Review and Evaluation of the MYSO, LLC Site Assessment Report

Kentucky Public Service Commission and Kentucky State Board on Electrical Generation and Transmission Siting

May 20, 2026

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May 20, 2026

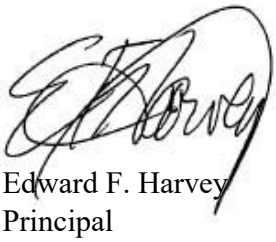
Ms. Nicole Carr
Kentucky Public Service Commission
211 Sower Blvd.
Frankfort, KY 40601

Re: Harvey Economics' Review of MYSO, LLC's Site Assessment Report for Facilities in Graves County, Kentucky

Dear Ms. Carr,

Harvey Economics is pleased to provide you with our final report, *Review and Evaluation of the MYSO, LLC Site Assessment Report.*

Yours truly,



Edward F. Harvey
Principal

Report

May 20, 2026

Review and Evaluation of the MYSO, LLC Site Assessment Report

Prepared for

Kentucky Public Service Commission and
Kentucky State Board on Electrical Generation and Transmission Siting
211 Sower Boulevard
Frankfort, Kentucky 40602

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Table of Contents

Table of Contents (Continued)

SECTION 6: Recommended Mitigation

APPENDIX A

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

EXHIBITS

Table of Contents (Continued)

SECTION 1
Introduction

This document provides a review of the Site Assessment Report (SAR) for the proposed MYSO, LLC solar facility ("Mayfield Solar" or "Project") submitted to the Kentucky State Board on Electric Generation and Transmission Siting (Siting Board). Mayfield Solar submitted the SAR as part of its application for a construction certificate to construct a merchant electric generating facility under KRS 278.706 and 807 KAR 5:110 on January 28, 2026. Siting Board staff retained Harvey Economics (HE) to perform a review of the SAR. Requirements specific to the SAR are defined under KRS 278.708, detailed below.

Statutes Applicable to the SAR Review

KRS 278.706 outlines the requirements for an application to receive a certificate to construct a merchant electric generating facility. Section (2)(l) of that statute requires the Applicant to prepare a SAR, as specified under KRS 278.708. The Mayfield Solar SAR is the main focus of HE's review. However, the Siting Board also requested that HE review other materials prepared by the Applicant, including the economic impact report. The economic impact report is a requirement of the application under KRS 278.706(2)(j), separate from the SAR.

KRS 278.708(3) states that a completed site assessment report shall include:

(a) A description of the proposed facility that shall include a proposed site development plan that describes:

1. Surrounding land uses for residential, commercial, agricultural, and recreational purposes;
2. The legal boundaries of the proposed site;
3. Proposed access control to the site;
4. The location of facility buildings, transmission lines, and other structures;
5. Location and use of access ways, internal roads, and railways;
6. Existing or proposed utilities to service facility;
7. Compliance with applicable setback requirements as provided under KRS 278.704(2), (3), (4), or (5); and
8. Evaluation of the noise levels expected to be produced by the facility.

(b) An evaluation of the compatibility of the facility with scenic surroundings;

(c) The potential changes in property values and land use resulting from the siting, construction, and operation of the proposed facility for property owners adjacent to the facility;

(d) Evaluation of anticipated peak and average noise levels associated with the facility's construction and operation at the property boundary; and

(e) The impact of the facility's operation on road and rail traffic to and within the facility, including anticipated levels of fugitive dust created by the traffic and any anticipated degradation of roads and lands in the vicinity of the facility.

KRS 278.708(4) states that "the site assessment report shall also suggest any mitigating measures to be implemented by the applicant to minimize or avoid adverse effects identified in the site assessment report."

KRS 278.706(2)(j) states that a completed application shall include "an analysis of the proposed facility's economic impact on the affected region and the state."

KRS 278.706(2)(d) addresses specific setback requirements, as related to distances from adjacent property owners of various types (i.e., residential neighborhoods, schools, hospitals, nursing homes).

SAR Review Process and Methodology

HE completed the following tasks as part of the review of the Mayfield Solar SAR and certain other components of the Mayfield Solar application:

- Review of the contents and information provided in the site assessment report, application and other documents provided by the Applicant;
- Brief review of secondary data sources to obtain background information and geographic setting for the Mayfield Solar Project;
- Limited review of relevant evaluation criteria to identify potential issues and assessment approaches to serve as benchmarks for the adequacy review;
- Identification of additional information we deemed useful for a thorough review, and submittal of questions to the Applicant via Kentucky Public Service Commission General Counsel;
- Review of additional information supplied by the Applicant in response to the first set of submitted HE questions, and discussion of responses with the Siting Board staff;
- Completion of interviews and data collection with outside sources as identified in this document;
- Participation in a site visit, including a tour of the Project site with the Applicant and in-person meetings with local officials;

- Review of additional information supplied by the Applicant in response to a second set of questions submitted by HE, and discussion of responses with the Siting Board staff;
- Completion of analyses and evaluation of the impacts upon each of the previous identified resources; and
- Preparation of this report, which provides HE's conclusions as to potential Project impacts and mitigation recommendations.

Components of the Mayfield Solar Facility Application

Mayfield Solar's application package to the Siting Board (Application) consists of multiple documents, including the SAR and additional reports and studies provided as appendices to the SAR:

- The main Application document provides a summary overview of the Mayfield Solar Project and the Applicant's responses to applicable KRS.
- Exhibits A through G and Exhibit I include, but are not limited to, the following:
    - Description of the proposed site, including maps of the project area;
    - Public notice evidence and report;
    - Compliance with local ordinances, regulations and setback requirements;
    - Effect on Kentucky electricity transmission system;
    - Economic Impact Analysis; and
    - Decommissioning Plan.
- The separate Site Assessment Report (Application Exhibit H) includes Attachments A through F, which include, but are not limited to, Site Plan Maps, Property Value Impact Report, Acoustic Assessment, Glare Hazard Assessment, and Traffic Assessment.
- A Cumulative Environmental Assessment and vegetative screening plan information were provided subsequently to the Application, at the request of the Siting Board.

Additional Information Provided by the Applicant

Once HE reviewed the contents of the Application, including the SAR, HE and the Siting Board staff independently developed an initial list of detailed questions, either requesting additional information or asking for clarification about items in the SAR. The Siting Board staff submitted the first request for information, including questions from HE, on March 12, 2026; Mayfield Solar provided written responses on March 27, 2026.

HE and certain representatives from the Siting Board also met with the Applicant for an in-person meeting on April 9, 2026, to conduct a site visit and discuss remaining issues.

After HE and the Siting Board staff reviewed Mayfield Solar's responses to the first request for information and following the site visit, HE and the Siting Board staff independently developed a second list of detailed questions. The Siting Board staff submitted the second request for information, including questions from HE, on April 22, 2026. Mayfield Solar provided written responses to the second request for information on May 6, 2026.

Report Format

This report is intended to support the Siting Board in its decision-making process pertaining to a construction certificate for Mayfield Solar, LLC. The report is structured to respond to the requirements for a SAR as outlined in KRS 278.708, the economic analysis described in KRS 278.706(j) and to our contract:

- This section of the report, Section 1, introduces the purpose and process of the SAR review and HE's work;
- Section 2 offers a summary and conclusions of HE's SAR evaluation;
- Section 3 describes the Mayfield Solar Project and proposed site development plan;
- Section 4 provides a brief profile of Graves County's economic and demographic characteristics as context for the Project setting;
- Section 5 offers detailed findings and conclusions for each resource area; and
- Section 6 presents recommendations concerning mitigation measures and future Siting Board actions.

Caveats and Limitations

Review limited to resource areas/issues enumerated in the statutes. HE's evaluation of the Mayfield Solar Project is contractually limited to a review of the SAR and other application materials, including the economic impact analysis. Statutes dictate the issues to be covered in the SAR; HE focused on those specific topic areas which are addressed in this report. The Siting Board might have additional interests or concerns related to the construction, sitting, or operation of the Project; those may be addressed in other documents or by other parties.

Level of review detail determined by expert judgement. KRS 278.708 identifies the required components of an SAR; however, the level of scrutiny and detail of the evaluation depends upon expert judgement as to what information is relevant and what level of detail is appropriate. This level of review generally relates to the assessment methodologies, geographic extent of impacts, and the degree of detailed information about the Project as requested by the consultant in follow-up inquiries. Given our experience related to project impact assessments and evaluation of impacts on various resource components, HE believes that we have performed a thorough and comprehensive review of the Mayfield Solar SAR, which we hope will meet the needs of the Siting Board.

Assumption of accurate Applicant data. HE reviewed all the data and information provided by the Applicant as part of the SAR and associated documents, including responses to two sets of inquiries. Although we evaluated Applicant data for consistency and clarity as part of our review, we did not perform any type of audit to confirm the accuracy of the information provided. We assume that the Applicant submissions are an honest representation of the Project, based on the best data available at the time.

Other solar projects / cumulative impacts. In addition to the proposed Mayfield Solar Project, in March 2024, the Siting Board granted the Banjo Creek solar project a construction certificate to construct an approximately 120 MW merchant solar electric generating facility and approximately 2,000-foot nonregulated transmission line in Graves County at a location several miles south of the proposed Mayfield Solar site. That Project has not yet begun construction.

In the interest of full disclosure to the Siting Board and public, HE has not performed any analyses to quantify or to address any potential cumulative impacts on the local area from the construction and operation of the two Projects. The specific development and operation schedules of the projects are unknown at this time.

SECTION 2
Summary and Conclusions

On January 28, 2026, MYSO, LLC (Mayfield Solar or Applicant) applied to the Kentucky State Board on Electric Generation and Transmission Siting (Siting Board) for a construction certificate to construct a merchant electric generation facility and associated nonregulated transmission line. Barrelhead Solar's application (Application) responded to the statutory requirements set forth by the State of Kentucky in KRS 278.706 and 278.708.

The Siting Board retained Harvey Economics (HE) to review and evaluate the Site Assessment Report (SAR) included in the Application, as well as other supporting information provided by the Applicant. In addition to the topic areas included in the SAR, HE also addressed the Applicant's economic impact analysis and the topic of decommissioning. The results and conclusions from HE's review and evaluation are provided below. Recommended mitigation measures are offered in Section 6 of this report.

Facility Description and Site Development Plan

Mayfield Solar proposes to construct an approximately 200-megawatt (MW) merchant electric solar facility on a portion of a 1,500-acre area north of the City of Mayfield in Graves County, Kentucky.

Solar infrastructure will include approximately 521,400 solar panels, associated ground-mounted racking structures, 63 inverter skids and underground electrical conveyance lines; a battery energy storage system is being considered for the Project. A Project substation (collector substation) will connect the Project to the existing Bryan Road substation owned by the Big River Electric Company (BREC) via a 161 kilovolt (kV) nonregulated transmission line approximately five to six miles long.[1] Internal access roads will also be constructed, and perimeter fencing will enclose the solar modules and associated Project infrastructure. The substation and battery storage areas will have separate fencing.

- ***Surrounding land uses*** – The area around the Project site predominantly consists of agricultural land, as well as rural residential properties. Scattered existing vegetation is also present in the area, including trees and shrubs. A church, a small cemetery, and a Masonic Lodge are in close proximity to the Project boundary.
- ***Proximity to homes and other structures*** – A total of 170 residential structures and 307 non-residential structures will be located within 2,000 feet of the Project boundary line. The closest home will be more than 300 feet from a solar panel and further from any inverter or the Project substation. Eight residences will be less than 100 feet from the Project boundary.

[1] A separate application for construction of the Project transmission line will be submitted to the Siting Board.

- ***Locations of structures*** – Solar panels, inverters and collection system cabling will be located across the property. The Project substation, battery energy storage system (BESS) and O&M building will be located within the northeastern portion of the Project site.

- ***Locations of access ways*** – Thirty-two separate entrances will allow access to different areas of the Project site during construction. The number of entrances is expected to be reduced during operations. The main entrance will be located in the northern portion of the Project site near the Substation location. Approximately 93,000 linear feet of gravel roads will be constructed across the Project site for internal mobility. The Project will not use railways for any construction or operational activities.

- ***Access control*** – Each entrance will have its own security gate during construction and operations. The Project solar arrays and other infrastructure will be secured with approximately 161,300 linear feet of perimeter fence, consisting of eight-foot high farm style wire fencing with wooden posts. A security fence meeting National Electric Safety Code (NESC) requirements will secure the substation area. A Project specific Emergency Response Plan will be developed based on the final site layout and input from local law enforcement and emergency responders. The design of the BESS facility will allow for fire-apparatus access.

- ***Utility service*** – Limited water and electric service may be required to provide for the operations and maintenance building. It is anticipated that water service will be obtained from Mayfield Electric & Water Systems, onsite wells, or trucked in from an offsite water purveyor, and that electric service will be obtained from Jackson Purchase Energy Cooperative. Portable chemical toilets will be placed on site for construction workers. No permanent bathroom facilities are anticipated.

- ***Project life*** – The Applicant anticipates a 40-year Project life for the Mayfield Solar facility.

Project construction is expected to occur over a period of up to 24 months. An average of between 100 and 125 workers will be on-site throughout the construction period. Peak construction activity is expected to occur over a period of approximately seven to nine months, requiring approximately 250 construction workers during that period.

Setback requirements and requested deviation. The Applicant has entered a motion for a deviation from the existing setback requirements. HE reviewed this motion and believes that the Project meets the specific statutes of a setback deviation. The Siting Board must determine if these measures are sufficient.

Project Setting

The area immediately surrounding the Project site can be generally described as rural, including agricultural operations, forestland, and a small number of individual residences. The topography of Graves County is characterized by gently rolling plains, gradual uplands, and low-lying stream valleys associated with tributaries of the Tennessee and Ohio River systems. The highest elevation in the county is a ridge between Mayfield Creek and Little Mayfield

Creek at 580 feet. The West Forks Clark River is situated at the lowest elevation where it meets McCracken County at about 321 feet.

Graves County has a current population of about 36,800 people. The County's population has remained fairly stable over the last several decades and is anticipated to decline gradually in the future. The manufacturing sector is the largest employer in Graves County, largely driven by the HVAC industry. The City of Mayfield is a manufacturing hub with its own industrial park. Agriculture and agribusiness remain an important part of the local character and identity in Graves County, with significant contributions to the State's poultry and cattle industries and production of soybeans, corn, and wheat. Many cultural and historical areas draw tourists and support employment in the retail and hospitality sectors.

In terms of economic conditions, per capita income levels are relatively low, compared with the Commonwealth, and County residents currently experience a higher rate of poverty than other areas of Kentucky.

Compatibility with Scenic Surroundings

The Project site and surrounding areas can be described as rural, where the majority of the landscape is agricultural or forested, with rural residential properties scattered throughout. About 87 percent of the acreage adjacent to the Project site is categorized as agricultural or mixed agricultural/ residential. A small portion of the area is developed, including individual single-family homes or churches.

Scenic compatibility focuses largely on Project infrastructure, including solar panels, inverters, fencing, internal roads, the Project substation and BESS area. The shortest distance between a residence and a solar panel is about 300 feet; inverters and the Project substation are further from any residence or other structure. Exhibit 2-1 indicates the distance from residences (within 2,000 of the Project boundary line) to Project infrastructure.

Exhibit 2-1.
Distances between Nearby Residential Structures and the Proposed Mayfield Solar Project Solar Panels, Inverters and Substation

Distance from Residence	Solar Panel	Inverter	Substation / BESS Area
0 - 300 feet	0	0	0
301 - 600 feet	18	0	0
601 - 900 feet	11	4	0
901 - 1,200 feet	13	5	0
1,201 - 1,500 feet	23	15	0
1,501 - 1,800 feet	34	5	0
1,801 - 2,000 feet	19	7	0
Total Homes:	**118**	**36**	**0**

Source: MYSO, LLC, May 2026.

In many areas surrounding the Project site, panels or other infrastructure may be visible from local roadways or residences. However, the area includes some existing natural vegetation in the form of trees and shrubs, and the Applicant has proposed some vegetative screening to further reduce visibility of Project infrastructure from several nearby residences and along portions of a few surrounding roadways.

Vegetative screening and use of anti-glare panels will reduce the potential for glare from solar panels. Given the use of a tracking panel array system, the Applicant's glare study predicted no glare along local roadways and at identified observation points near the Project site.

Given its rural location, existing vegetation and proposed screening, HE believes the Mayfield Solar facility can be considered generally compatible with the existing scenic surroundings for local residents. However, potentially high Project visibility for some neighboring residences and from local roadways at certain locations may be a concern.

Potential Changes in Property Values and Land Use

The Applicant's consultant, Kirkland Appraisals, LLC, provided an extensive database and analysis of property values, transactions, and estimated impacts of solar facilities in diverse locations, concluding that the Mayfield Solar Project would have no effect on residential property values or undeveloped land.

To further assess potential property value impacts, HE: (1) reviewed existing literature related to solar facility impacts; (2) interviewed the Graves County Property Valuation Administrator (PVA) and a Graves County Commissioner; (3) conducted additional evaluation of the data provided by Mr. Kirkland; and (4) examined the potential for impacts to residential and other properties closest to the Project.

Recent studies examining the effects of utility-scale solar facilities on nearby property values are mixed, with some studies indicating decreases in property values, others suggesting increases in property values and still others indicating no impacts to property values. Overall, any changes indicated (positive or negative) were relatively small. Most studies noted that visibility of the facilities (or lack thereof) was an important component of the potential impact to property values. The Applicant has proposed vegetative screening along certain local roadways and other areas within the Project site to reduce visibility of Project infrastructure.

Neither the Graves County PVA nor the Commissioner have heard any concerns from residents regarding potential impacts on property values. The PVA noted that property values and sales prices, for both farmland and residential homes, are continuing to increase at a record pace in the general Project area, potentially due to interest from out-of-state buyers and general lack of developable land due to the existence of floodplains. The PVA suggested that he does not believe that the Project is likely to have a noticeable effect on local property values.

HE's evaluation of the data provided by Mr. Kirkland also suggests that, overall, property values are unlikely to be affected by solar facilities. In evaluating this particular Project, we find that the visual and noise impact to proximate structures will likely be minimized by the existing natural vegetation and proposed vegetative screening. A total of 107 non-participating

homes are located within 2,000 feet of a solar panel; the closest is more than 300 feet from a panel.[2] The Applicant's viewshed analysis identified 52 residences that may have limited views of Project infrastructure (mainly solar panels). Some of those views may be further limited by vegetative screening.

Therefore, HE concludes that negative impacts to property values from this Project are unlikely as a general rule, but that property value impacts are site specific, within a narrow range. This conclusion is predicated on the assumption that the mitigation strategies discussed in Section 6 are adopted by Mayfield Solar and the Siting Board. Mitigation of visual and other effects, with close property owner coordination, can minimize uncertainties related to property values.

Anticipated Peak and Average Noise Levels

Neither the Commonwealth of Kentucky nor Graves County have noise ordinances applicable to this Project. As such, HE adopted the noise recommendations generated by the Environmental Protection Agency and the World Health Organization to gauge acceptable levels of sound.

