with soil to such a depth and with a minimum of compaction that is consistent with the restoration of productive agricultural use such that the depth of soil is expected to be no less than 54 inches within one year after backfilling.

k. Should the decommissioning and site reclamation plan be deemed invalid by a court of competent jurisdiction the PV Solar Farm Special Use Permit shall be deemed void.

l. The Project Company has obligation to complete the decommissioning and site reclamation plan and to pay all associated costs shall be independent of the Project Company's obligation to provide financial assurance.

m. The liability of the Project Company's failure to complete the decommissioning and site reclamation plan or any breach of the decommissioning and site reclamation plan requirement shall not be capped by the amount of financial assurance.

n. If the Project Company desires to remove equipment or property credited to the estimated salvage value without the concurrent replacement of the property with property of equal or greater salvage value, or if the Project Company installs equipment or property increasing the cost of decommissioning after the PV Solar Farm begins to produce electricity, at any point, the Project Company shall first obtain the consent of the Zoning Administrator. If the Project Company's lien holders remove equipment or property credited to the salvage value, the Project Company shall promptly notify the Zoning Administrator. In either of these events, the total financial assurance shall be adjusted to reflect any change in total salvage value and total decommissioning costs resulting from any such removal or installation.

Financial Assurance Acknowledgments

Per Sections 6.1.5.Q.(4)(c.-i.), the Project Company acknowledges the following:

c. The governing body has the right to require multiple letters of credit based on the regulations governing federal insurance for deposits.

d. The Project Company, its successors in interest, and all parties to the decommissioning and site reclamation plan shall adjust the amount of the financial assurance to ensure that it reflects current and accurate information as follows:

(a) At least once every three years for the first 12 years of the financial assurance and at least once every two years thereafter or, if the PV Solar Farm modules have an unlimited warranty of a least 10 years and also have a limited power warranty to provide not less than 80% nominal power output up to 25 years and proof of that warranty is provided at the time of Zoning Use Permit approval, then at least once every five years for the first

25 years of the financial assurance and at least once every two years thereafter, the Project Company, its successors in interest, and all parties to the decommissioning and site reclamation plan shall use an independent Illinois Licensed Professional Engineer to provide updated estimates of decommissioning costs and salvage value, by including any changes due to inflation and/or change in salvage price. The Project Company, its successors in interest, and all parties to the decommissioning and site reclamation plan shall, upon receipt, provide a copy of the adjusted Professional Engineer's report to the Zoning Administrator.

(b) At all times, the value of the irrevocable letter of credit shall equal or exceed the amount of the independent engineer's cost estimate as increased by known and documented rates of inflation based on the Consumer Price Index since the PV Solar Farm was approved.

e. The long-term corporate debt (credit) rating of the letter of credit issuing financial institution by both Standard & Poor's Financial Services LLC (S&P) and Moody's Investors Service (Moody's) shall be equal to or greater than the minimum acceptable long term corporate debt (credit) rating, as follows:
   (a) The Zoning Administrator shall verify the long-term corporate debt (credit) rating of the proposed financial institution by Standard and Poor's Financial Services LLC (S&P) and/or Moody's Investors Service (Moody's) and/or the Kroll Bond Rating Agency
   (b) The minimum acceptable long term corporate debt (credit) rating of the proposed financial institution shall be a rating of "A-" by S&P or a rating of "A3" by Moody's, or a rating of "A-" by Kroll Bond Rating Agency.
   (c) Whenever the most current long term corporate debt (credit) rating of the proposed financial institution by either S&P, Moody's, or Kroll Bond Rating Agency is lower than the minimum acceptable long term corporate debt (credit) rating, the letter of credit shall be replaced with a new irrevocable letter of credit from an issuing financial institution whose most current long term corporate debt (credit) rating by either S&P, Moody's, or Kroll Bond Rating Agency meets or exceeds the minimum acceptable long term corporate debit (credit) rating.

f. At all times the value of the irrevocable letter of credit shall be increased annually as necessary to reflect actual rates of inflation over the life span of the PV Solar Farm and the amount shall be equal to or exceed 125% of the amount of the independent engineer's cost estimate as increased by known and documented rates of inflation since the PV Solar Farm was approved.

g. Should the salvage value of components be adjusted downward or the decommissioning costs adjusted upward pursuant to paragraph 6.1.5Q.4.d., the amount of the irrevocable letter of credit pursuant to this paragraph 6.1.5Q.4. shall be increased to reflect the adjustment, as if the adjusted estimate were the initial estimate.

h. Any financial assurance required per the Agricultural Impact Mitigation Agreement with the Illinois Department of Agriculture as required by paragraph 6.1.5R. shall count towards the total financial assurance required for compliance with paragraph 6.1.1A.5.

i. Unless the Governing Body approves otherwise, the Champaign County State's Attorney's Office shall review and approve every Letter of Credit prior to acceptance by the Zoning Administrator.