Construction activities are expected to generate noise emissions greater than 60 decibels (dBA) at neighboring residences during the 18- to 24-month construction period. This level is above standards for annoyance, but the noise will be sporadic and decrease with distance from nearby residences. The pile driving process is the loudest part of the construction process. During that period, unmitigated noise emissions will exceed 80 dBA for 16 residences located within 500 feet of the Project fenceline. Road construction, panel construction, and trenching may also be loud activities. Road and panel construction and trenching activities will only occur in any one location for a relatively short period of time, moving around the Project site until construction is complete. Since these construction activities are not sustained, no hearing loss or long-term annoyance to residents is expected. Substation construction activities may also produce higher levels of noise but will occur more than 2,000 feet from the nearest non-participating residence.

Noise from Project components during operations (inverters, transformer) is not anticipated to result in an increase in the local sound environment. Operational components would emit relatively low sounds during daylight hours and less sound at night. For nearly all nearby residences, operational sound levels would be less than the 50.0 dBA noted by the World Health Organization (WHO) as potentially causing moderate annoyance. One residence belonging to the participating landowner, and three residences who have entered into "Good Neighbor Agreements" (GNAs) with the Applicant will experience operational sound levels of 51 dBA – 52 dBA. Noise from the Project's operational components is not likely to be annoying and may not be noticeable.

[2] In addition to leasing land within the Project boundary from participating landowners, the Applicant has also entered into contractual "Good Neighbor Agreements" (GNAs) with nine adjacent landowners. HE considers the landowners with GNAs to be participating landowners due to the contractual relationship with the Applicant. Together, the participating landowners own 11 residences within 2,000 feet of a solar panel.

Natural vegetation borders some parcels around the Project site; this vegetative buffer will help partially mitigate noise emissions that may be caused by Project construction and operations for homeowners.

Road and Rail Traffic, Fugitive Dust and Road Degradation

The major roads providing access to the Project site are U.S. Highway 45 and Kentucky Route 1241. These roads feed into local roads that provide access to the Project site.

Construction activities will cause noticeable increases in traffic volumes on several local roads, given light existing traffic volumes in the area. These impacts will be temporary, occurring over the anticipated 18- to 24-month construction period, but may be annoying to local residents. Local roads are generally paved, two-lane roads, without shoulders present. Local road conditions vary, some requiring improvements. Vehicle traffic, including commuting workers and heavy deliveries, may also have the potential to cause road degradation. The Applicant has committed to surveying the conditions of local roads before and after Project construction to assess for and fix damage caused by their vehicles. The Applicant does not anticipate improving public roads prior to construction but noted that the unmaintained farm road east of Whittemore Road may require upgrades.

Given the few employees and deliveries required for Project operations, traffic impacts during the operational phase will be minimal.

The Paducah and Louisville (P&L) Railway runs an active spur for freight in Graves County to the east of the Project area. The Project does not anticipate use of the railway for delivery of Project components. As currently proposed, vehicles may potentially travel over two road level railroad crossings to access the site for construction or operation.

Fugitive dust should not be an issue given the large acreage surrounding the Project site, areas of existing vegetation, and the Applicant's commitment to using best practices during construction activities, including the application of water for dust suppression.

Economic Impact Analysis

Construction and operation of the Mayfield Solar facility will provide some limited economic benefits to Graves County and the Commonwealth. Construction employment and income opportunities will be temporary, but local hires will increase employment and income in an area that would benefit from it. The bulk of construction purchases will be made outside of Kentucky, limiting opportunities for local business activity or generation of additional sales tax.

Economic benefits during operations will include employee income and property taxes. Annual property tax payments will be made to Graves County taxing authorities, including the Graves County School District; however, those payments will likely amount to a small percentage of total tax revenues. Operational employment will be minimal, and purchases of materials or supplies will be small on an annual basis. Annual lease payments to participating landowners

and payments made to those with Good Neighbor Agreements will also provide economic benefits, with new household spending supporting a small number of local jobs.

Economic losses during operations focus on the reduction in agricultural activities within Project boundaries, including crop production. The reduced acreage available to agriculture represents about half of one percent of total farmland in Graves County. A small number of jobs and income in the agricultural sector will be lost during the operational period. However, according to the Applicant's economic analysis, the local income lost from reduced agricultural production will be greater than the income generated by facility operations.

Decommissioning activities will also generate a number of temporary jobs and local income opportunities in Graves County, at the end of the 40-year Project life.

Overall, the economic impacts of the Mayfield Solar facility represent a positive, albeit small, contribution to the region when considering the overall effects of construction, operations (including tax revenues) and decommissioning activities.

Decommissioning

The Applicant assumes a useful life of approximately 40 years for the Mayfield Solar facility. The Applicant's Decommissioning Plan includes information about the dismantling and removal of solar facility components, site restoration and decommissioning cost estimates. The Applicant states that they will commit to financial surety in compliance with the specific requirements of Kentucky statutes.

The majority of above- and below-ground Project facilities will be removed from the Project site, including panels, wiring, piles, inverter stations, security fencing, and access roads (unless the landowner requests that internal access roads or fencing remain on-site). Underground cabling (to a depth of three feet) will be removed and salvaged. Site restoration activities include de-compacting subsoils as needed, and restoration and revegetation of disturbed land to pre-construction conditions to the extent practicable. The Applicant will provide a bond or similar financial security to ensure decommissioning occurs once the Project ceases operation.

After site restoration, the land would return to pre-Project uses and property values, thereby eliminating long-term Project-related impacts, compared with simply shuttering the solar facility. The decommissioning process will also add a modest, temporary positive economic stimulus to the region.

Public Outreach and Communication

The Applicant has engaged in various public outreach activities in Graves County and in the Project area, including hosting a public meeting, posting notice in the local newspaper, mailing informational letters to adjacent landowners, and meeting with County officials and local

residents. A Project website has been developed and is publicly available at https://brightnightpower.com/what-we-do/our-projects/mayfield-community/.[3]

The Graves County Property Value Administrator (PVA) and a County Commissioner believe that local residents may be generally aware of the Project; no residents have voiced either general or specific concerns to either the PVA or the County Commissioner at this point. The Commissioner has some general concerns regarding potential road and bridge damage and impacts to residents living south of KY 849 in close proximity to the Project site.

The Applicant should continue to engage with local residents, businesses and others to provide additional information about the Project and respond to questions and concerns. The Project website should also be updated to reflect current Project plans and details.

Complaint Resolution

A Complaint Resolution Plan has not yet been developed for this Project. The Applicant provided a copy of the Frontier Solar Complaint Resolution Plan (another of their projects), stating that a similar plan would be developed for Mayfield prior to construction. That example plan briefly outlines a complaint resolution process. A detailed, Project-specific plan should be developed to address questions, concerns and larger issues that may arise during construction and operations.

Conclusions and Recommendations

Based on our findings related to the specific siting considerations in the statutes and as addressed in this report, HE recommends that the Siting Board approve MYSO, LLC's application for a certificate to construct a merchant electric generating facility. This finding assumes that the Project is developed as described in the SAR and the supplemental information provided, and that the mitigation measures set forth in Section 6 of this report are adopted.

[3] The Project website provides very limited information regarding the Project and does not appear to have been updated since early 2024.

SECTION 3
Project Overview and Proposed Site Development Plan

Project Overview

Mayfield Solar application documents describe the Project as a proposed 200-megawatt (MW) alternating current (AC) merchant electric solar energy generation and storage facility to be located in unincorporated Graves County, Kentucky. The Project site consists of approximately 1,500 acres of leased land. The Project footprint, generally the area within the fence line where the Project infrastructure will be located, includes approximately 1,342 acres.

The Project is located on the east side of U.S. Highway 45, north of the City of Mayfield and near the unincorporated communities of Folsomdale, Viola and West Viola. Kentucky Route 849 runs approximately through the middle of the Project site and Kentucky Route 408 is located on the southern boundary of the Project site. Mayfield Creek runs along the eastern side of the Project site.

The Project would generate electricity through the use of photovoltaic solar panels. The Project includes an estimated 521,416 photovoltaic solar panels, associated racking, 63 inverter skids, 63 inverters, underground electrical conveyance lines, and a Project substation. The current Project design incorporates a battery energy storage system (BESS) facility; however, a final decision regarding the development of such facility as part of this Project has not been made.[4,5]

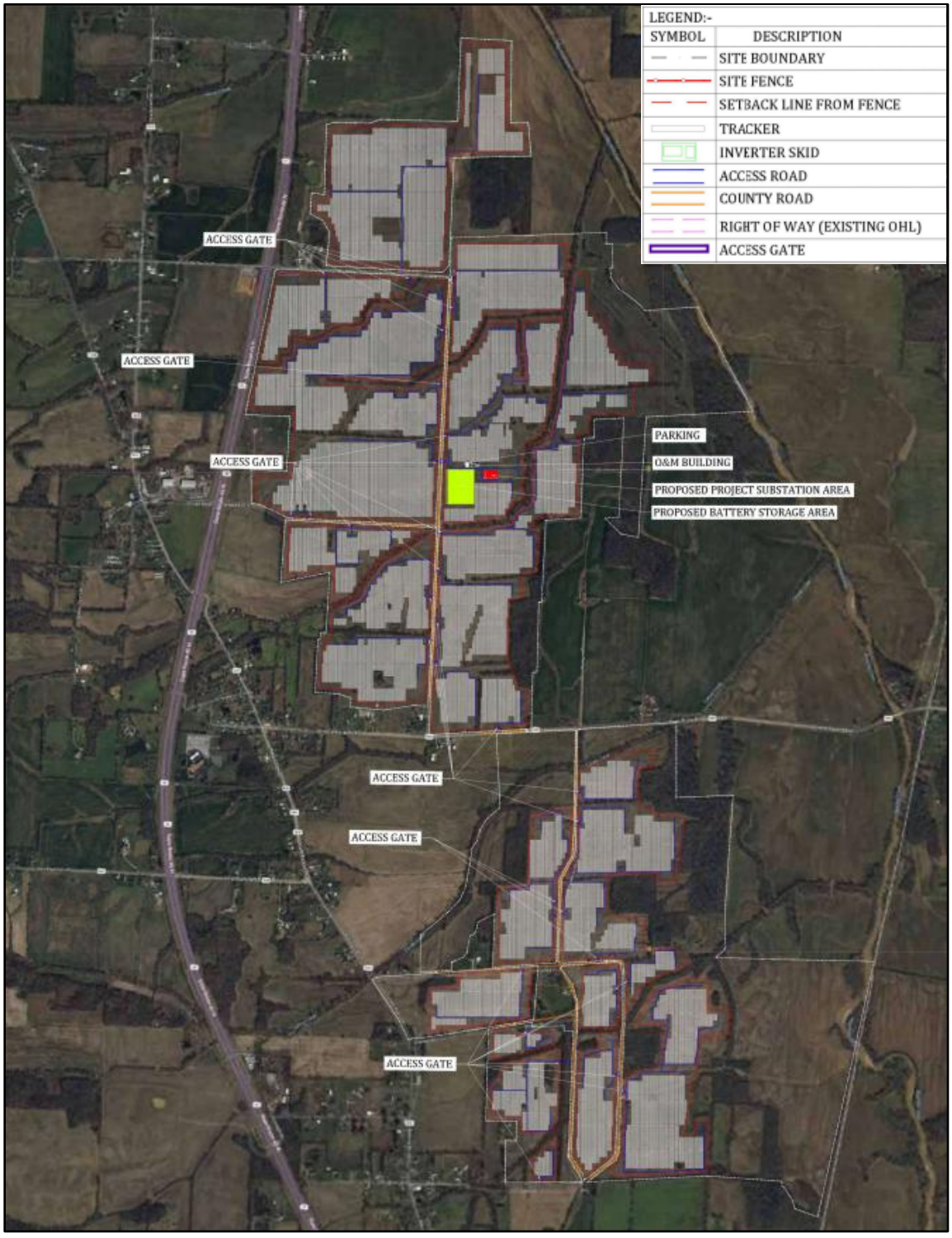
An overhead Project transmission line of approximately five to six miles in length will connect to the 161 kV Bryan Road Substation owned by Big Rivers Electric Corporation (BREC).[6]

The perimeter of the solar facility will be secured using approximately 161,278 linear feet (about 30.5 miles) of "farm style" wire fencing with wooden posts. The substation area will have separate fencing, meeting National Electric Safety Code requirements. Approximately 93,000 linear feet (approximately 17.6 miles) of internal access roads will be constructed within the Project site, consisting mainly of gravel roadways.

Exhibit 3-1 illustrates the Project boundaries and identifies locations of Project components, as provided by the Applicant.

[4] The Applicant's decision regarding the BESS is dependent on the needs and interests of potential Project off-takers and a final offtake contract structure.
[5] HE's evaluation of potential Project impacts assumes the inclusion of a BESS facility and incorporates the available information provided by the Applicant about that facility to the extent possible.
[6] The transmission line will be included as part of a separate application submitted by the Applicant to the Siting Board.

Exhibit 3-1.
Location, Overview and Project Facilities Map for the Proposed Mayfield Solar Project



Source: MYSO, LLC, January 2026.

The Project site is located in western Kentucky, approximately 13 miles north of the City of Mayfield in Graves County and about 16 miles south of the City of Paducah, Kentucky, which is located on the border with Illinois, on the south side of the Ohio River. The City of Bowling Green, Kentucky is located about 150 miles east of the Project site and the City of Nashville, Tennessee is about 140 miles to the southeast.

Construction Activities

Construction of the Mayfield Solar facility is expected to occur over a period of between 18 and 24 months, with different construction activities occurring sequentially and concurrently across the Project site. Construction will occur sequentially in a given area to complete any clearing and grading activities before commencing installation of Project components. Construction activities will occur concurrently in that multiple areas of the site will commence installation activities simultaneously.

Construction activities and the Project's anticipated schedule is outlined in Exhibit 3-2.

Exhibit 3-2.
Proposed Mayfield Solar Project Construction Schedule

Task	Estimated Duration (Months)	Anticipated Timeframe
Site Preparation & Civil Works	12	Sep 2027 - Aug 2028
Pile Installation*	7^	Apr 2028 - Oct 2028
Racking Installation*	6	May 2028 - Oct 2028
Module Installation*	6	May 2028 - Oct 2028
Substation Construction	12	Jul 2028 - Jun 2029
BESS Installation	18-22	Feb 2028 - Dec 2029
Commissioning & Testing	12	Oct 2028 - Oct 2029

Notes: (1) Tasks marked with an asterisk (*) indicate peak construction activities.
(2) ^ indicates a change from 6 months to 7 months based on timeframe provided by the Applicant.

Source: MYSO, LLC, May 2026.

According to the Applicant, all construction activity would be limited to the hours of 6am to 7pm, Monday through Saturday. Construction activities that create a higher level of noise, such as pile driving, will be limited to 9am to 5pm, Monday through Saturday.

On average, between 100 and 125 construction workers will be on-site each day over the duration of the approximately 18- to 24-month construction period. Peak construction activity is anticipated to occur over a period of about 7 to 9 months, requiring up to 250 construction workers on-site at any one time during that period.

Operational Activities

During operations, one staff member would be onsite daily and up to three additional employees will make site visits as needed according to the long-term service agreement's maintenance plan.

- Routine preventive maintenance on inverters, trackers, electrical equipment, and the BESS (if constructed) will generally be scheduled on weekdays, with technicians onsite approximately 260 days per year.

- Vegetation management and access road upkeep are anticipated to occur multiple times per growing season.

- Module and inverter inspections and testing will typically occur quarterly, supplemented by manufacturer-recommended preventive maintenance under long-term service agreements.

All such routine work will be planned to occur between approximately 7:00 a.m. and 6:00 p.m., avoiding evenings and nights except when necessary to maintain facility safety or reliability. Evening maintenance (after 7:00 p.m.) is expected to be infrequent and limited primarily to planned outages or corrective work that must be performed outside of peak daytime production hours. The Applicant currently estimates evening maintenance would occur approximately 10 to 15 days per year and would consist mainly of low-noise activities (switching, testing, and inspections) rather than construction type work.

Life of the Project

The Mayfield Solar facility is anticipated to operate for approximately 40 years. Project decommissioning (the process of closing the facility to retire it from service) is discussed in Section 5 of this report.

Proposed Site Development Plan

The following discussion addresses each of the SAR requirements for a proposed site development plan, as laid out in KRS 278.708(3)(a).

Surrounding land uses. Land surrounding the Project site predominantly consists of agricultural land and residential properties, as described in Exhibit 3-3. A small portion of the adjoining acreage is used for industrial purposes.[7] The unincorporated communities of Folsomdale, West Viola, Viola, Boaz and St Johns surround the Project site. U.S. Highway 45 is located immediately to the west of the Project site.

[7] The adjoining industrial property is owned by Alcrete, a precast concrete manufacturer.

Exhibit 3-3.
Land Uses of Properties Adjoining the Proposed Mayfield Solar Project

Land Use	% of Total Adjoining Acres	# of Adjoining Parcels	% of Total Adjoining Parcels
Agricultural	74.2%	40	50.0%
Agriculture / Residential	13.3%	5	6.3%
Residential	10.7%	34	42.5%
Industrial	1.9%	1	1.3%
Total	100.0%	80	100.0%

Source: MYSO, LLC, January 2026.

Section 4 of this report provides a general overview of Graves County's demographic and economic characteristics.

The Applicant also provided information describing the distances between nearby residential and non-residential structures and the Project boundary, solar panels, inverters, and substation. The area within 2,000 feet of the Project site includes 170 homes (including two residences owned by a participating landowner) and 307 non-residential structures (including barns, sheds, silos, garages, seven commercial buildings, two churches, one cemetery, a masonic lodge and a fire department).[8]

In addition to leased land within the Project boundary, the Applicant has entered into contractual agreements with nine adjacent landowners. These "Good Neighbor Agreements" (GNAs) establish minimum setbacks from residences, require vegetative screening and ongoing maintenance, and provide direct access to the Applicant's project team while also offering financial consideration in exchange for construction-related inconvenience and changes to viewsheds.[9] Although these properties are not located within the Project boundary, HE considers these to be "participating" landowners due to the contractual relationship with the Applicant.[10]

Exhibit 3-4 summarizes information about the distances between existing residential structures and the Project boundary.

[8] The Applicant's response to the Siting Board's second data requests list 171 homes; however, that response also indicated that one structure (a mobile home) has since been demolished.
[9] The Applicant identified roughly 19 adjacent non-participating neighbors and contacted each to offer a Good Neighbor Agreement in a one-on-one discussion. Ten neighbors accepted the offer to meet and nine GNAs were ultimately signed. The remaining neighbor that did not enter into a GNA verbally indicated he was not opposed to the Project and did not need an agreement.
[10] As also noted later in this report, landowners that have GNAs with the Applicant also have the ability to participate in the Complaint Resolution program.

Exhibit 3-4.
Distances of Residential Structures within 2,000 Feet of the Proposed Mayfield Solar Project Boundary

Distance from Project Boundary	Number of Residential Structures
0 - 300 feet	19
301 - 600 feet	12
601 - 900 feet	11
901 - 1,200 feet	20
1,201 - 1,500 feet	34
1,501 - 1,800 feet	42
1,801 - 2,000 feet	32
Total Structures	**170**

Notes: (1) Two homes within 300 feet of the Project boundary are owned by a participating landowner.
(2) Nine homes within 300 feet of the Project boundary are owned by landowners with Good Neighbor Agreements.

Source: MYSO, LLC, May 2026.

The shortest distances between non-participating residences and Project generation facilities are as follows:[11]

- Solar panels: 322 feet
- Inverter: 986 feet
- Project substation: 2,687 feet

Legal boundaries. The Project will be located on privately owned land leased by the Applicant, consisting of 62 individual parcels of various sizes. A total of 58 parcels (approximately 2,000 acres) is owned by the Purchase Area Regional Industrial Authority (PARIA), with the remaining four parcels (approximately 237 acres) owned by one individual landowner.[12] Attachment C of the SAR provides maps and narrative descriptions of each parcel. Supplemental materials provided by the Applicant include a parcel map of the proposed Project site, which identifies individual parcels, consistent with the narrative provided in Attachment C.

Access control. A total of 32 gated access entrances will be used to access different areas of the Project site during Project construction: fifteen (15) located along E Baldree Road; three (3) located along E Pittman Road; five (5) located along Whittemore Road; two (2) located along Old Plant Road; four (4) located along an unnamed farm road; one (1) located along KY 849; one (1) located along McGee Road; and one (1) located along Olden Road. The Applicant anticipates reducing the number of entrances used during operations; however, the specific

[11] Residences covered by GNAs are considered participating for this analysis.
[12] PARIA is a multi-county economic development entity formed to assemble, hold, and market large sites for future industrial and commercial projects. The Project site is a subset of the total acreage owned by PARIA at this location.

operational entrances have not yet been identified. All entrances will have locked security gates.

The Project solar arrays and other infrastructure will be enclosed with approximately 161,278 linear feet (about 30.5 miles) of perimeter fence, described as eight-foot high farm style wire fencing with wooden posts. Separate security fencing meeting National Electric Safety Code (NESC) requirements, typically a six-foot chain link fence with three strings of barbed wire at the top, will enclose the Project substation.

The Project's Engineering, Procurement, and Construction (EPC) contractor will coordinate with local law enforcement and emergency responders prior to start of construction to develop a Project specific Emergency Response Plan based on the final site layout and components selected for the site. The design of the BESS facility will allow for fire-apparatus access.

Location of buildings, transmission lines and other structures. Approximately 521,416 solar panels, 63 inverter skids, a Project substation, O&M building, battery storage area, overhead and underground electric conveyance lines will be located within the Project site. The preliminary locations of Project infrastructure can be seen in Exhibit 3-1 of this report. The battery storage area, substation and O&M building will be located in the central portion of the Project site, on the east side of E Baldree Road. Between six and eight weather stations will be placed throughout the Project site, adjacent to PV arrays.

The Project also includes an overhead transmission line, described as approximately five to six miles in length.[13]

Temporary construction mobilization and laydown areas will be located near the Project substation and at several other locations across the Project site, to be chosen by the Project's construction contractor.

Location and use of access ways, internal roads and railways. As noted previously, 32 separate gate entrances will allow access to different sections of the Project site during construction, with fewer entrances in use during operations. Entrance locations are described in more detail in Section 5 of this report, as part of the Traffic Analysis.

Approximately 93,000 linear feet (approximately 17.6 miles) of private access roads will be developed within the Project site. The preliminary design assumes the basin access roads will be 10 feet wide, internal access roads will be 16 feet wide, and substation access roads will be 20 feet wide.

A spur line of the Paducah and Louisville Railway is located on the east side of the Project site. However, that railway would not be used for construction or operational activities related to the Project.

[13] The transmission line will be included as part of a separate application submitted by the Applicant to the Siting Board.

Existing or proposed utilities to service facility. Limited water and electric service may be required to provide for the operations and maintenance building. It is anticipated that water service will be obtained from Mayfield Electric & Water Systems, onsite wells, or trucked in from an offsite water purveyor, and that electric service will be obtained from Jackson Purchase Energy Cooperative. Portable chemical toilets will be placed on site for construction workers. No permanent bathroom facilities are anticipated.

Compliance with applicable setback requirements. KRS 278.706(2)(d) states that a completed Application shall include "A statement certifying that the proposed plant will be in compliance with all local ordinances and regulations concerning noise control and with any local planning and zoning ordinances. The statement shall also disclose setback requirements established by the planning and zoning commission as provided under KRS 278.704(3)."

The Mayfield Solar Application includes a statement certifying that the proposed Project will follow all applicable local ordinances and regulations (Exhibit C of the Application). However, Graves County has not established a Planning Commission and does not have any planning or zoning requirements applicable to the Project. Therefore, the State statutory setback requirements apply to the Mayfield Solar facility.

Applicable portions of the setback statute (KRS 278.706(2)(e)) state that "all proposed structures or facilities used for generation of electricity be 2,000 feet from any residential neighborhood, school, hospital, or nursing home facility".[14] In the case of the Mayfield Project, there are no schools, hospitals or nursing homes within 2,000 feet of the Applicant's proposed location of Project structures or facilities; however, there are several residential neighborhoods at least partially located within 2,000 feet of the Project boundary.[15] Those neighborhoods are mainly located to the west and south of the Project site.

KRS 278.704(4) states that deviations from the setback requirements may be granted "on a finding that the proposed facility is designed to, and as located, would meet the goals of KRS 224.10-280, 278.010, 278.212, 278.214, 278.216, 278,218, and 278.700 to 278.716 at a distance closer than those outlined in the setback statute."

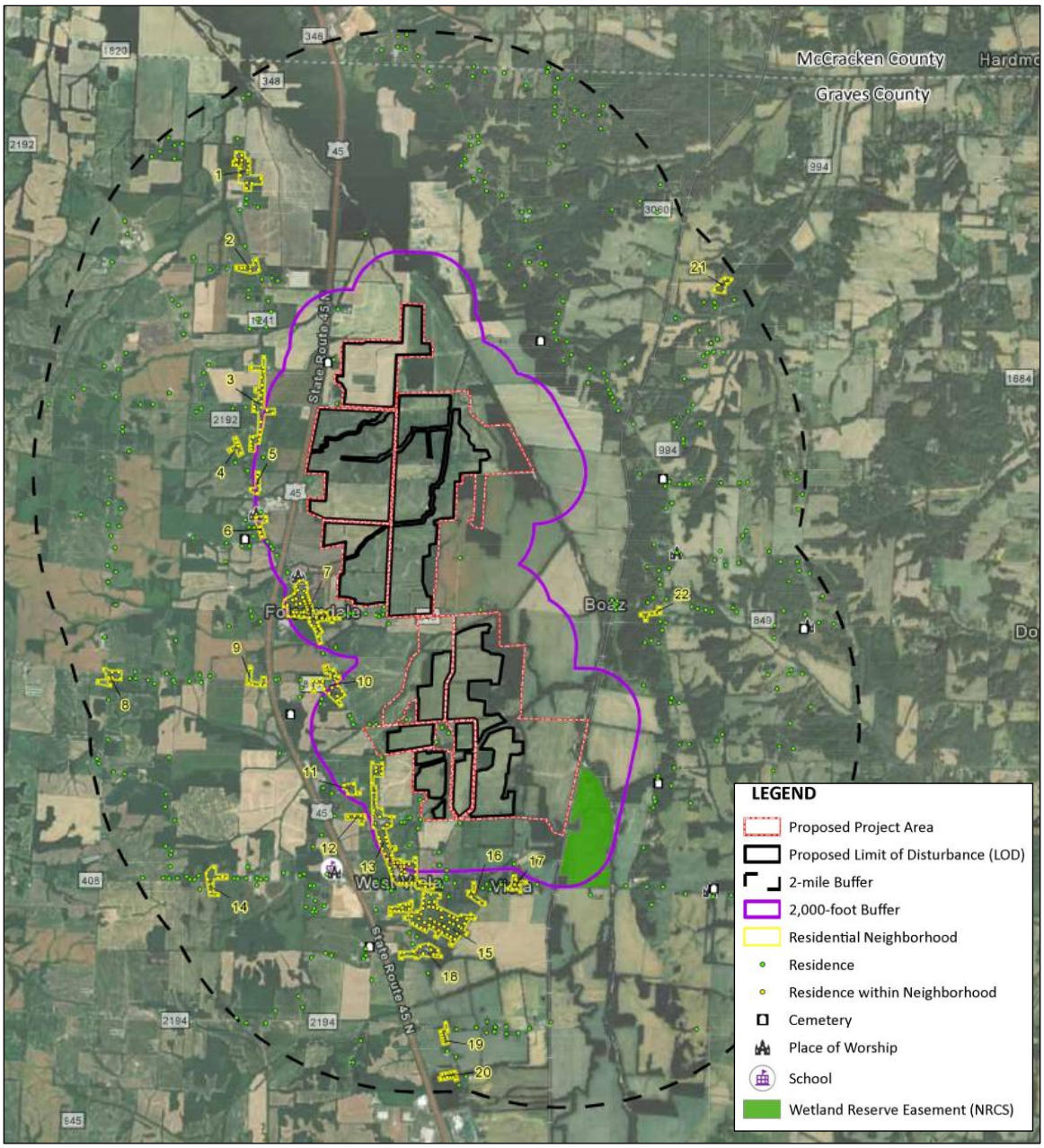
The Applicant has filed a Motion for Deviation which addresses each of the statutes listed above, describing the Applicant's or the Project's compliance with each. That document also provides descriptions of the residential neighborhoods within 2,000 feet of the Project site.

Residential neighborhoods. Exhibit 3-5 illustrates the residential neighborhoods identified in the Motion for Deviation as being located within 2,000 feet of the Project boundary.[16] Seven residential neighborhoods (encompassing a total of 136 homes) are located within 2,000 feet of the Project boundary, as listed in Exhibit 3-6; however, some of the individual homes within each neighborhood are located further than 2,000 feet from the Project boundary line. Only six

[14] According to KRS 278.700(6), a residential neighborhood is a populated area of five or more acres containing at least one residential structure per acre.
[15] The Application identifies residential neighborhoods within a two-mile buffer of the Project site and within a 2,000 foot buffer of the Project site.
[16] The Exhibit is included as part of Exhibit A of the Application, which identifies all residential neighborhoods within two miles of the Project boundary.

of the seven identified residential neighborhoods are located within 2,000 feet of any Project infrastructure.

Exhibit 3-5.
Location of Residential Neighborhoods Located within 2,000 Feet and within Two Miles of the Mayfield Solar Project Boundary



Notes: (1) Exhibit A of the Application includes additional detailed maps of each identified neighborhood.
(2) Seven of the 22 identified residential neighborhoods in the Exhibit are located within 2,000 feet of the Project boundary.

Source: MYSO, LLC, March 2026.

Exhibit 3-6 describes each of the identified residential neighborhoods located within 2,000 feet of the Project boundary.

Exhibit 3-6.
Description of the Residential Neighborhoods within 2,000 feet of the Proposed Mayfield Solar Project Boundary

Residential Neighborhood	Number of Residences within 2,000-foot Buffer	Nearest Project Component	Distance to Nearest Project Component
3 *	4	Panel	1,744 feet
5 *	4	Panel	1,968 feet
6	6	Panel	1,956 feet
7 *	54	Panel	855 feet
10*	8	Panel	2,164 feet
11	5	Panel	1,863 feet
13 *	47	Panel	516 feet
Total	**128**		

Notes: (1) An * indicates that a portion of the neighborhood is located outside 2,000 feet of the boundary line. Other neighborhoods are fully located within 2,000 feet.
(2) Neighborhood 7 is the only one located less than 2,000 feet from an inverter.
(3) All neighborhoods are located more than 5,000 feet from the Project substation.
(4) Distances to Project Components are measured from the nearest Project component to the nearest edge of the closest residential structure in the neighborhood.

Sources: MYSO, LLC, April 2026 and May 2026.

Within the identified residential neighborhoods, the smallest distance between a home and any Project infrastructure is 516 feet (one home in Neighborhood 13). However, additional homes are also located within 2,000 feet of the boundary line, but outside of the designated residential neighborhoods. For example, a total of 170 homes (inside and outside of residential neighborhoods) are located within 2,000 feet of the Project boundary line, including 15 located less than 500 feet from a panel.[17]

Compliance with statutory requirements. The Motion for Deviation described the Applicant's or Project's compliance with applicable requirements as follows:

- ***KRS 224.10-280: Cumulative Environmental Assessment (CEA):*** The Applicant has provided a CEA that addresses air pollutants, water pollutants, waste, and water withdrawal. That report provides a detailed discussion of each topic area. The Motion for Deviation includes the following:

    - ***Air evaluation –*** The CEA evaluates the air pollutants to be emitted by the facility and the associated control measures. Solar facilities do not produce any emissions during operation. As such, the Project is not anticipated to emit any of the criteria pollutants or Hazardous Air Pollutants (HAPs). Indirect air emissions from the Project would occur during construction from staging of supplies and operation of construction equipment, worker personnel vehicles, and equipment and supply

[17] The drawing of residential neighbor boundary lines may be somewhat subjective on the part of the Applicant, in terms of the specific individual homes included or excluded from any specific neighborhood. However, throughout this report, HE's evaluation of impacts considers the potential impacts to individual residences, regardless of whether or not that residence is included in an identified neighborhood.

deliveries, as well as during facility operation from maintenance vehicles, such as trucks used by technicians and equipment used during mowing and other vegetation control. The CEA describes the air pollution mitigation measures during both construction and operation of the Project.

- ***Water evaluation*** **–** the Project is designed with the existing topography being utilized to the greatest extent practicable, resulting in minimal grading and ground disturbance. The Project is expected to yield stormwater discharge during construction; the Applicant will comply with KDOW's Construction Storm Water Discharge General Permit. Stormwater discharge will be mitigated utilizing BMPs to minimize the impacts of stormwater runoff. The Applicant will prepare a Stormwater Pollution Prevention Plan to be implemented throughout all ground disturbing activities in compliance with KDOW requirements. After completing construction activities, the Project will have little to no impact on surface waters during operations and maintenance.

  Precipitation that runs off of the solar panels will not pose a risk to groundwater, as solar panels are sealed and do not leach contaminants. Hazardous materials used during construction that could potentially contaminate groundwater will be stored on site. Contractors will utilize BMPs to minimize the risk of leaks and spills and implement plans and procedures to immediately address any spills and leaks that may occur. The development and operation of the Project is not anticipated to have negative impacts to groundwater.

- ***Waste evaluation*** **–** All waste generated during the construction and operation of the Project will be disposed of in accordance with all local, state, and federal regulations. No waste will be disposed of at the Project site. Where practicable, construction waste will be recycled, and any material that cannot be recycled will be disposed of offsite at a permitted facility. Little to no waste is expected to be generated from the Project during the operations phase. Any waste generated during maintenance activities will be removed from the site and disposed of in accordance with state and federal regulations. At the end of the Project's operational life, the Project will follow a decommissioning and site restoration plan to disconnect, remove, and recycle the solar array equipment and restore the site. No adverse effects from waste generation or disposal in relation to construction or operation of the Project are anticipated.

- ***Water withdrawal evaluation*** **–** If water service is required during construction or operations, the Project will use onsite well water or connect to the local water utility if services are available. Water use related to construction activities will include site preparation such as dust control and grading activities. The volume of water required during the construction process is minimal and water resources are not anticipated to be adversely affected. The Project will minimally and infrequently use water during normal operations and maintenance, mainly for vegetation management needs during periods of drought.

- ***KRS 278.010: Definitions applicable to associated statutes:*** The Motion for Deviation states that in filing a complete Application pursuant to the applicable statutes in this proceeding, Mayfield has satisfied the goal of providing the required information utilizing the definition of any applicable term defined in KRS 278.010.

- ***KRS 278.212: Filing of plans for electrical interconnection with merchant electric generation facility; costs of upgrading existing grid:*** The Motion for Deviation states that Mayfield will comply with all applicable conditions relating to electrical interconnection with utilities by following the Midcontinental Independent System Operator (MISO) interconnection process. Additionally, Mayfield will accept responsibility for appropriate costs which may result from its interconnecting with the electricity transmission grid.

- ***KRS 278.214: Curtailment of service or generation and transmission cooperative:*** The Motion for Deviation states that Mayfield will abide by the requirements of this provision to the extent that these requirements are applicable.

- ***KRS 278.216: Site compatibility certificate; site assessment report; commission action on application:*** The Motion for Deviation states that by complying with the requirements of KRS 278.700 *et seq*., Mayfield has met the requirements and goals of KRS 278.216.

- ***KRS 278.218: Approval of commission for change in ownership or control of assets owned by utility:*** The Applicant is not a utility as defined by the applicable statute; therefore, the Motion for Deviation states that this statute does not apply to Mayfield. However, the Motion for Deviation also states that to the extent Siting Board approval may at some time be required for change of ownership or control of assets owned by Mayfield, Mayfield will abide by the applicable rules and regulations which govern its operation.

- ***KRS 278.700 – 278.716: Electric Generation and Transmission Siting:*** The Motion for Deviation states that Mayfield's application includes an evaluation of the issues required by KRS 278.700-278.716 and meets the goals of those statutes. Moreover, the Applicant has designed the Project to ensure that, through Project layout and other mitigation measures, it will not intrude on or otherwise disrupt its neighboring landowners.

Evaluation of noise levels produced by facility. Noise levels related to facility construction and operations are discussed in detail in Section 5 of this report.

Results of SAR Review – Proposed Site Development Plan

Conclusions. Based on HE's review of the Mayfield Solar SAR, the subsequent information provided by the Applicant in response to two rounds of inquiries, direct discussions with the Applicant, and other secondary area research, HE offers the following conclusions regarding the proposed site development plan:

- We believe that the Applicant has generally complied with the legislative requirements for describing the facility and a site development plan, as required by KRS 278.708.

- Security and access control measures appear to be adequate, given the type of facility and its location in a rural area.

- Graves County has not established a Planning Commission and has not enacted any planning or zoning requirements applicable to the Project or to the Project site. No applicable setback requirements have been established by Graves County.

- The Mayfield Solar Project does not meet the Commonwealth's statutory setback requirements, and the Applicant has submitted a motion for a deviation from those requirements. HE believes that the Project, as proposed, does meet the specific statutes noted for consideration in a setback deviation, assuming the mitigation HE proposes is adopted. The Siting Board will need to judge the quality of the Applicant responses in the setback deviation request.

Need for mitigation. Recommended mitigation measures related to the description of the facility and the proposed site development plan include:

1. A final site layout plan should be submitted to the Siting Board upon completion of the final site design. Deviations from the preliminary site layout plan, which formed the basis for HE's review, should be clearly indicated on a revised graphic. Those changes could include, but are not limited to, the location of solar panels, inverters, transformers, operations and maintenance building, substation, battery energy storage systems or other Project facilities or infrastructure, including internal access roads.

2. Any change in Project boundaries, including easements, from the information which formed this evaluation should be submitted to the Siting Board for review.

3. The Siting Board will determine if any deviation in the site boundaries or site layout plan is likely to create a materially different pattern or magnitude of impacts. If not, no further action is required, but if yes, the Applicant will support the Siting Board's effort to revise its assessment of impact and mitigation requirements.

4. A final, Project-specific construction schedule, including revised estimates of on-site workers and commuter vehicle traffic, should be submitted to the Siting Board. Deviations from the preliminary construction schedule should be clearly indicated.

5. The Siting Board will determine whether any deviation to the construction schedule or workforce estimates is likely to create a materially different pattern or magnitude of impacts. If not, no further action is required. If so, the Applicant will support the Siting Board's effort to revise its assessment of impacts and mitigation requirements.

6. The Applicant shall submit a status report every six months until the project commences construction to update the Siting Board on the progress of the Project.