Per Section 6.1.5.Q.(5), the Project Company acknowledges that the Administrator may also draw on the funds for the following reasons:

a. In the event that any PV Solar Farm or component thereof ceases to be functional for more than six consecutive months after it starts producing electricity and the Owner is not diligently repairing such PV Solar Farm or component.

b. In the event that the Owner declares the PV Solar Farm or any PV Solar Farm component to be functionally obsolete for tax purposes.

c. There is a delay in the construction of any PV Solar Farm of more than 6 months after construction on that PV Solar Farm begins.

d. Any PV Solar Farm or component thereof that appears in a state of disrepair or imminent collapse and/or creates an imminent threat to the health or safety of the public or any person.

e. Any PV Solar Farm or component thereof that is otherwise derelict for a period of 6 months.

f. The PV Solar Farm is in violation of the terms of the PV Solar Farm Special Use Permit for a period exceeding ninety (90) days.

g. The Project Company, its successors in interest, and all parties to the decommissioning and site reclamation plan has failed to maintain financial assurance in the form and amount required by the Special Use Permit or compromised the county's interest in the decommissioning and site reclamation plan.

h. The county discovers any material misstatement of fact of misleading omission of fact made by the Project Company in the course of the Special Use Permit Zoning Case.

The Project Company has either failed to receive a copy of the certification of design compliance required by paragraph 6.1.5D. or failed to submit it to the county within 12 consecutive months of receiving a Zoning Use Permit regardless of the efforts of the Project Company to obtain such certification.

Per Section 6.1.5.Q.(6), the Project Company acknowledges that the Zoning Administrator may, but is not required to, deem the PV Solar Farm abandoned, or the standards set forth in Section 6.1.5Q.5. met, with respect to some, but not all, of the PV Solar Farm. In that event, the Zoning Administrator may draw upon the financial assurance to perform the reclamation work as to that portion of the PV Solar Farm only. Upon completion of that reclamation work, the salvage value and reclamation costs shall be recalculated as to the remaining PV Solar Farm.

Per Section 6.1.5.Q.(7), the Project Company acknowledges that the decommissioning and site reclamation plan shall be included as a condition of approval by the Board and the signed and executed irrevocable letter of credit and evidence of the escrow account must be submitted to the Zoning Administrator prior to any Zoning Use Permit approval.

6.0 PROJECT DECOMMISSION COSTS AND FINANCIAL ASSURANCE

Upon approval and issuance of a Photovoltaic (PV) Solar Farm County Board Special Use Permit, Section 6.1.5.Q.(4) of the Champaign County Zoning Ordinance (as amended through 02/23/2023) requires the Project Company to provide financial assurance in the form of an irrevocable letter of credit in an amount sufficient to cover 125% of the decommissioning cost. The financial security shall be in an amount determined by the County, and agreed upon by the Project, to be reasonably sufficient to restore the property to its previous condition prior to construction and operation of the solar farm. To aid in this, a project decommissioning cost estimate was created. See **Appendix A: Opinion of Probable Construction Cost with Salvage**. Industry standard prices in 2024 for removal costs were determined using RS Means cost data. Removal costs includes materials, contractor installation/demolition, mobilization and demobilization, overhead and profit, and performance bonding. Material salvage values were based off of current US salvage exchange rates.

Net salvage was deducted from the total estimated decommissioning cost in accordance with Section 6.1.5.Q.(4)b. of the ordinance as follows:

(a) The Project Company will meet one of the following standards:
   i. The Project Company, its successors in interest, and all parties to the decommissioning and site reclamation plan shall maintain the PV Solar Farm free and clear of liens and encumbrances, including financing liens and shall provide proof of the same prior to issuance of the Special Use Permit; or
   ii. The Project Company, its successors in interest, and all parties to the decommissioning and site reclamation plan shall deduct from the salvage vale credit the amount of any lien or encumbrance on the PV Solar Farm; or

iii. Any and all financing and/or financial security agreements entered into by the Project Company, its successors in interest, and all parties to the decommissioning and site reclamation plan shall expressly provide that the agreements are subject to the covenant required by Section 6.1.1A.2 that the reclamation work be done.

(b) The Project Company, its successors in interest, and all parties to the decommissioning and site reclamation plan shall provide proof of compliance with paragraph 6.1.5Q.4.b.(1). prior to the issuance of any Zoning Use Permit and upon every renewal of the financial assurance and at any other time upon the request of the Zoning Administrator.

(c) The Project Company, its successors in interest, and all parties to the decommissioning and site reclamation plan shall provide in the decommissioning and site reclamation plan for legal transfer of the structure to the demolisher to pay the costs of reclamation work, should the reclamation work be performed.

(d) The net estimated salvage value that is deducted from the estimated decommissioning costs shall be the salvage value that results after all related costs for demolition and any required preparation for transportation for reuse or recycling or for simple disposal and other similar costs including but not limited to the decommissioning of the PV Solar Farm Structures, equipment, and access roads.

(e) Estimated salvage value shall be based on the average salvage price of the past five years as published in a reputable source for salvage values and shall reflect sound engineering judgement as to anticipated changes in salvage prices prior to the next update of estimated net salvage value.