7. The Applicant or its contractor will control access to the site during construction and operation. Site entrances will be gated and locked when not in use.

8. The Applicant's access control strategy will include appropriate signage to warn potential trespassers. The Applicant will ensure that the site entrance and boundaries have adequate signage, particularly in locations visible to the public, local residents and business owners.

9. The fence enclosing the substation will adhere to North American Electric Reliability Corporation (NERC) safety standards and will be appropriately spaced, bonded, and grounded in compliance with National Electrical Safety Code (NESC) requirements prior to installation of any electrical equipment.

10. The Applicant will meet with local law enforcement agencies, EMS and fire services to provide information and ensure they are familiar with the plan for security and emergency protocols during construction and operations.

11. Prior to construction, the Applicant will provide an Emergency Response Plan to the local fire district, first responders, and any County Emergency Management Agency. The Applicant will provide site-specific training for local emergency responders at their request. Access for fire and emergency units shall be set up after consultation with local authorities.

SECTION 4
Project Setting

Description of the Area

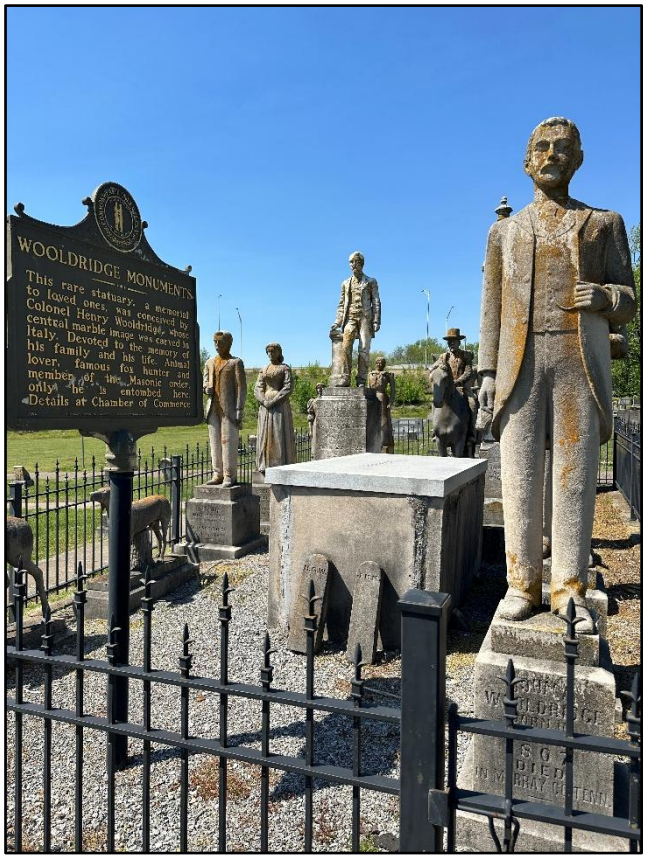
This section provides a description of the area surrounding the proposed Project site in Graves County, Kentucky. The Project site is located north of the City of Mayfield, which is the county seat, in western Kentucky within the Jackson Purchase area. Graves County is bordered by McCracken County to the north and abuts the Tennessee state line to the south. Calloway and Marshall counties are located to the east, with the counties of Hickman and Carlisle to the west. The area's landscape is characterized by gently rolling plains, gradual uplands, and low-lying stream valleys associated with tributaries of the Tennessee and Ohio River systems. The highest elevation in the county at 580 feet is a ridge between Mayfield Creek and Little Mayfield Creek in the southeast of the county near the Calloway County border; the lowest area is where the West Forks Clark River enters McCracken County, with an elevation of 321 feet.[18] The Project site is located on an agricultural plain bordered by Mayfield Creek to the north and east, with U.S. Highway 45 and Kentucky Route 1241 marking the western edge.

Graves County was named in honor of Major Benjamin Franklin Graves, a Kentucky legislator who died in the War of 1812.[19] Vice President Alben Barkley, who served under President Truman, was born in Graves County.[20] The county's proximity to the Ohio and Tennessee Rivers contributed to early settlement and development of commerce, and plentiful tributary waters provided for fertile agricultural lands. Early agriculture was focused on tobacco, corn, and cotton.[21] Mayfield is the largest city in Graves County and also serves as the commercial, governmental, and healthcare hub for the region. A powerful tornado travelled through Graves County in 2021 and caused significant damage to Mayfield, destroying much of the downtown historic district including the county courthouse and thousands of homes.[22]

The Maplewood Cemetery in Mayfield is home to two sites on the National Register of Historic Places: the Confederate Memorial Gate and the Wooldridge Monuments (as seen on "Ripley's Believe it or Not"). Kaler Bottoms National Wildlife Management Area spans approximately 1,900 acres in the northeast of Graves County along the Clarks River. This area is popular for hunting, fishing, and wildlife viewing.[23]

[18] Kentucky Geological Survey. Groundwater Resources of Graves County, Kentucky. https://www.uky.edu/KGS/water/library/gwatlas/Graves/Topography.htm
[19] The Kentucky Encyclopedia. https://books.google.com/books?id=8eFSK4o--M0C&pg=PA384
[20] Biographical Directory of the United States Congress. https://bioguide.congress.gov/search/bio/b000145
[21] Graves County History. https://gravescountyky.com/History.html
[22] The Violent Tornado Outbreak of December 10-11, 2021. https://www.weather.gov/pah/december-10th-11th-2021-tornado
[23] Kaler Bottoms WMA. https://fw.ky.gov/More/Documents/KalerBottomsWMA_All.pdf

Exhibit 4-1.
The Wooldridge Monuments in Mayfield, Kentucky



Source: Harvey Economics, April 2026.

Population and housing density. As of mid-2024, approximately 36,821 people resided in Graves County.[24] The county's population has remained relatively stable over the past two decades with small year-to-year gains and losses; in 2010 the population was 37,121 and in 2020 the population was 36,649.[25] Modest out-migration has been somewhat offset by diverse local job opportunities and regional connectivity.[26] Over 86 percent of the population is white and the median age of residents is 40.4.[27] Graves County is predicted to remain relatively stable. The Kentucky State Data Center estimates 35,758 people will reside in the county in 2050, which is about a three percent decrease from 2024.[28] Currently, there are around 14,139 households in the

[24] U.S. Census Bureau. Graves County, KY QuickFacts, Population. https://www.census.gov/quickfacts/fact/table/gravescountykentucky/POP010210
[25] U.S. Census Bureau. Graves County, Kentucky, Profile of General Demographic Characteristics. https://data.census.gov/table/DECENNIALDPSF42000.DP1?q=graves+county+kentucky&y=2000
[26] USA Facts. Our Changing Population: Graves County, Kentucky. https://usafacts.org/data/topics/people-society/population-and-demographics/our-changing-population/state/kentucky/county/graves-county/
[27] U.S. Census Bureau. Graves County, Kentucky, Age and Sex. https://data.census.gov/table/ACSST5Y2024.S0101?q=graves%20county%20kentucky
[28] Kentucky State Data Center, Projections of Population and Households, State of Kentucky, Kentucky Counties, and Area Development Districts 2020 – 2050. https://louisville.app.box.com/s/rh39adf5ou0cd0aduxe5dnodanj3ftf0/file/993066674933

county, with an average of 2.5 persons per household.[29] Graves County has a higher-than-average population density for Kentucky with 67.75 people per square mile, although the majority of the county's density is centered around Mayfield.[30]

Mayfield, population 9,718, and Wingo, population 586, are the only incorporated cities in the county.[31] Mayfield is approximately eight miles south of the Project site. The community of Folsomdale is centrally located along the western boundary of the Project. The small communities of West Viola and Viola are located less than one mile south of the Project site. The closest metropolitan areas include Nashville, Tennessee (about 143 miles to the southeast), with a population of approximately 2,151,000, and Evansville, Indiana (about 127 miles to the northeast), with a population of approximately 272,000.[32]

Income. In 2024, approximately 20 percent of Graves County residents lived in poverty with a per capita personal income of $30,535.[33] This was about 15 percent less than the average per capita personal income in the Commonwealth of Kentucky ($35,821), and 32 percent less than the average for the United States ($44,673).[34]

Business and industry. About 15,600 civilians were employed in Graves County in 2024.[35]

- Agriculture is not a large employment sector in the county, but it is a leading industry, with Graves County ranking first in the state for agricultural products sold.[36] Nearly 256,000 acres are farmland. Soybeans, corn and wheat were the top crops by acre in 2022, ranking the county 6th in the state. Graves County ranks first in the state for market share of livestock and poultry sales. The 2022 livestock inventory for the county included about 15,000 heads of cattle and over 10.2 million chickens. Pilgrim's Pride, a major poultry production operation, maintains a substantial facility in Graves County with approximately 1,300 employees, making it one of the largest employers in the region.[37]

[29] U.S. Census Bureau. Graves County Households and Families. https://data.census.gov/table?q=graves+county+kentucky&t=Families+and+Household+Characteristics
[30] Statistical Atlas. Graves County, Kentucky. https://statisticalatlas.com/county/Kentucky/Graves-County/Population
[31] World Population Review. Graves County, Kentucky Cities. https://worldpopulationreview.com/us-cities/kentucky/by-county/graves-county
[32] U.S. Census Bureau. Annual Estimates of the Resident Population for Metropolitan Statistical Areas. https://www2.census.gov/programs-surveys/popest/tables/2020-2024/metro/totals/cbsa-met-est2024-pop.xlsx
[33] U.S. Census Bureau. Graves County, Kentucky. https://data.census.gov/profile/Graves_County,_Kentucky?g=050XX00US21083
[34] U.S. Census Bureau, Per Capita Income in the Past 12 Months. https://data.census.gov/table/ACSDT5Y2024.B19301?q=per+capita+income&t=Income+and+Earnings
[35] U.S. Census Bureau. Graves County. Selected Economic Characteristics. https://data.census.gov/table/ACSDP5Y2024.DP03?t=Employment+and+Labor+Force+Status&g=050XX00US21083
[36] USDA Census of Agriculture. County Profile, Graves County Kentucky. https://www.nass.usda.gov/Publications/AgCensus/2022/Online_Resources/County_Profiles/Kentucky/cp21083.pdf
[37] Graves County Economic Development. Top Employers. http://www.gravescountyed.com/datamaps/top-employers/

- Manufacturing is the largest employment sector in Graves County with 2,487 jobs.[38] Due in part to its proximity to highways, railways and riverports, Graves County has historically been a manufacturing hub; manufacturing wages and opportunities are high in the county.[39] Mayfield boasts that it is the "centrifugal air compressor repair capital of the world."[40] The Hickory Industrial Park in Mayfield, which includes a skilled craft training center, recently received $8 million for expansion. The manufacturing industry in the area is quite diverse and includes locomotive engines, HVAC equipment, shoes, candles, firearms, and metal fabrication, among others.[41]

- The healthcare sector closely follows manufacturing employment with 2,232 jobs.[42] Several medical facilities are located in Mayfield, including the Jackson Purchase Medical Center. Jackson Purchase Medical Center is a 107-bed comprehensive care hospital serving counties in the Jackson Purchase region with about 500 employees.[43]

- Retail is the next largest employment sector with 1,7674 jobs.[44] The retail sector is largely driven by the tourism industry. Boutique shopping, a thriving local arts scene, and historical sites draw visitors to the county.[45] Historical attractions include Cartright Grove (an 1800s Wild West town), the Maplewood Cemetery (with Civil War history), and the Edana Locus mansion and arboretum. The annual Fancy Farm Picnic combines a barbeque cookout with a political rally, noted in the Guiness Book of World Records and further contributing to local retail and tourism employment.[46]

Major and minor roads and railways. The Project site is bordered to the west by U.S. Highway 45 and Kentucky Route 1241, changing from the former to the latter at Folsomdale. KY 1241 stems from US 45 and runs north to south between the cities of Paducah and Mayfield. Project components are located within parcels to the north and south of KY 849, which intersects with KY 1241 at Folsomdale and heads east, bisecting the Project area. KY 408 intersects with both US 45 and KY 1241, running parallel to the southern border of the Project from west to east.

Interstate 24, located primarily in neighboring McCracken County to the north, is the closest major interstate corridor. The nearest highway is US 45. Highway 45 runs north–south through Mayfield, providing access to Paducah and Interstate 24 to the north and to the Tennessee state line to the south. Interstate 69 (the Purchase Parkway) runs generally east-west through Mayfield,

[38] Statistical Atlas. U.S. Census Bureau Data. Industries in Graves County, KY. https://statisticalatlas.com/county/Kentucky/Graves-County/Industries
[39] Graves County Highlights Manufacturing Success. https://www.wpsdlocal6.com/news/graves-county-highlights-manufacturing-success-amid-kentucky-s-record-growth/article_31dac34b-ec38-4bf5-91f4-f85eefd63d55.html
[40] Graves County Economic Development. http://www.gravescountyed.com/index.php
[41] Graves County Industry. https://www.gravescountyky.gov/graves-county-industry
[42] Statistical Atlas. U.S. Census Bureau Data. Industries in Graves County, KY. https://statisticalatlas.com/county/Kentucky/Graves-County/Industries
[43] HMP Metrics. Jackson Purchase Medical Center. https://hmpmetrics.com/hospital/summary/180116
[44] Statistical Atlas. U.S. Census Bureau Data. Industries in Graves County, KY. https://statisticalatlas.com/county/Kentucky/Graves-County/Industries
[45] Mayfield, KY Tourism. https://www.mayfieldky.gov/community/tourism.php
[46] Explore Kentucky History- Fancy Farm. https://explorekyhistory.ky.gov/items/show/887

linking Graves County to other communities in western Kentucky and providing regional connectivity for freight and commuters.[47] The Paducah and Louisville Railway is a freight line operating a rail spur between Paducah and Pryorsburg that travels east of the Project site, separated by Mayfield Creek.[48]

Overall area description. Based on HE's research, the area around the Project site can be generally characterized as a predominantly agricultural, rural area with dispersed small communities, working farms, and a modestly sized city serving as the regional service center. The county's landscape features a mix of gently rolling cropland, pastures, and wooded stream corridors, with limited dense residential or commercial development outside of Mayfield. This area has a stable population, a diversified but still production-oriented economy, and strong ties to the broader Jackson Purchase region. The area is shaped by its agricultural heritage, local arts and history. Graves County has a median age of about 40 years; overall population is expected to gradually decrease over the next 25 years, and the median age of the population is expected to increase. Residents' income levels are low, and they currently experience a higher rate of poverty than the entire state of Kentucky, which is higher than in the U.S.[49]

[47] USA County Maps. Graves County Map, Kentucky.
https://uscountymaps.com/graves-county-map-kentucky/
[48] Kentucky Transportation Cabinet. Kentucky Active Rail Lines.
https://transportation.ky.gov/MultimodalFreight/Documents/Railroads%20Map.pdf
[49] U.S. Census Bureau. Poverty Status in the Past 12 Months. Graves County.
https://data.census.gov/table?q=graves+county+ky+poverty

SECTION 5
Description of Impacts

This section of the report addresses impacts to the following resource topics, as enumerated in KRS 278.708 and KRS 278.706(j):

- Compatibility of the facility with scenic surroundings;
- Potential changes in property values and land use for adjacent property owners;
- Anticipated peak and average noise levels;
- Road and rail traffic, fugitive dust and anticipated degradation of roads and lands; and
- Economic impacts on the region and the state.

The statutes require that the SAR provides information about impacts to the above resources resulting from short-term construction activities and longer-term operational activities. The Siting Board also directed HE to address the potential effects of decommissioning activities, and that discussion is included in this section.

For each resource topic, HE describes generally accepted assessment criteria or methodology necessary to evaluate impacts of a project of this nature. We then summarize the relevant information included in the SAR, as well as supplemental information about the Wood Duck Solar Project provided by the Applicant in response to data inquiries. HE also provides additional information gathered about the Project and its potential impacts on the region through secondary source research, including interviews. Finally, HE draws conclusions about Project impacts as well as recommended mitigation measures.

Facility Compatibility with Scenic Surroundings

This component of the statute relates to how well the proposed facility will "blend-in" or is compatible with its physical surroundings and associated land uses. For example, certain industrial facilities can be unsightly, visually unappealing, and generally incongruous with the surrounding area. Coal-fired electric generating plants often have large smokestacks that can be seen from far away. Wind turbines are tall, and their blades can be seen spinning from miles away, etc. Generally, solar farms are considered to be less visually intrusive, as they are relatively short in stature, and can be effectively visually blocked naturally with topographic variation or intervening vegetation, or through strategic means utilized by an applicant.

General methods of assessment. Visual impacts of solar facilities are highly dependent on the characteristics of the surrounding area, i.e., industrial, suburban residential, rural/agricultural. As a result, different methods may be used to assess the visual impacts of solar facilities, depending on location. The Argonne National Laboratory's Environmental Science Division and the National Park Service jointly developed the *Guide to Evaluating Visual Impact Assessments for Renewable Energy Projects*; that document is a guide designed to help planners

evaluate the quality and completeness of visual impact assessments for solar and wind facilities.[50] Additional reports have been published from public agencies and private firms on visual impact assessments for solar facilities.

Most visual impact assessments focus on visualization of the appearance of the project from key observation points (KOPs). Since it is impossible to visualize proposed projects from every observation point, it is common for planners to utilize a "worst-case" potential visual impact, i.e., locations where perceived change may be greatest. The overarching goal of visual impact assessments is to determine potential visual impacts that may result from construction, operations, and decommissioning of a project, in a manner that is logical, repeatable, and defensible.[51]

A standard visual analysis generally proceeds in this sequence:[52]

- Description of the project's visual setting;
- Identification of KOPs. KOPs are locations near the project site where there is potential for solar facility components to be seen from ground-level vantage points, i.e., a nearby residence or a passing vehicle;
- Analysis of the visual characteristics of the project, i.e., height of solar panels, descriptions of other facility components; and
- Evaluation of impacts from KOPs.

Glare from sun shining off solar panels can also be a potential issue in certain locations (i.e., along roadways, near airports, or close to residential properties) or at specific times of the day (generally in the early morning or later in the afternoon as the panels rotate to capture the light). Glare analyses evaluate the potential for different types of glare (red, which is the most severe; yellow, which is less severe; and green, which has the lowest severity rating) at different locations around a project site and the duration of potential glare, if applicable, at different times of the day. Measures can be implemented to reduce the potential for glare impacts, including the use of anti-glare panels, appropriate panel location and growth of vegetative buffers.

Project components with potential for visual impacts. Once constructed, the following Project components may result in visual impacts to local residents and drivers:

- ***Solar panels:*** The Project will include approximately 521,416 solar panels. Solar arrays consist of panels placed in rows on racking structures, supported by steel piles driven into the ground. The Applicant is proposing a tracking system, in which panels move to track the sun over the course of the day. The center height of the racking structure is approximately five feet above ground; the highest point of each module will be a maximum of 12 feet above ground.

[50] National Park Service, U.S. Department of the Interior. *Guide to Evaluating Visual Impact Assessments for Renewable Energy Projects*. August 2014. http://visualimpact.anl.gov/npsguidance/.
[51] Dean Apostol, James Palmer, Martin Pasqualetti, Richard Smardon, Robert Sullivan. (2016). *The Renewable Energy Landscape: Preserving Scenic Values in our Sustainable Future*. September 2016.
[52] Environmental Design & Research. *Visual Impact Analysis*. May 2019.

- ***Solar inverters and transformers:*** 63 inverters and transformers will be located adjacent to solar array blocks. Each inverter and transformer pad will be a part of a manufactured skid foundation that is mounted on reinforced concrete slabs or steel piles. The skid foundations will have a footprint that measures approximately 20 feet by 9.5 feet and will not exceed 9 feet in height including the 1-foot concrete foundations.
- ***Collection system.*** DC electrical power received by the inverters is converted into AC electrical power and delivered to the Project substation via overhead and underground collection feeder cables.
- ***Project substation:*** The Project substation will have a concrete foundation equipment pad measuring approximately 238 feet long and 138 feet wide.
- ***O&M building:*** An O&M building and associated parking area will be located near the substation. That building will have a footprint that measures approximately 30 feet by 50 feet.
- ***Battery energy storage system (BESS) facility:*** If developed, the BESS area will encompass approximately 7.5 to 10 acres on the east side of Baldree Road, adjacent to the Project substation. BESS unit enclosures will be 8 to 10 feet in height and 30 to 32 feet long, with other equipment at 10 to 15 feet in height. The facility will be enclosed by a 6- to 8-foot-high security fence.
- ***Weather stations:*** Approximately six to eight weather stations will be placed throughout the Project site, located adjacent to PV arrays. Specific locations of the weather stations will be chosen prior to construction. Weather stations are typically 10 to 15 feet in height.
- ***Transmission line:*** The Project includes a proposed nonregulated transmission line, described as between approximately five and six miles in length.[53]
- ***Fencing:*** Approximately 161,278 linear feet (30.5 miles) of eight-foot high farm style wire fencing with wooden posts will secure the perimeter of the solar facility. Separate six-foot fencing topped with three strand barbed wire will surround the Project substation.
- ***Access Roads:*** Approximately 93,000 linear feet (17.6 miles) of access roads will be constructed within the Project boundary.

Summary of information provided by the Applicant. Related to potential visual impacts and scenic compatibility, the Mayfield Solar SAR includes a Glare Hazard Assessment (Attachment D). The Applicant's Property Value Impact Analysis (Attachment B of the SAR) provides a description of surrounding land uses. In response to requests from the Siting Board, the Applicant provided information about a screening plan aimed at minimizing view of Project infrastructure from certain adjacent roadways and nearby residences.

Scenic surroundings. The Application and the Property Value Impact Report describe the Project area as consisting of agricultural and rural residential land. Exhibit 3-3 of this report

[53] The proposed transmission line will be evaluated as part of a separate application filed by the Applicant. The transmission line route has not been finalized.

provides a breakdown of the land use types surrounding the Project site. The site itself is largely agricultural in nature and includes several residential and agricultural structures.

Potential visual impacts from Project construction. The SAR does not address the potential for visual impacts to adjacent landowners or local drivers during the construction phase.

Vegetation removal. The Applicant estimates that a total of approximately 81 acres of trees would be trimmed and / or cleared during construction to provide optimal sun to the solar panels. The majority of the Project site is active agriculture; therefore, tree trimming would occur in multiple small areas across the Project area.[54] The Applicant has stated they will reduce tree clearing to the extent practicable as the Project's design becomes more refined. Other clearing will include areas that are graded and contain rooted, herbaceous vegetation (i.e., hay or fallow fields), which will be stabilized directly after grading activities through seeding. Given the agricultural nature of the landscape in the Project area, seeding will quickly re-establish herbaceous ground cover in those areas that are graded.

Visual impacts. In response to multiple requests from the Siting Board, the Applicant conducted a viewshed analysis that identified 52 residences located within two miles of the Project that may have limited views of Project infrastructure (mainly solar panels). The vast majority of those residences are located on the west side of the Project, generally along KY 1241. Appendix C of this report provides the Applicant developed map identifying residences with potential visibility of the project (Potential Visibility Points). The analysis accounted for natural and man-made features, such as buildings, trees, and other objects, and assumed 10-foot-tall solar panel points.

The Applicant describes each of the 52 residences as being located more than 300 feet from any project infrastructure (panels, inverters, and substation) and having limited, minimal views of Project panels, as would typically be seen on the horizon line. The Applicant also notes that existing vegetation and trees and proposed vegetative buffers that will be planted would reduce or eliminate these views during a majority of the year.

Applicant's approach to Project screening. The Application states that the Project plans to install vegetative screening in key locations. In response to requests from the Siting Board, the Applicant provided a series of maps identifying areas along Project boundaries and within the Project site where low-density and dense buffers are proposed.[55] Approximately 1,427 linear feet of low-density screening would be planted in three separate small areas along Project boundaries. Approximately 12,254 linear feet of dense screening would be planted along multiple sections of the Project boundary.

According to the Applicant, vegetative buffers are proposed for areas in between non-participating residences that were directly adjacent to parcels containing Project infrastructure, and where natural foliage did not already provide screening. However, it appears that the majority of proposed screening locations are adjacent to participating landowners, as well as

[54] A map illustrating the tree trimming locations across the Project site was submitted by the Applicant in response to the Siting Board's first data request.
[55] Landscape maps and details about proposed vegetation were submitted by the Applicant in response to the Siting Board's first data request.

landowners with Good Neighbor Agreements. Appendix D of this report provides an overview map of the Project site, identifying areas where screening is proposed by the Applicant (Landscaping Map).

Low-density screening areas would include Eastern Red Cedar and Green Giant Arborvitae plantings at staggered spacing. Dense screening would add additional species into the planting mix (Virginia Pine, American Holly), with tighter spacing of plantings. Planted vegetation would be between three and six feet in height when installed and would reach between 20 and 50 feet in height at maturity, depending on the species. The Applicant will maintain planted vegetative screening as part of its routine site operations and maintenance program.

At the request of the Siting Board, the Applicant provided visual renderings of vegetative screening in front of solar facility infrastructure for one of the Applicant's other projects, described as having a location with similar topography.[56] Those photos suggest that planted trees and other vegetation would at least somewhat screen project panels or other infrastructure; however, it would likely take several years for newly planted vegetation to reach the height and thickness of the trees in the renderings.

Throughout the life of the Project, the Applicant will maintain planted vegetative screening as part of its routine site operations and maintenance program. Vegetated buffer areas will be periodically mowed, trimmed, and managed to maintain the intended screening height and density, keep vegetation clear of fences, access roads, and electrical equipment, and control invasive or undesirable species. Operational staff will conduct regular inspections of the screening areas, replacing dead or diseased trees and shrubs in kind as needed to preserve the effectiveness of the vegetative buffers over time. The Project will rely on natural rainfall and site stormwater management for long-term vegetation growth, using temporary watering only during initial establishment or unusual drought conditions.

Potential for glare from Project panels. The Glare Analysis describes use of ForgeSolar GlareGauge software to determine the potential for glare from solar panels to affect local residents and area drivers. The Project's solar panels will include anti-reflective coatings, which reduces the potential for glare.

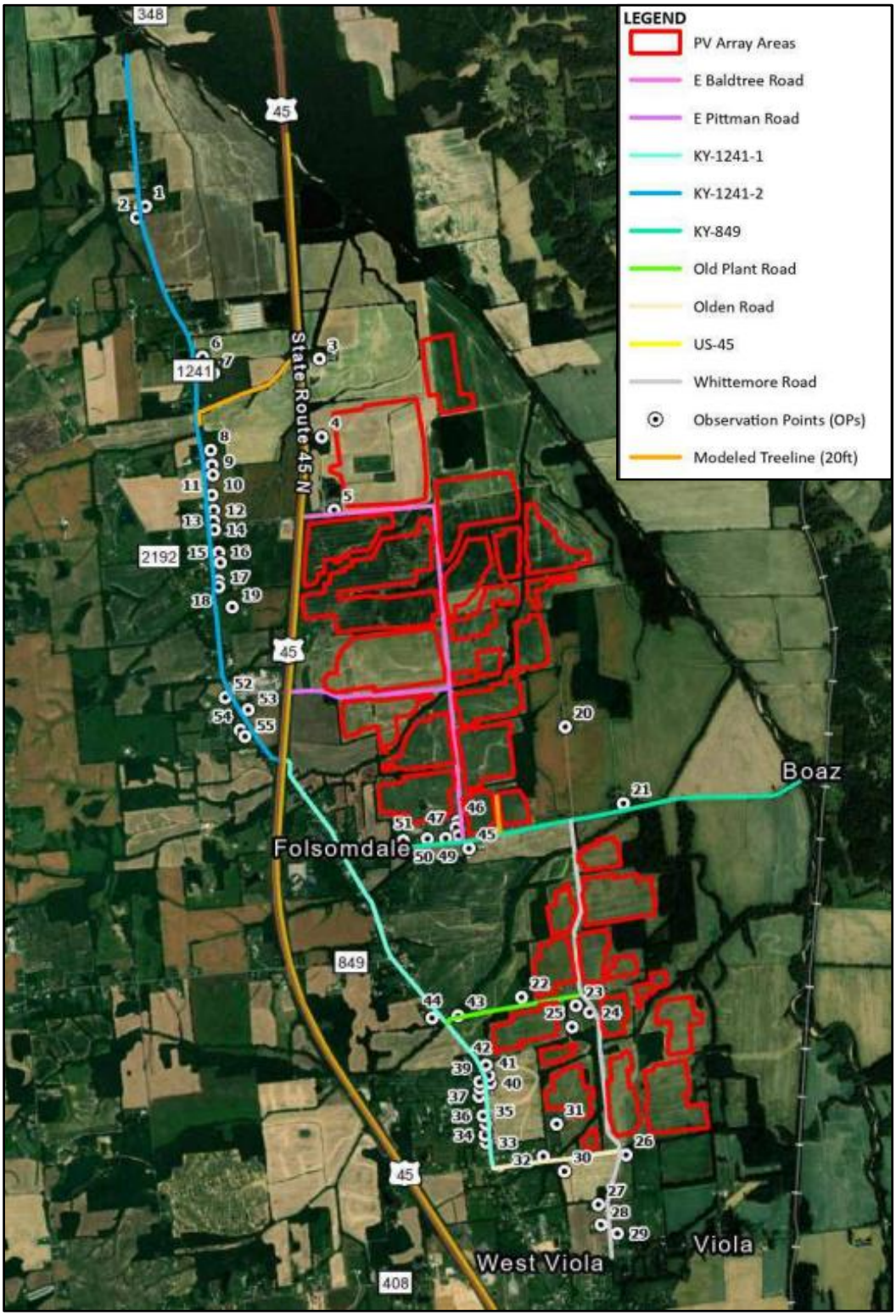
The Project's Glare Analysis addressed the potential for glint and glare for 35 modeled photovoltaic (PV) array areas:

- When driving along proximal segments of E Baldree Road, E Pittman Road, State Route 1241, State Route 849, Olden Road, Old Plant Road, U.S. Highway 45, and Whittemore Road; and
- At 55 nearby locations selected to represent observer views at neighboring properties (OPs).

Exhibit 5-1 provides a map identifying each road segment and all observation points included in the glare analysis.

[56] Example visual renderings were submitted in response to the Siting Board's second data request.

Exhibit 5-1.
Roadways and Observation Points Evaluated in the Mayfield Solar Project Glare Analysis Model



Source: MYSO, LLC, January 2026.

The analysis includes calculations to predict potential minutes of glare during the year at the following specified receptors: (1) Viewing height of observer in standard commuter vehicle at 3.5 feet above ground surface and (2) Viewing height of observer in typical semi-tractor-trailer truck at 7.5 feet above ground surface.

The simulation predicted no glare to any modeled receptors (roadways or observation points).

HE's evaluation of impacts. HE reviewed maps and Google Earth satellite imagery of the site and used Google Maps to "drive" around the area to assess viewpoints of the Project from a vehicle commuter's point of view. In addition, HE staff made a visit to the Project site on April 9, 2026. During this site visit, HE staff drove around the Project site to gain line-of-sight to various viewpoints and compiled a photo log of the different areas. The photo log index map and site photos can be found in Appendices A and B of this report, respectively.

Visual setting. HE's site visit confirmed information provided by the Applicant and gathered as part of the Project evaluation, with regards to the rural nature and "look" of the area. The area surrounding the Project is largely rural and agricultural, with clusters of residences and some natural vegetation, including trees, bushes and grass. Vegetation is relatively dense in certain areas, such as near homes and along a few roadways, while other areas are completely open for the purpose of agricultural activity. Some roadways have little to no existing vegetation. Overall, the existence of natural vegetation in the area might be considered "spotty."

US 45 is located on the western side of the Project site, along with some commercial businesses. The Project site itself is largely comprised of cropland (corn, soybeans). About 72 percent of land in Graves County is considered farmland (approximately 256,000 acres); about 78 percent of farmland acreage used for crop production (mainly corn, soybeans and wheat), with the remainder used for pasture, woodland or other uses.[57] Mayfield Creek is located to the east of the Project site and Carney Creek crosses the southern portion of the site.

Several homes are located in close proximity to the Project boundary, mainly along KY 849 and Olden Road. The community of Folsomdale is located west of the center of the Project area and the small community of Viola is located south of the Project site. Most local roads surrounding the Project site are paved, two-lane roads without existing shoulders. Several local roads are relatively narrow. Traffic on roads within the Project boundaries is generally light. Local roads adjacent to the Project site, such as KY 849 in the center of the Project and KY 1241 to the west of the Project site are more heavily trafficked.

The Applicant provided information about the distances between nearby residential structures and the Project boundary, solar panels, inverters and the substation. Exhibit 3-4 of this report described proximity of residential structures to the Project boundary. A total of 170 residential structures are located within 2,000 feet of the Project boundary.[58] Exhibit 5-2, below, presents

[57] USDA, National Agricultural Statistics Service, 2022 Census of Agriculture, Graves County profile.
[58] The Applicant's response to the Siting Board's second data requests list 171 homes; however, that response also indicated that one structure (a mobile home) has since been demolished.

data on the distances between those residences and Project infrastructure - solar panels, inverters and the substation / BESS area.

Exhibit 5-2.
Distances between Nearby Residential Structures and the Proposed Mayfield Solar Project Solar Panels, Inverters and Substation / BESS Area

Distance from Residence	Solar Panel	Inverter	Substation / BESS Area
0 - 300 feet	0	0	0
301 - 600 feet	18	0	0
601 - 900 feet	11	4	0
901 - 1,200 feet	13	5	0
1,201 - 1,500 feet	23	15	0
1,501 - 1,800 feet	34	5	0
1,801 - 2,000 feet	19	7	0
Total Homes:	**118**	**36**	**0**

Notes: (1) Two residences within 600 feet of a solar panel are owned by the participating landowner.
(2) Nine additional residences within 600 feet of a solar panel have Good Neighbor Agreements.
(3) Residential structures include those located within 2,000 feet of the Project boundary line.

Source: MYSO, LLC, May 2026.

As noted in Section 3 of this report, the shortest distances between non-participating residences and Project generation facilities are as follows:[59]

- Solar panels: 322 feet
- Inverter: 986 feet
- Project substation: 2,687 feet

Many of the 170 homes within 2,000 feet of the Project boundary line are located to the west of the Project site, along KY 1241. A number of additional homes are located along KY 849. Non-residential structures within 2,000 feet of the Project boundary include a cemetery, barns, churches and commercial property.

Vegetative screening. During the site visit and after review of the Applicant materials (including comparison of the map of Potential Visibility Points and the Landscaping Maps), HE identified several locations in the vicinity of the Project site at which additional vegetative screening might reduce views of Project infrastructure, but which were not identified as areas proposed for planting by the Applicant. Examples include the following:

[59] Residences covered by GNAs are considered participating for this analysis.

- Portions of US 45 are located directly adjacent to the northern section of the Project site; no vegetative screening is proposed in that area and drivers on US 45 would have a direct view of many panels.

- Multiple homes located along KY 1241, on the west side of US 45 were identified by the Applicant as having a view of the Project (northern portion of the Project site); no vegetative screening is proposed to reduce Project views from those locations.

- Multiple homes located along KY 1241, on the east side of US 45 were identified by the Applicant as having a view of the Project (southern portion of the Project site). Existing vegetation is more apparent in that area (as compared to other areas of the Project site) and some vegetative screening is proposed in certain locations.

- Portions of several small roads running through the Project site (for example, McGee Road, Baldree Road, Pittman Road, Whittemore Road) would also have direct views of many panels.

The Applicant has stated that they have taken care to thoughtfully identify and propose installation of vegetative screening in areas where panels would be adjacent to parcels with existing homes that would have direct views of the Project. However, additional screening might further reduce Project views from those residences. Additionally, screening along roadways would reduce Project views for local drivers.

Glare. As described above, the Glare Study concluded that modeling indicated no potential for any type of glare along local roadways or at the many identified observation points. However, given that some roadways and residences would have a view of Project panels, even with the proposed vegetative screening, HE requested additional information from the Applicant regarding operation of the panels in support of that conclusion. The Applicant responded by providing additional descriptions of the operation of the tracking systems to minimize glare:

"The large benefit of tracking panels is that they follow the sun, so the angle of reflection is basically back at the source (sun) and not resulting in glare to proximal structures and roadways. These systems reflect any light not absorbed directly back towards the sun, minimizing instances of glare. Glare can occur in single-axis tracking systems when the sun is outside the panels tracking range, as the panels would assume resting state to prevent shading to other panels (back-tracking). A resting state of a panel is typically flat, often occurring at dawn and dusk. This time period is when glare is most likely to happen, as the sun is hitting the flat panels at a low angle and reflecting at a similarly low angle. To prevent or mitigate this potential glare, the Project will use a resting angle of 5 degrees and anti-reflective coating to minimize reflections of the surrounding area."

Construction activities. Adjacent landowners and commuters driving along surrounding local roads may be able to see construction equipment and activity as it occurs.

- Relatively few homes are located within half a mile of the Project site. Those local residents will be able to see trucks and other equipment during construction.

- Drivers on surrounding roadways, including local roads near the Project site, will be able to see construction activities occurring on the Project site from certain locations.

- Existing vegetation in the area will reduce visibility of some Project construction activities.

- According to the general construction schedule provided by the Applicant, construction activity would occur over a period of up to about 24 months, with peak activity occurring over a period of between seven and nine months. Construction activity would be limited in duration.

Because of the rural nature of the area and the fact that construction will be temporary, HE expects the visual impacts from construction activities to be minimal.

Project facilities. HE's focus of the scenic compatibility evaluation is upon the above-ground Project components, including the solar panels, inverters, Project substation, BESS area and other structures, as those components may be visible from local residences and roads for the 40 years of Project operations.[60]

- The Project site includes some existing natural vegetation but is comprised largely of open agricultural land used to grow crops, resulting in visibility of Project facilities from multiple locations (residences and roadways).

- The smallest distance between a residence and a Project solar panel is more than 300 feet. The closest residence to the Project substation / BESS area would be about 2,700 feet from those facilities; other homes would be more than 4,000 feet (more than ¾ of a mile) away from that area.

- Solar panels and other infrastructure may be visible from as many as 52 local residences. The Applicant's proposed vegetative screening plan includes plantings in specific locations across the Project site to reduce views from residences with a direct view of Project facilities. However, HE believes that additional screening in other locations could further reduce Project visibility for other homes.