(f) The deduction from the estimated decommissioning costs for net estimated salvage value shall be capped at 70% of the total net estimated salvage value even though the total actual salvage value shall be available in the event that decommissioning is actually required.

(g) The total financial assurance after deduction of the net estimated salvage value shall not be less than $1,000 per acre.

(h) The credit for net estimated salvage value attributable to any PV Solar Farm may not exceed the estimated cost of removal of the above-ground portion of that PV Solar Farm on the subject site

APPENDIX A

Opinion of Probable Construction Cost With Salvage

Little Prairie Solar LLC
Champaign County, IL
Decommissioning Estimate Pro Forma w/ Salvage

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs. LS = Lump Sum, HR = Hours, EA = Each, LF = Linear Feet, AC = Acres, LB = Pounds.

Item	Quantity	Unit	Unit Price	Total Salvage	Total Price (incl. markups)	Total Price
Mobilization	1	LS		$ -	$ 225,730	$ (225,730)
Supervision	653	HR	$93.00	$ -	$ 60,729	$ (60,729)
Temporary Facilities	1	LS		$ -	$ 25,980	$ (25,980)
Safety	1	LS		$ -	$ 17,600	$ (17,600)
Legal Expenses	1	LS		$ -	$ 4,610	$ (4,610)
General Liability Insurance	1	LS		$ -	$ 18,850	$ (18,850)
Contractor's G&A	1	LS		$ -	$ 35,610	$ (35,610)
SWPPP, Erosion Control Measures (Disturbed Area)	785	AC	$670.00	$ -	$ 525,950	$ (525,950)
Seeding	40	AC	$2,814.09	$ -	$ 111,157	$ (111,157)
Tilling 6" topsoil/scarifying access road and rough grading existing soil	22	AC	$3,286.55	$ -	$ 72,304	$ (72,304)
Remove and Recycle Chainlink Fence	82,307	LF	$5.02	$ 44,545	$ 413,404	$ (368,859)
Disconnection and Demolition of Switchyard/Substation Equipment	1	EA	$175,167.42	$ 35,033	$ 175,167	$ (140,134)
Remove and Recycle AC Cables	210,080	LF	$0.29	$ 34,348	$ 60,778	$ (26,430)
Remove and Recycle DC Cables	934,536	LF	$0.19	$ 152,797	$ 173,330	$ (20,534)
Backfill AC and DC trenches	85,520	LF	$0.41	$ -	$ 35,272	$ (35,272)
Remove and Recycle Inverters	35	EA	$490.61	$ 189,000	$ 17,171	$ 171,829
Remove and Recycle PCS Station (BESS Inverters)	58	EA	$381.79	$ 42,000	$ 22,144	$ 19,856
Remove and Recycle Photovoltaic Modules	334,022	EA	$4.94	$ 1,048,881	$ 1,650,069	$ (601,188)
Remove and Recycle Piles	67,500	EA	$4.71	$ 831,600	$ 317,925	$ 513,675
Remove and Recycle Support Assemblies	10,416,843	LB	$0.06	$ 1,145,853	$ 614,123	$ 531,729
Remove BESS Batteries	174	EA	$1,871.98	$ -	$ 325,725	$ (325,725)
Remove Vegetative Screening	5	AC	$37,260.00	$ -	$ 200,086	$ (200,086)
Reclaim Stormwater Basin and Grade to Predevelopment Conditions	5	AC	$1,500.00	$ -	$ 6,765	$ (6,765)
			Subtotal:	**$ 3,524,056**	**$ 5,110,480**	**$ 2,643,641**
			Max Salvage (70% of Net Value):	**$ 2,466,839**		

Administrative Cost Contingency (2.5% of Total Demolition Cost):	**$ 127,762**
Demolition Cost Contingency (25% of Total Demolition Cost):	**$ 1,277,620**
Total Decommissioning Cost with MaxSalvage and Contingencies:	**$ 4,049,023**
Minimum Financial Assurance ($1,000/acre):	**$ (785,000)**
Financial Assurance (125% of Total Decommissioning Cost with Salvage and Contingencies):	**$ 5,061,279**

Notes:
1. Quantities were recorded on 08/16/2024.
2. Equipment rental rates and labor productivity and unit rates were derived from RSMeans Online (Heavy Construction, 2024 data).
3. Labor, material, and equipment rates are based on the RSMeans City Cost Index (CCI) for Champaign.
4. PV Module Removal/Recycle labor and equipment costs are computed at present values.
5. The age at decommissioning of this estimate is 40 years.
6. This estimate assumes 500 piles per MWac.
7. This estimate assumes 77,162 LB of support assemblies per 1 MW output.
8. Material salvage values were based off of current US salvage exchange rates.
9. Photovoltaic Module material salvage rate is based on straight-line depreciation of modules (-0.5% per year).
10. Material salvage values were determined using the most prevalent salvageable metal in each component. Copper Wire @$0.16/LF (AC and DC
11. Inverter resale value is dependent on the assumption that all inverters will be decommissioned and resold half way through their useful life (every 5 years).