- Solar panels and other infrastructure will also be visible from multiple small and larger roadways around and within the Project site. Proposed screening is somewhat limited along roadways that are not near residences. Drivers on portions of US 45 will be able to clearly see Project panels in some areas. Panels will also be visible to drivers on portions of KY 849 and rural roads within the Project site, although traffic volumes on rural roads are quite low.[61]

[60] A proposed transmission line will be evaluated as part of a separate application filed by the Applicant. The transmission line route has not been finalized.

[61] The Siting Board's Final Order for the Banjo Creek Solar Project, also located in Graves County, includes planting of vegetative screening in areas where viewshed impacts occur "from residences or roadways directly adjacent to the Project and there is not adequate existing vegetation" as a mitigation measure.

- Project facilities may be more visible in winter and early spring months in areas where existing vegetation is mainly deciduous. Additionally, planted vegetation will take several years to grow to heights and density levels that shield infrastructure from view.

- Visibility of the substation / BESS area may be limited due to the distance from nearby homes, existing natural vegetation and proposed vegetative screening in that area.

- According to the Applicant's Glare Analysis, Project solar panels would not generate any glare at modeled roadways or at the multiple observation points evaluated. The Applicant will operate the panels in such a way that any potential for glare is minimized.

The Project area is generally rural in nature, with some existing vegetation. Given those characteristics, along with the Applicant's proposed vegetative screening, HE would expect the overall visual impacts associated with the presence of Project facilities to be minimal.

Conclusions and recommendations. Based on our review of the SAR, supplemental information provided by the Applicant, and additional research conducted by HE, we offer the following conclusions and recommendations regarding scenic compatibility:

- Construction vehicles and activity will likely be visible from local roadways and at different vantage points around the Project site, but these effects will be temporary and limited due to the rural nature of the Project site. Natural vegetation exists in some areas along and within the Project site, potentially reducing visibility of construction activities occurring on-site.

- Operational infrastructure, including solar panels, fencing and Project substation will be visible from some residences and roadways. The Applicant has proposed vegetative screening in different areas around the Project site, which will reduce views of Project facilities in some locations.

- The use of anti-glare panels will reduce the potential for glare from solar panels for local residents and drivers. The Applicant's glare study predicts that no glare would be generated by the Project and has committed to operating the panels in such a way as to further minimize any potential for glare.

- The Applicant has committed to developing a Complaint Resolution Plan prior to the start of construction. That plan should address site-specific concerns that may arise during construction or operation of the facility, including those related to scenic compatibility.[62]

- A large portion of Graves County is considered farmland, including active crop production. Farmland and other undeveloped areas surrounding the Project site include scattered existing natural vegetation. Vegetative screening proposed by the Applicant

[62] The topic of Complaint Resolution is addressed later in this report.

would add to the rural and natural feel of the area, while also shielding Project facilities from view.

Based on our understanding of the Project area in Graves County and of Project-specific characteristics, HE believes that the Mayfield solar facility would not be incompatible with the existing scenic conditions for residents or drivers on local roads. However, additional vegetative screening would further reduce infrastructure visibility in some locations.

Need for mitigation. The visual impacts are likely to be such that the Applicant should consider certain mitigation:

1. Existing vegetation between the solar arrays and nearby roadways and homes shall be left in place, to the extent feasible, to help minimize visual impacts and screen the Project from nearby homeowners and travelers.

2. The Applicant will not remove any existing vegetation except to the extent it must remove such vegetation for the construction and operation of Project components.

3. The Applicant will implement vegetative screening as proposed in the submitted Landscape Map as a minimum, including vegetative screening along roadways and near the Project substation / BESS area.

4. The Applicant will provide any changes to the Landscape Map to the Siting Board.

5. The Applicant will maintain planted screening vegetation, including establishment, supplemental plantings and on-going maintenance.

6. Any changes to the site infrastructure layout (i.e., panels, inverters, etc.) included in the Application materials will be submitted to the Siting Board for review. If the Siting Board deems those changes to be significant, the Siting Board may require the Applicant to revise the submitted Landscape Map.

7. The Applicant will work with local homeowners, other landowners and area residents to address and resolve complaints related to view of Project facilities via the Applicant's Complaint Resolution Plan.

8. To the extent that an affected adjacent property owner indicates to the Applicant that a visual buffer is not necessary, the Applicant will obtain that property owner's written consent and submit such consent in writing to the Siting Board.

9. The Applicant will use anti-glare panels and operate the panels in such a way that glare from the panels is minimized or eliminated. The Applicant will work with affected local residents or Graves County representatives to address and resolve complaints related to glare via the Applicant's Complaint Resolution Plan.

Potential Changes in Property Values and Land Use

The construction and operation of industrial facilities have the potential to affect property values and/or land uses of those properties adjacent to, or even in the general vicinity of, the facility in question. The magnitude, timing, and duration of increased traffic volume, noise, odor, visual impairments, or other emissions associated with the facility can influence the marketability and value of nearby properties. Each of those factors are addressed in this report and are considered here in examining property value impacts.

General methods of assessment. The value of a residential property is based on many factors, including characteristics of the home and the land on which it is situated, the uses and values of the surrounding property, among other attributes. The value of a residential property will take into account things such as lot size, age of home, size of home, number of bedrooms and bathrooms, etc. A residential property located near public lands or open spaces may be more highly valued, whereas the same property located near a heavy industry facility might have a lower value. Residential property values may vary differently than agricultural or industrial properties.

Several methods are available to assess the impacts of a new development on nearby property values. A technique known as hedonic pricing analysis can be used to determine the impacts of a specific characteristic on the price or value of a property. However, this method of valuation requires large amounts of data, statistical experience, and careful evaluation. Formal appraisal is a technique which uses the concept of specific property characteristics in comparing different properties. Matched pair analysis is another technique. A matched pair analysis makes a comparison between similarly situated properties that sold before and after a new industrial facility is constructed. This approach is described in more detail below.

Summary of information provided by the Applicant. The Property Value Impact Report (provided as Attachment B A to the SAR) was completed by the Applicant's consultant, Richard Kirkland of Kirkland Appraisals, LLC. Referred to here as the Kirkland report, that document, along with additional follow-up information from Mr. Kirkland provides the following relevant information:

- ***Land uses of adjacent properties*** – Mr. Kirkland describes adjoining land as primarily a mix of agricultural and rural residential uses. About 74 percent of the acreage adjacent to the Project site is agricultural, an additional 13 percent is mixed agricultural / residential and about 11 percent is purely residential. A small amount of acreage adjacent to the Project site is identified as for industrial purposes (about two percent).

- ***Distances between solar panels and homes on adjacent properties*** – The Kirkland report indicated that the closest residential structure will be about 300 feet away from a solar panel. The Applicant also provided additional information about the distance between various structures and the potential Project footprint. Altogether a total of 170 homes and 307 non-residential structures are located within 2,000 feet of the Project

boundary.[63] Of those, 11 are owned by participating landowners or landowners with Good Neighbor Agreements.

- ***Academic research studies, appraisal market studies, other publications and broker comments*** **–** The Kirkland report provides summaries of several research papers and articles addressing property value impacts of solar or wind facilities. Based on his understanding of each study, Mr. Kirkland concludes that proximity to a solar facility has no impact (positive or negative) on property values. Mr. Kirkland also provides the results of several appraisal market studies focused on the presence of solar facilities, which all conclude finding no impact on property values due to proximity to solar facilities. Comments from real estate brokers during the course of Mr. Kirkland's work also indicate that solar farms have had no impact on the marketing, timing, or sales price for the adjoining homes.

- ***Assessor surveys*** **–** The Kirkland report describes the findings from a survey of assessors in Kentucky counties with existing or proposed solar projects and assessor surveys in other states conducted by Mr. Kirkland. In Kentucky, Mr. Kirkland contacted 10 county Property Value Administrators (PVAs) regarding impacts to property value near a solar facility; of the six PVAs that responded, all stated that there was no impact to property values from the facility. Surveys completed in other states reflected similar results.

- ***Discussion of a "matched pair" analysis*** – The Kirkland report employs an analytical approach described as a matched pair analysis, which aims to determine the impact of a specific feature or attribute on property value. This form of "matched pair" analysis compares differences between the sales prices of properties adjacent to a solar facilities and sales prices of properties located further from that same facility.[64] Mr. Kirkland identifies and compares the sales prices of properties sold using data from solar farms across multiple states, including Kentucky. In general, the solar farms included in the analyses are relatively similar in terms of rural, less densely populated locations. Nearby land uses are typically residential and agriculture in nature.

- ***Narrative discussion of specific factors related to impacts on property values*** **–** Mr. Kirkland briefly addresses the topics of hazardous materials, odor, noise, traffic, stigma, and appearance as related to solar facilities in general and concludes that the "proposed solar farm [Mayfield Solar] will not negatively impact adjoining property values." He does state that "the only category of impact of note is appearance, which is addressed through setbacks and landscaping buffers."

- ***Construction related impacts to property values*** **–** Mr. Kirkland states that no impacts to property values are anticipated due to construction activity on the Project site. The report notes that "construction will be temporary and consistent with other development

[63] Non-residential structures within 2,000 feet the Project boundary include agricultural buildings, commercial buildings, government buildings, churches, a masonic lodge, a cemetery and a fire department.
[64] Mr. Kirkland adjusts for such factors as date of sale, age of home, square footage, number of bedrooms and bathrooms and garage spaces prior to comparing sales prices.

uses of the land and in fact dust from the construction will likely be less than most other construction projects given the minimal grading."

Kirkland's conclusions. The Kirkland report presents the following analyses and conclusions:

1. A sale/ resale analysis of 16 properties located near solar facilities (sales price before and after development of the facility, adjusted for inflation). Ten of those properties are located in Kentucky and several are located near recently developed large scale projects (i.e., Turkey Creek, Mt Olive Creek, Russellville). He found price differences ranging from -5 percent to +15 percent, with an average impact of +3 percent and a median impact of +2 percent.

2. A matched pair analysis accounting for property price differentials of 47 matched pair sets associated with 16 different solar facilities in the Southeast and Midwest U.S.[65] Kirkland states that the difference in sales prices for those matched pair sets ranged from -7 percent to +12 percent with an average of +1 percent and median of +/-0 percent.

3. Data specific to facilities in the Southeast U.S. (77 matched pair sets associated with 35 solar facilities) show price differentials ranging from -10 percent to +10 percent with an average of +1 percent and median of +1 percent.

4. A larger dataset for a broader geographic area of the U.S. (138 matched pair sets associated with 74 solar facilities) shows price differentials ranging from -10 percent to +14 percent with an average of +1 percent and median of +/-0 percent.

Based on the data and analysis in this report, it is Mr. Kirkland's "professional opinion that the solar farm proposed at the subject property will have no negative impact on the value of adjoining or abutting property."

HE's evaluation of impacts. To assess the topic of impacts to property values, HE: (1) reviewed relevant existing literature related to solar facility impacts; (2) conducted an interview with the Graves County Property Valuation Administrator; (3) conducted additional evaluation of the data provided in the Kirland report; and (4) examined the potential for impacts to residential and other properties closest to the Project.

Literature review. HE reviewed the existing literature related to the relationship between property values and utility-scale solar facilities. A summary of recent studies that address the issue of changes in property values specifically related to solar facilities can be found in Appendix E of this report.[66] Based on review of the identified academic studies, HE offers the following observations:

[65] The size of the solar facilities evaluated ranges from 2.7 MW up to 617 MW and from an overall property size of 34 acres (2.7 MW facility) up to 3,500 acres (617 MW facility). The majority of those facilities are 80 MW or less.

[66] Several of these studies are also addressed in the Kirkland report and considered in his evaluation and conclusions.

- The results and conclusions of recent studies examining the effects of utility-scale scale solar facilities on nearby property values are mixed, with some studies indicating decreases in property values within a certain distance, others suggesting increases in property values and still others indicating no impacts to property values.

- In all the studies reviewed, potential positive or negative changes in property values were relatively small, generally less than five percent.

- In most cases, researchers noted that property values are influenced by a wide range of factors and that the presence of a solar facility is not the main driver of a property's value (or sales price).

- In most studies, researchers noted that visibility of the facilities was an important component of the potential impact to property values.

- Many of these studies use large databases, including many solar projects and thousands of housing transactions, as inputs into various statistical models. While use of those extensive datasets is beneficial for developing results that might reflect an average effect over a large geographic area, it is likely that the impacts to individual properties will differ from the average based on the characteristics of that property.

- Impacts to the value of individual homes may be different than an estimated average impact to property values at a regional level. For individual homes, considerations might include the types of other surrounding land uses and the ability for project facilities to be screened. For example, the value of a home located near other commercial or industrial activity may be unaffected by development of a solar facility. Homes without any views of the solar project (due to existing vegetation, screening, slope or other factors) may be unaffected by the solar facility even if they are in relatively close proximity. The value of specific features of the home or property may outweigh the effects of a nearby solar facility. The real estate market and demand for housing in a specific area may also have influences that outweigh the effects of a nearby solar facility.

In addition to academic literature, HE also reviewed several reports developed by independent property appraisers. Independent appraisers are often hired to conduct analyses related to property value impacts for solar companies. Those analyses focus on property value trends of lands adjacent to existing solar farms across the country, using a paired sales or matching pair approach. The appraisal reports reviewed indicate differences in property values ranging from about -3.2 percent to as much as +27 percent, although generally in cases with positive impacts, property values increased by about 5 percent or less. Overall, the conclusions were that solar facilities do not negatively impact property values.[67]

[67] McGarr, P. and A. Lines, CohnReznick, Property Value Impact Study, Proposed Soar Farm, McLean County, IL, 2018; McGarr, P. and A. Lines, CohnReznick, Property Value Impact Study, Proposed Soar Farm, Kane County, IL, 2018; McGarr, P., CohnReznick, Property Value Impact Study, Adjacent Property Values Solar Impact Study: A Study of Nine Existing Solar Farms Located in Champaign, LaSalle, and Winnebago Counties, Illinois; and Lake, Porter, Madison, Marion, And Elkhart Counties, Indiana, 2018;

It is interesting to note that local residents often raise concerns about property values during public hearings or open houses related to specific solar facilities, despite the fact that many existing studies related to this issue generally indicate no impacts to property values. In many cases, newspaper articles and other media indicate that residents believe property values will be reduced by nearby solar farms, suggesting that there may be a perception of negative effects on property values from portions of the community. In the case of the proposed Barrelhead facility, no comments indicating concerns related to property values have been submitted to the Siting Board and no traditional media or social media information was identified that would suggest such a concern specific to this Project.

Interview with Graves County officials. HE spoke with the Graves County Property Value Administrator (PVA) (Mr. Lee Martin) and a Graves County Commissioner (Mr. Tyler Goodman) on April 9, 2026, as part of the on-site visit. Mr. Martin stated that he has not had any meetings with Project representatives and that he has not heard any concerns from local residents regarding any aspects of the Project. Property values and sales prices, for both farmland and residential homes, are continuing to increase at a record pace, potentially partially due to interest from out-of-state buyers. Additionally, there is not as much land available for development in this area as compared to other areas of the County due to the existence of the floodplain. In terms of potential impacts on property value from the Project, Mr. Lee commented that there has not been any measurable reduction in sales in the vicinity of the permitted Banjo Creek Solar Project (also located in Graves County), suggesting that the same outcome might apply to the Mayfield area.

Mr. Goodman commented that this area is continuing to recover and rebuild after the tornado that devastated the area in 2021. His main concern regarding the Project is for local residents living south of KY 849 in close proximity to the Project site. He indicated that he wants Project representatives to address any concerns brought up by those residents; however, he did not indicate that he had heard any specific concerns from that group of residents. Mr. Goodman also commented that aesthetic concerns were an issue for local residents in the area of the Banjo Creek Solar Project.

Review of Kirkland data and conclusions. Although Mr. Kirkland concludes that there would be no impact on property values from the Mayfield facility, the matched pair analyses do indicate the potential for a range of positive or negative effects. Therefore, HE examined more closely the data provided in the matched pair sets for facilities in the Southeast and Midwest to determine the likelihood of a positive impact, negative impact, or no impact.

Exhibit 5-3 presents a detailed picture of the distribution of price differences for matched pair sets associated with solar facilities in Kentucky and adjoining states. About 83 percent of matched pair comparisons reflected a sales price differential of between negative five percent and positive five percent, with about six percent of comparisons showing no price differential at all. About 43 percent of all comparisons showed a negative impact on home prices, while another

McGarr, P., CohnReznick, Property Value Impact Study, Adjacent Property Values Solar Impact Study: A Study of Eight Existing Solar Farms Located in Lapeer County, Michigan; Chisago County, Minnesota; Marion County, Indiana; LaSalle County, Illinois; Bladen, Cumberland, Rutherford and Wilson Counties, North Carolina; and Isle of Wight County, Virginia, 2020.

51 percent indicated a positive effect. Overall, these data appear to support Mr. Kirkland's conclusion of no property value impacts due to proximity to solar facilities when averaging all the data.[68]

Exhibit 5-3.
Distribution of Sales Price Differences for Matched Pair Sets, Kentucky and Adjoining States

	Kentucky / Adjoining States Solar Facility Analysis	
# Facilities Included	16	
# Matched Pair Sets	47	
Range of Price Impact	**Number of Sets**	**% of Sets**
-6% or greater	1	2%
-1% to -5%	19	40%
0%	3	6%
1% to +5%	17	36%
+6% or greater	7	15%
Total	47 Pairs	100%

Note: The largest negative difference a matched pair set was -7 percent; The largest positive difference was 12 percent.
Source: Kirkland Appraisals, LLC, Property Value Impact Report for Mayfield Solar, January 2026.

The range of price differences reflected in all of the datasets provided in the Kirkland materials also appears to support the proposition that any impacts to property values associated with the presence of a solar facility are largely site- or property-specific and may occur within a range, likely to be small.

Residential properties in close proximity to the Project site. Information obtained in HE's literature search indicates that impacts to the values of adjacent or surrounding properties may be largely related to the ability to see or hear the Project and that vegetation or other visual barriers may reduce the potential for adverse impacts to property values. Therefore, HE more closely examined the locations and situations of nearby residential properties in terms of distance to the Project and potential viewshed impacts when considering potential impacts to property values.

- The nearest non-participating home would be located more than 300 feet from a solar panel. A total of 118 homes would be located within 2,000 feet of a panel (Exhibit 5-2), including eleven homes owned by a participating landowner or landowner with a Good Neighbor Agreement. The closest home to an inverter would be more than 600 feet away and the closest home to the Project substation would be more than 2,500 feet away.

[68] Mr. Kirkland states that impacts of between -5 percent and +5 percent can be considered within the typical variation of real estate transactions.

- Project infrastructure may be somewhat visible from about 52 residences. As described by the Applicant, those residences would have limited, minimal views of Project panels, as would typically be seen on the horizon line. The Applicant also notes that existing vegetation and trees and additional proposed vegetative buffers would reduce or eliminate those views.

- The Applicant is proposing vegetative screening in select areas of the Project site, generally in locations that would minimize Project visibility from homes with direct view of Project facilities.

- As described in the next section of this report (noise evaluation), operational noise levels are expected to be low, and Project generated noise levels may not be noticeable to nearby residents.

Conclusions and recommendations. Based upon review of the Kirkland report and our additional research efforts and interviews, HE offers the following conclusions related to potential impacts to property values or land uses for adjacent property owners:

- Construction activities will be temporary, occurring over a period of up to 24 months. Those activities will result in increased traffic and noise in the vicinity of the Project. However, homebuyers and those interested in buying other types of properties often have a longer-term mindset when considering the purchase price.

- Relatively few (118) homes are located within 2,000 feet of a solar panel, with the closest located more than 300 feet from a panel. Distances to other Project infrastructure are much greater. Those distances are relatively far when considering visibility of the facility.

- Certain literature suggests that concerns about impacts to property values from solar facilities stem from visibility of panels and other infrastructure. If that is the case, existing vegetation in the Project area should help mitigate any potential reductions in property values. Additionally, the Applicant is proposing vegetative screening at strategic locations along and within the Project boundary.

- As discussed in a later section of this report, operational noise levels are estimated to be below the World Health Organization's estimates of moderate or annoying noise levels for all nearby residences.

- Current research suggests that the existence of solar facilities does not, in general, measurably result in changes to property values, although there may be small risk of negative impacts in certain cases.

- After considering the available research and other information, it is HE's opinion that any impact on property values due to the presence of a solar facility will be site specific, project specific and property specific. Application or assumption of a single, blanket percentage change in property values is not appropriate or accurate, when it comes to the presence of a solar facility. A small, narrow range is more meaningful.

- Neither the Graves County Property Valuation Administrator (PVA) nor the County Commissioner interviewed as part of the site visit have heard any concerns from residents regarding impacts on property values. The PVA noted that property values and sales prices are increasing in the general Project area and suggested that he does not believe that the Project is likely to have a noticeable effect on local property values.

- HE concludes that, overall, property values in the Project area and in Graves County are unlikely to be affected by the siting of the Mayfield Solar facility. This conclusion assumes that the mitigation strategies discussed in Section 6 are adopted by Mayfield Solar.

Need for mitigation. No unique mitigation measures are recommended related to potential impacts to property values or adjacent land uses because other mitigation already recommended can accomplish this. However, coordination by the Applicant with local homeowners regarding potential visual impacts and impacts from noise, traffic or other Project activities should be initiated.

Anticipated Peak and Average Noise Levels

Noise issues stem from construction activities and operational components of the solar facility. During construction, noise sources will include backhoes, pile drivers, concrete pump trucks, flatbed trucks, generators, and other equipment. During operations, noise will be emitted from inverters, and the substation transformer. Distance from noise emitters to noise receptors is important since noise levels decrease the further a noise receptor is from a noise emitter.

General methods of assessment. Sound levels are measured in decibel units (dB). Decibels are measured on a logarithmic scale that quantifies sound intensity. Sound levels are typically described as dBA, which is the measure of the overall noise level of sound across the audible spectrum to compensate for the varying sensitivity of the human ear to sound at different frequencies. The impacts of noise are not strictly related to loudness – the time of day when noise occurs, the duration of the noise, and baseline or background noise levels are also important factors in determining the "loudness" of a noise.

Generally speaking, an increase in 10 dBA is perceived as a doubling of loudness, which is to say, 70 dBA is perceived as twice as loud as a level of 60 dBA is.[69] A change of three decibels is barely noticeable, but a change of five decibels is typically noticeable. Once sounds reach 90 dBA humans can experience pain from the noise and sounds above 150 dBA can cause permanent hearing damage.[70] For additional context, 30 dBA is the sound emitted by a whisper, 55 dBA are emitted from a percolating coffeemaker, and 80 dBA would be the sound emitted by a kitchen blender.

[69] RECON Environmental, Inc. *Noise Analysis for the Drew Solar Project, Imperial County, California*. July 24, 2018. http://www.icpds.com/CMS/Media/Drew-Solar---Appendix-G.pdf

[70] Alpine Hearing Protection website, https://www.alpinehearingprotection.co.uk/5-sound-levels-in-decibels/#:~:text=0%20decibel%20is%20the%20so,permanent%20damage%20to%20your%20hearing.

A standard noise impact assessment focuses on several key factors:[71]

- Measurement of existing ambient noise levels;
- Identification of noise-sensitive receptor sites;
- Calculation of distances between noise sources and sensitive receptors;
- Estimation of project-related (construction or operational) noise production and exposure, including cumulative noise effects.

Summary of information provided by the Applicant. An acoustic assessment for the Project (Attachment D of the SAR) was prepared by Tetra Tech, Inc. (Tetra Tech), focusing on noise emissions during construction and the operational phases, with descriptions of existing noise conditions in the area. Revised acoustical modeling results with updated data on expected noise conditions during construction and operations was provided in response to the second Siting Board data request.

Baseline (ambient) noise levels. Existing land uses in the Project area are mainly agricultural; scattered residences and forested land are also present in the area. The Applicant indicated that baseline noise levels for a rural/agricultural area, similar to the area surrounding the Project, would result in daytime sound levels of approximately 50 to 55 dBA.[72] The area surrounding the Project site includes a highway, secondary roads, active agricultural lands, residential structures, a church and a small cemetery.

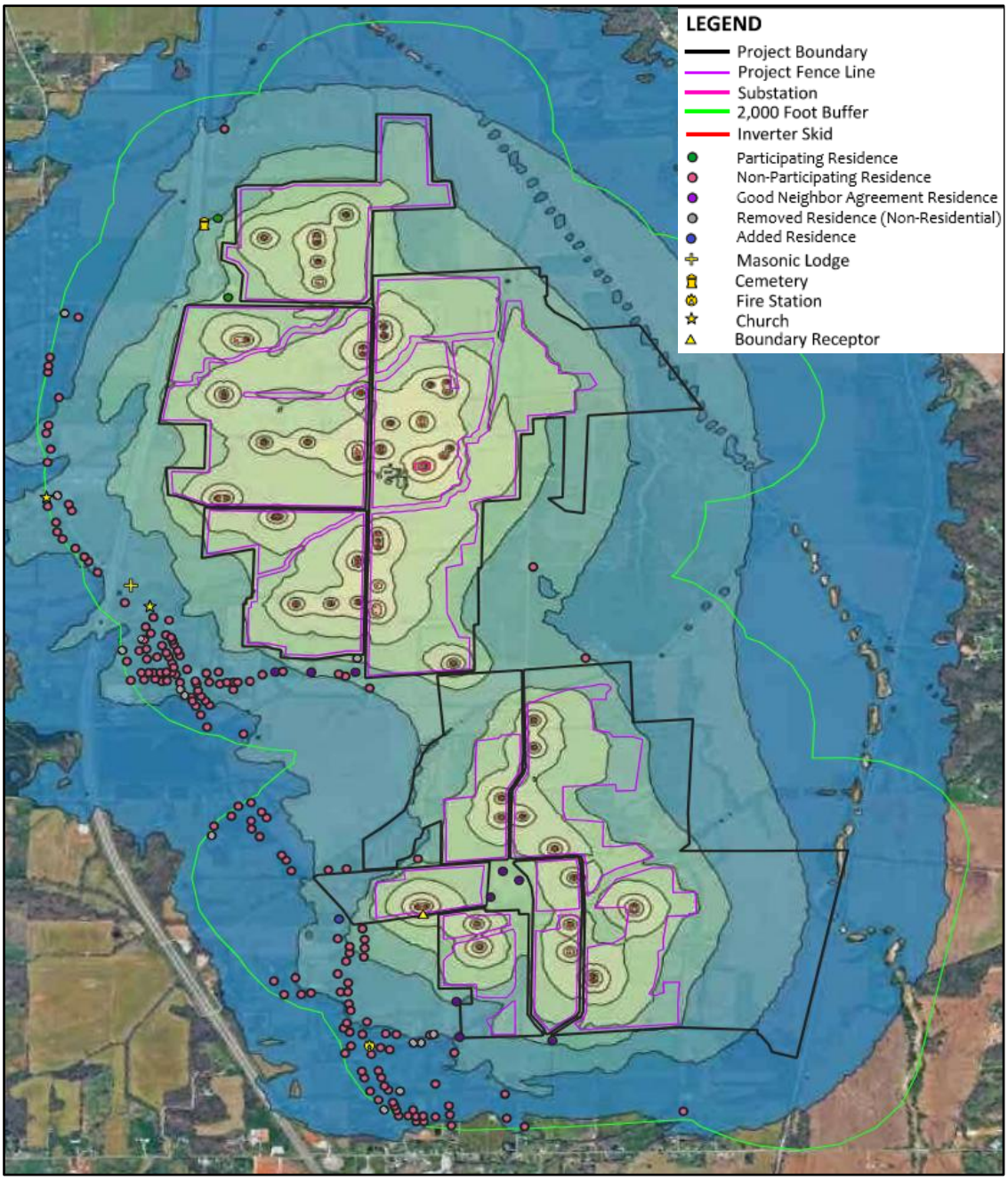
Noise sensitive receptors. Noise sensitive receptors are generally defined as locations where people reside or where the presence of unwanted sound may adversely affect the existing land use. Typically, sound sensitive locations include residences, places of worship, hotels, auditoriums, athletic fields, day care centers, hospitals, offices, schools, parks and recreational areas. Noise is generally described as unwanted sound, which can be based either on objective effects (hearing loss, damage to structures, etc.) or subjective judgments (such as community annoyance). Local conditions such as traffic, topography and wind characteristics of the region can alter background sound conditions. The Applicant identified 159 non-participating residences and 307 non-participating, non-residential receptors within 2,000 feet of the Project boundary.[73,74] Non-residential receptors include nine commercial buildings, two government buildings (including a volunteer fire department), two churches, a cemetery, a Masonic Lodge, and numerous barns, sheds, garages, and silos. Participating receptors within the 2,000 foot

[71] Department of Energy. Noise and Vibration Impact Assessment Methodology. https://www.energy.gov/sites/prod/files/edg/media/EIS0250F-S2_0369_Volume_V_Part_3.pdf;
[72] Applicant's response to first data request.
[73] Per Applicant's responses to the data requests. Application materials initially included 181 non-participating residences; this was revised in responses to Siting Board's data requests. Two residences belonging to the participating landowner and nine residences with Good Neighbor Agreements are considered participating residences for this analysis.
[74] A non-participating residence located on KY-1241 near McGee Road was not included in the acoustical analyses or receptor maps submitted with the Application. This residence was verified during the Site Visit and information about noise impacts to this residence (R-184) was provided in response to the second data request.

buffer include eleven residences; two sheds, a garage and a barn are located within the Project boundary.

Exhibit 5-3, below, provides the locations of the residential noise receptors and select non-residential noise receptors within 2,000 feet of the Project boundary.

Exhibit 5-3.
Noise Sensitive Receptors near Mayfield Solar Project



Note: This Exhibit includes the 183 residences identified in the Application with residence R-184 added.
Source: MYSO, LLC, January 2026 and May 2026; Harvey Economics, 2026.

Construction noise emitters. During the construction phase, a variety of heavy equipment will be utilized. Peak construction noise will be created by pile driving at approximately 101 dBA from a distance of 50 feet, with cranes, graders, dozers, and cement trucks emitting sound levels greater than 80 dBA at a distance of 50 feet. Pile driving will be utilized during site preparation, excavation, and in construction of the solar panels, inverters, and substation. Exhaust noise from diesel engines that power construction equipment is also a significant source of noise generation.[75]

The Applicant's consultant, Tetra Tech, calculated estimated sound pressure levels at residential and non-residential receptors for pile driving during Project construction.[76]

Twenty-four non-participating residences are located within 1,000 feet of a solar array.[77] Construction sound levels during panel construction would be 75 dBA or greater for all of these noise receptors.

Exhibit 5-4 provides the range of sound levels during the panel construction phase with pile driving at non-participating residential receptors within 1,000 feet of an array. The maximum anticipated sound levels (L_{max}) are shown.

[75] Identification of Dominant Noise Sources in a Diesel Power Group. Hassoun, et al., 2019. https://d-nb.info/1214765556/34

[76] The BESS units were not included in the Acoustic Analysis.

[77] Two residences belonging to the participating landowner and nine residences with Good Neighbor Agreements are considered participating residences for this analysis.

Exhibit 5-4.
Panel Construction Sound Levels at Select Non-Participating Residential Receptors

Receptor ID	Distance from Solar Array (ft)	Estimated Lmax Sound Level (dBA)
R-63	322	84
R-56	360	84
R-114	395	82
R-86	436	82
R-102	477	81
R-54	516	80
R-100	534	80
R-184	586	80
R-61	587	79
R-182	628	79
R-52	709	78
R-29	741	77
R-119	758	77
R-53	779	77
R-55	787	77
R-60	853	76
R-50	855	76
R-95	855	78
R-111	855	76
R-51	890	76
R-92	950	75
R-89	964	75
R-103	996	75

Note: Sound level reflects noise level generated by the operation of multiple pieces of construction equipment from the nearest site of pile driving to a noise sensitive receptor.

Source: MYSO, LLC, January 2026 and May 2026.

Maximum construction noise levels are predicted to be slightly higher than the panel construction data during the Project's site preparation phase, when additional pieces of construction equipment are in operation simultaneously and closer to the Project boundary.

Of the 107 non-participating, non-residential structures within 1,000 feet of the Project boundary, four receptors are commercial buildings; the remainder are sheds, barns, garages, and silos. Construction sound levels were not provided for these noise receptors but are anticipated to be similar to those experienced at residential structures located at a comparable distance from panel construction.

The Folsomdale Church (CH-1), Liberty Church (CH-2), Folsomdale Masonic Lodge (M-1) and the Viola-North Graves Volunteer Fire Department (F-1) are all located more than 1,250 feet

from the Project boundary and will likely only experience mild impacts from construction noise, if at all.

The Nall Cemetery (C-1) is located on the property of the participating landowner (R-157), approximately 600 feet from the Project fenceline. This small cemetery consists of approximately 18 graves dating before 1900.[78]

Exhibit 5-5, below, provides the range of construction equipment sound levels during the site preparation phase of construction with pile driving for select non-residential receptors. The maximum anticipated sound levels (Lmax) are shown.

Exhibit 5-5.
Pile Driving Sound Levels at Select Non-Residential Receptors

Structure ID	Identifier	Distance from Project Boundary (ft)	Estimated Lmax Sound Level (dBA)
NR-298	Commercial	299	84*
C-1	Nall Cemetery	509	80
NR-168	Commercial	884	76*
NR-167	Commercial	977	74*
NR-108	Government	1,064	73*
NR-122	Commercial	973	72*
M-1	Masonic Lodge	1,261	72
CH-1	Folsomdale Church	1,274	72
F-1	Fire Department	1,487	70
CH-2	Liberty Church	1,971	69

Notes: (1) Construction sound level reflects noise level generated by the operation of multiple pieces of construction equipment from the nearest site of pile driving to a noise sensitive receptor during site preparation.
(2) Asterisk (*) indicates approximate sound level based on data for residential receptors at similar distances to Project boundary and nearest panel.
(3) Receptors shown are non-participating.

Source: MYSO, LLC., January 2026 and May 2026.

Construction noise at these levels will be noticeable and potentially annoying for local residents but will not be sustained long-term. For comparison, city traffic experienced from inside a vehicle is approximately 85 dB and a vacuum cleaner operates at 70 to 80 dB; these levels can be challenging but will not affect hearing unless exposure is for an extended period.[79]

Pile driving will occur during site preparation, excavation, installation of solar panels, inverters, and substation construction. According to the Project's anticipated schedule and construction phase equipment breakdown, activities involving pile driving will occur over about 22 months, with a peak construction period of approximately seven to nine months. However, construction activities requiring pile driving will move across the Project area such that noise impacts to

[78] Find a Grave website, https://www.findagrave.com/cemetery/2592456/memorial-search?cemeteryName=Nall+Cemetery&page=1
[79] Alpine Hearing Protection website, https://www.alpinehearingprotection.co.uk/5-sound-levels-in-decibels/#:~:text=0%20decibel%20is%20the%20so,permanent%20damage%20to%20your%20hearing

individual residences will occur for much shorter periods. The "worst case" noise levels would be expected to occur over even briefer periods.

As the distance from the source of noise increases, the sound level attenuates or decreases. A doubling of distance results in a decreased noise level of approximately six dBA.[80] Therefore, residences more than 2,000 feet from the panels would experience lower levels of noise from the construction of the panels. The topography and existing natural vegetation in the southern portion of the Project site will likely contribute to further reduction of sound pressure levels for those residences.

Operational noise emitters. During the Project's operational phase, the primary sources for noise will be (1) the Project substation transformer and (2) 63 inverters, which will be distributed throughout the Project site.[81] Most of the operational noise will occur during daylight hours, as Project inverters do not operate at full load during evening hours. The nearest non-participating residence (R-138) is located about 2,680 feet from the substation transformer, with the next closest residences being further than 4,000 feet away. The closest non-residential receptor, a shed, is located further than 2,500 feet from the substation.

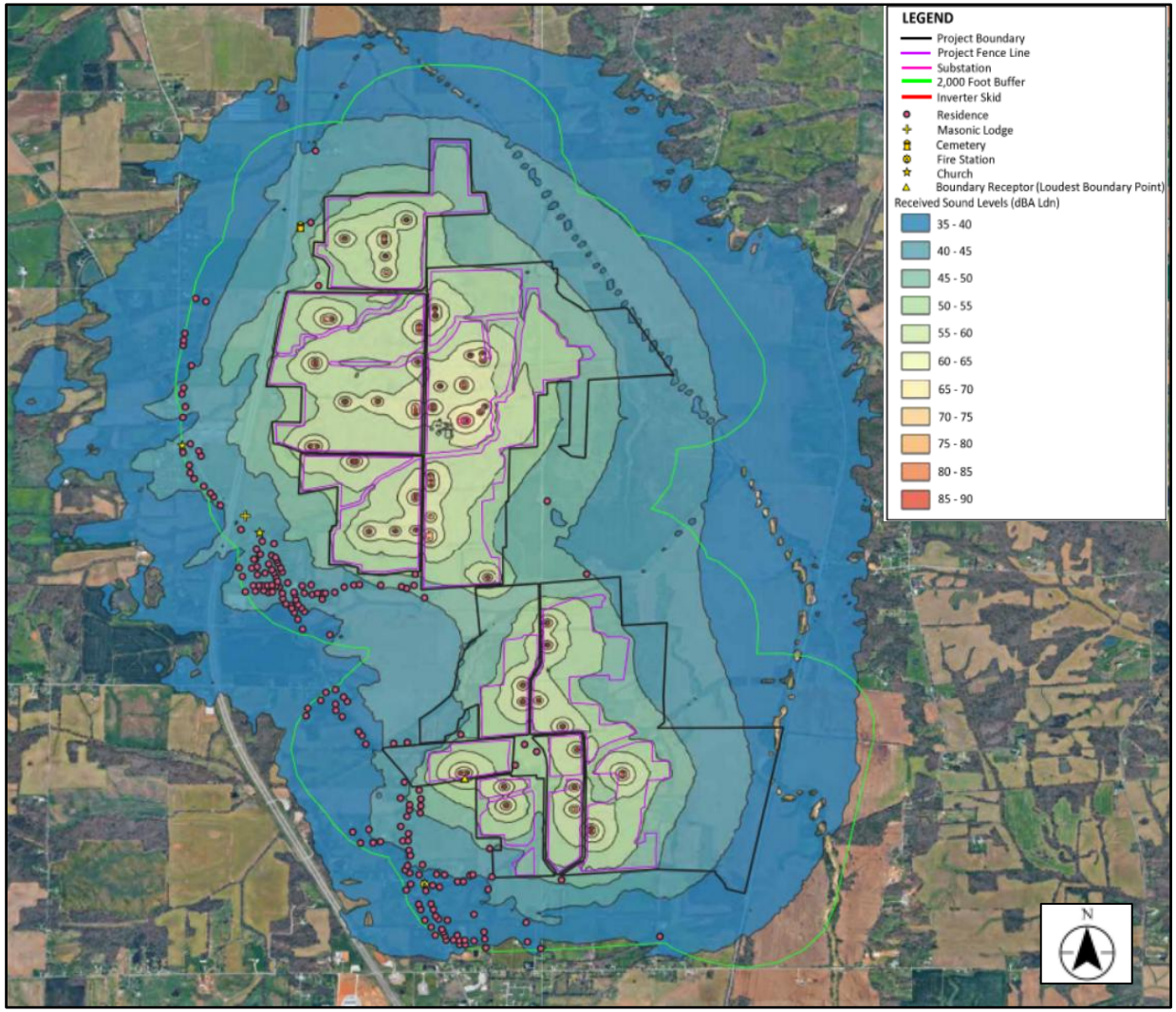
Tetra Tech analyzed the cumulative operational noise levels for all residential receptors and select non-residential receptors located within 2,000 feet of Project boundaries using the CadnaA sound model.[82] Eleven non-participating receptors are expected to experience noise levels at or above 45 dBA during operations: 1) Residence R-138, located closest to the Substation; 2) A grouping of homes at the northside of Neighborhood 13 (R-50 to R-54; R-56); 3) Residences R-100 and R-102, located south of panel area 5; 4) Residence R-86, located southwest of panel area 8; 5) Residence R-119, located northeast of panel area 10; and 5) Nall Cemetery (C-1), which is the closest non-residential receptor to an inverter.

Exhibit 5-6, below, provides the modeled operational daytime sound level contours produced by the Project components for residential and select non-residential receptors. The contours depict sound levels between 35-40 dBA (darker blue contour lines) and 85-90 dBA (darker red contour lines) in 5 dBA increments.[83] Focusing on daytime operations and noise levels, all non-participating sensitive receptors are outside of the 50-55 dBA sound contour. The highest predicted sound level during operations is 47 dBA at R-54, R-56, and R-119 (non-participating) and 52 dBA for R-57 and R-58 (Good Neighbor Agreements).

Routine maintenance and repair activities will occur during operations but will not materially impact noise levels in the area.

[80] http://hyperphysics.phy-astr.gsu.edu/hbase/Acoustic/isprob2.html#c1
[81] The number of anticipated BESS units and operational sound levels were not included in the Applicant materials or Acoustic Assessment.
[82] These calculations are representative of cumulative sound levels for 63 inverters and one transformer. Information pertaining to the BESS units was sought in data requests but not provided by the Applicant.
[83] Noise modeling does not include cumulative sound pressure levels from existing ambient noise. Daytime ambient sound pressure levels for the area, estimated to be approximately 50-55 dBA, are higher than the modeled operational sound levels for all noise sensitive receptors.

Exhibit 5-6.
Predicted Sound Contours of the Mayfield Solar Facility during Daytime Operation, dBA



Note: Operation sound levels reflect cumulative noise level generated by the operation of 63 inverters and one substation transformer.

Source: MYSO, LLC, May 2026.

HE's evaluation of impacts. Neither the Commonwealth of Kentucky nor Graves County have a noise ordinance that is applicable to the Project. As such, HE utilized the noise limit recommendations generated by the Environmental Protection Agency (EPA) and the World Health Organization (WHO) to gauge acceptable levels of sound.

- The EPA determined that a constant sound of 70 dBA over a 24-hour period is enough to start causing permanent hearing loss for individuals, and a sound of 55 dBA outdoors is enough to cause activity interference and annoyance.[84]

- The WHO determined that daytime noise emissions greater than 55 dBA over a 16-hour period can cause serious annoyance, and noise emissions greater than 50 dBA over a 16-hour period can cause moderate annoyance. The WHO recommends limits of 45 dBA over an 8-hour period during the night.[85]

Construction noise. Construction activities will produce sporadic noise that will substantially exceed 55 dBA during daytime hours. Residential noise sensitive receptors less than 1,000 feet from pile driving locations will experience estimated sound levels of greater than 75 dBA during pile driving. Access road construction and other construction activities will also generate noise. However, the nature of the Project, which requires that construction activities move around the site as each task is completed, will reduce the timeframe for the annoyance created by loud, though sporadic, noise. The topography and natural vegetation surrounding sections of the Project area will likely diminish the noise impacts as well. Many of the non-participating residences that will experience construction noise levels greater than 75 dBA (Exhibit 5-4) do not benefit from natural buffers, and additional consideration should be given in utilizing noise suppressing construction methods while work occurs in their vicinity.

Project construction has the potential for a number of loud activities to occur simultaneously, but the timing of activities is such that it is not realistic to predict which sources of noise will contribute to these periods of cumulative sounds. The anticipated construction timeframe provided by the Applicant indicates approximately a seven- to nine-month peak period. The Applicant provided data on noise levels generated by different construction equipment utilized for those activities. It is unlikely that construction noise would be limited to that shown in Exhibit 5-4. Therefore, HE examined methods for calculating cumulative sound levels.

As a reference, one decibel is the "just noticeable difference" in sound intensity for the human ear.[86] However, the frequencies of different sounds will affect the perceived loudness of cumulative noise. "Compared with dB, A-weighted measurements underestimate the perceived loudness, annoyance factor, and stress-inducing capability of noises with low frequency components, especially at moderate and high volumes of noise."[87] This means that very

[84] United States Environmental Protection Agency. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. March 1974. https://nepis.epa.gov/Exe/ZyPDF.cgi/2000L3LN.PDF?Dockey=2000L3LN.PDF

[85] World Health Organization. *Guidelines for Community Noise*. April 1999. https://www.who.int/publications/i/item/a68672

[86] http://hyperphysics.phy-astr.gsu.edu/hbase/Sound/db.html#c3

[87] https://www.softdb.com/difference-between-db-dba/

different types of noises could have a greater cumulative impact than expected. Cumulative impacts from two noise sources can be calculated based on the difference in the sound levels as shown in Exhibit 5-7.

Exhibit 5-7.
Calculation of Additional Sound Power, in Decibels

Signal Level Difference between Two Sources (dB)	Decibels to Add to the Highest Signal Level (dB)
0	3
1	2.5
2	2
3	2
4	1.5
5	1
6	1
7	1
8	0.5
9	0.5
10	0.5
>10	0

Source: https://www.engineeringtoolbox.com/adding-decibel-d_63.html.

This suggests that even multiple sources of loud noise will produce only modest increases to overall sound levels, providing the sources of noise are not of very different frequencies.

Sound levels during peak construction with pile driving are anticipated to exceed 70 dBA at 73 non-participating residences located within 1,700 feet of a solar array.[88] The WHO indicates that exposure to sound levels greater than 70 dBA Leq can increase the risk of noise-induced hearing impairment.[89] The Applicant has proposed incorporating noise suppressing construction methods for pile driving within 1,500 feet of noise sensitive receptors.

Although additional residences within 2,000 feet of the Project site will likely experience noise at levels expected to cause annoyance (55 dBA or greater) during construction, the sporadic nature of the noise will not be sufficient to cause damage to residents' hearing.

Operational noise. The nature of solar projects dictates that noise from operations will occur mainly during daylight hours. The closest non-participating receptor to an inverter (R-56) has will experience predicted noise levels of about 47 dBA during daytime operations. The closest

[88] SAR Attachment D; Applicant response to second data request.
[89] World Health Organization. *Guidelines for Community Noise*. April 1999. https://www.who.int/publications/i/item/a68672

non-participating receptor to a panel (R-63) is predicted to experience the greatest sound levels during daytime operations, at 49 dBA. These levels are below the 50-55 dBA estimated daytime ambient conditions and within the WHO's recommended maximum noise level of 50 dBA. HE concludes that, overall, noise impacts from Project operations will be minimal.

Conclusions and recommendations. Based on our review of the SAR, supplemental information provided by the Applicant, and additional research conducted by HE, we offer the following conclusions and recommendations regarding noise emissions:

- Seventy-three non-participating residences within 1,700 feet of panels are estimated to experience L_{max} sound levels greater than 70 dBA during peak construction when pile driving is occurring, and those residents will be subject to greater negative noise impacts, albeit somewhat temporarily.

- Three non-participating residences without Good Neighbor Agreements are located within 325 feet of the Project fenceline: R-56, R-63, and R-86. These residences will be especially impacted by higher levels of Project construction noise, and do not have existing natural buffers such as topography or vegetation to mitigate the impact.

- Construction phase noise may be annoying or disruptive for other residents surrounding the Project area for short periods of time. The intermittent nature of the noise might ameliorate the impacts, but residents close to the Project site might find construction noise to be troublesome even if it does not present actual damage to hearing.

- Mayfield Solar has stated that during the construction phase, noise-producing work will occur between the hours of 6am and 7pm Monday through Saturday, with louder noise producing activities such as pile driving limited to between 9am and 5pm Monday through Friday. However, it is likely that some noise, for example from deliveries or worker vehicles, would occur outside those hours. Noise occurring in the early hours of the morning and later hours of the evening should be minimized.

- Mayfield Solar has stated that during the construction phase, non-noise producing and non-construction activities may occur between the hours of 6am and 7pm, Monday through Saturday.

- The current trend of employees working from home could make daytime noise more of an issue than it would have been previously.

- Noise from Project components during operations (inverters, transformer) is not anticipated to result in increases beyond the local sound environment. In most locations, project operations would be unnoticeable to residents or drivers in the area.

- Although the Applicant did not provide construction or operation noise levels for the BESS area and BESS units, the BESS area will be co-located with the Project substation, more than 2,600 feet from the nearest receptor. It is unlikely that acoustic

levels from construction or operation of the BESS will result in a significant increase to the data provided.

- The existing topography, natural vegetation and planned vegetation buffering might help mitigate noise emissions that may be caused by construction or operational components of the Project.

Need for mitigation. Mitigation measures described in the SAR, responses to Siting Board data requests, or recommended by HE, which are related to the reductions of noise impacts include:

1. The Applicant shall notify all residents and businesses within 2,400 feet of the Project boundary about the construction plan, noise potential, complaint resolution process, and mitigation plan at least one month prior to the start of construction.

2. The Applicant shall respond to any complaints related to noise levels or noise causing activities occurring during construction or operations via a timely, formal and clearly developed complaint resolution program.

3. If pile driving activity occurs within 1,500 feet of a noise sensitive receptor, the Applicant shall implement a construction method that will suppress the noise generated during the pile driving process (i.e., semi-tractor and canvas method; sound blankets on fencing surrounding the Project site; or any other comparably effective method).

4. The Applicant should limit the construction activity, process and deliveries to the hours of 8:00 am to 5:00 pm, Monday through Saturday. No construction work should be conducted on Sundays.

5. The Applicant shall maintain functional mufflers on all diesel-powered equipment.

6. The Applicant should coordinate with the Folsomdale Church to limit pile driving and heavy or oversize deliveries passing near the Church during their services, including funerals.

7. The Applicant shall place panels, inverters, BESS units, and substation equipment consistent with the distances to noise receptors indicated in the Applicant's acoustic assessment and with the Applicant's proposed setbacks. Nevertheless, the Applicant shall not place solar panels or inverters closer than 150 feet from a residence, church or school, 25 feet from non-participating adjoining parcels, and 50 feet from adjacent roadways. The Applicant shall not place a central inverter, and, if used, energy storage systems closer than 450 feet from a residence, church, or school. These setbacks shall not be required for residences owned by landowners involved in the Project that explicitly agree to lesser setbacks and have done so in writing. All agreements by participating landowners to lesser setbacks must be filed with the Siting Board prior to commencement of construction of the Project.

Road and Rail Traffic, Fugitive Dust and Road Degradation

Traffic concerns related to the development of the Mayfield Solar facility during the construction or operational phases are addressed in this section. The approximately 18- to 24-month construction phase will include commuting construction workers, vehicles, and equipment on-site, plus the delivery of heavy loads of solar components, infrastructure, and other equipment. Traffic during operations will occur as employees travel to and from the property to monitor and maintain the site.

General methods of assessment. A typical evaluation of traffic-related impacts includes:

- Establishing existing traffic conditions in the area;
- Identifying primary access points that will be used by the project;
- Estimating changes in traffic due to construction and operations; and
- Assessing the impacts of project-related traffic on local areas. This includes determining whether additional traffic will lead to congestion, changes in service levels of existing road networks and identifying any potential degradation to existing bridges and roadways.

Summary of information provided by the Applicant. Attachment F of the SAR is a Transportation Assessment Report (Traffic Study) prepared by Tetra Tech. The study provides a narrative on existing road and traffic conditions; average daily traffic statistics for select roads; estimates of the Project's construction and operational traffic; and an analysis of roadway capacity. Further information was provided during the in-person site visit and in the Applicant's responses to the Siting Board's data requests. HE assumes that responses to the second data request are the best available information; that information was used if it conflicted with previous information.

Site access, vehicle parking and internal roadways. Vehicles traveling to the Project site will likely use US 45 and KY 1241 to reach local roads accessing the site. Local roads used to reach the 32 access points/entrances proposed for the Project include KY 849, KY 408, Baldree Road, Whittemore Road, Pittman Road, Old Plant Road, McGee Road, Olden Road, and an unnamed farm road.[90] The main access point is located on Baldree Road, along with 14 additional entrances. Local roads around the Project site will be traveled by worker vehicles and delivery trucks, including for delivery of the substation transformer. The Engineering, Procurement, and Construction (EPC) contractor will be responsible for determining Project delivery truck routes and assessing bridges for deliveries as well as obtaining necessary road and delivery permits. As of the May 2026 submission of responses to the second data request, the Project has not obtained an EPC contractor.

[90] The Traffic Study focused only on the county and state roads in the immediate Project area.

One laydown yard is planned within the Project area, located adjacent to the main access point at the substation location off Baldree Road, with smaller staging areas anticipated across the site within individual panel areas.

Approximately 59,000 linear feet of private access gravel roadways will be constructed across the Project site. Access road construction will primarily take place during the site preparation phase of Project construction. Internal access roads will primarily be 16 feet wide, and 20 feet in width for Substation access. Additional 10-foot wide roads will be constructed for access to stormwater basins.[91]

The Project anticipates the use of 32 access points or site entrances across eight local roads spread across the Project area. Each access point will have its own security gate. Exhibit 5-8 provides the distribution of these site entrances by roadway.

Exhibit 5-8.
Site Entrances and Correlated Local Roads

No. of Access Gates	Local Roads
1	KY 849 / Folsomdale-Boaz Road
15	Baldree Rd E
5	Whittemore Rd
3	Pittman Road E
2	Old Plant Road
4	Unnamed Farm Road
1	McGee Rd
1	Olden Rd

Source: MYSO, LLC, April 2026.

Baseline traffic volumes and road conditions. The Applicant provided traffic data for local roads used to access the Project during construction. Annual average daily traffic (AADT) and other road descriptors supplemented by HE are provided in Exhibit 5-9.

[91] Applicant's response to second data request.

Exhibit 5-9.
Baseline Traffic Data for Roads in the Project Area

Roadway	AADT	Speed Limit	Weight Limit	No. of Lanes	Shoulder
US 45	13,000	65	AAA	2	Y
KY 1241 - N of 849	763	45-55	AAA	2	N
KY 1241 - S of 849	2,646	45-55	AAA	2	N
KY 408 - Between US 45 & 1241	1,387	55	AA	2	N
KY 408 - E of 1241	606	55	AA	2	N
KY 849	763	45-55	A	2	N
Olden Rd	N/A	35	County	2	N
Baldree Rd E	N/A	NP	County	2	N
Whittemore Rd	N/A	NP	County	2	N
Pittman Road E	N/A	NP	County	2	N
Old Plant Road	N/A	NP	County	2	N
McGee Rd	N/A	NP	County	2	N
Unnamed Farm Road	N/A	NP	County	1	N

Notes: (1) N/A indicates data not available; NP indicates not posted.
(2) "AAA" rating is 40 tons gross vehicle weight (gvw); "AA" rating is 31 tons gvw; "A" rating is 22 tons gvw; "County" rating is 18 tons gvw.

Source: MYSO, LLC, January 2026; Kentucky Transportation Cabinet, 2026; Harvey Economics, 2026.

Construction related traffic volumes and routes utilized. Construction-related traffic for the Project site is anticipated to include (1) passenger vehicles and trucks; (2) general delivery trucks; (3) tractor trailers; and (4) cement/water trucks:

- An average of 100-125 worker vehicles traveling to and from the Project site are predicted on any individual day. Workers are anticipated to drive personal vehicles, cars and pickup trucks, with one to two workers per vehicle. During peak periods, up to 238 worker vehicles are anticipated on-site per day, accounting for 10 percent of workers carpooling.
- Multiple delivery trucks (tractor trailers, flatbeds, other large vehicles) are anticipated per average day including 10 semi-trucks and 10 mid-size trucks. The average day number of cement and water trucks was not specified.
- During peak construction periods, 10 semi-trucks and 10 mid-size trucks for delivery are anticipated daily in addition to other delivery vehicles. The peak day number of cement and water trucks was not specified.
- Delivery trucks will include cement trucks with 80,000 pounds max load weight, water trucks with 80,000 pounds max load weight, dump trucks for gravel with 80,000 pounds max load weight, and flatbed or semi-trucks for delivery of solar panels and inverters with 80,000 pounds max load weight. Weights for mid-size trucks and BESS deliveries have not been specified.

- The Project's substation transformer will be an especially heavy delivery, with an estimated load weight of 300,000 pounds.[92] Delivery of the transformer will be coordinated by the EPC contractor and likely require an overweight/over-dimensional permit.
- Worker vehicles will access the Project site via 32 access points; primarily located along Baldree Road. Internal access roads will be utilized to move within panel areas (Exhibit 3-1).
- Workers are anticipated to gather at the main Project entrance on Baldree Road each day before dispersing to their work locations.
- Project construction delivery traffic will access the site via the 32 Project access points. The substation access point on Baldree Rd is in proximity to the Project laydown area.
- The Project substation transformer is anticipated to be delivered to the main access point on Baldree Road via US 45 and Pittman Road.

The Applicant has stated that haul routes for large deliveries will be determined by an EPC contractor, once hired; however, travel on local roads will also be necessary for direct site access. Mayfield Solar will obtain all necessary permits for oversized or overweight deliveries.[93]

During the site visit, HE staff observed portions of local roads and bridges used to access the Project site to be in poor condition or damaged, and local roads do not have shoulders. Improvements to local roads may be necessary prior to construction to allow for large and/or overweight deliveries. Such improvements may include road widening or surface repairs. Mayfield Solar indicated that they would coordinate with the Graves County Road Department or the Commonwealth about traffic plans and mitigation measures.

Construction traffic management. The Applicant addressed traffic management during construction as follows:

- Appropriate signage and traffic signaling will be used during construction.
- Mayfield Solar will consult and coordinate with the Graves County Road Department to obtain road use permits, as necessary, and develop a road use agreement.
- Mayfield Solar will consult and coordinate with Kentucky Transportation Cabinet (KYTC) to obtain road use permits, as necessary.
- Permanent road closures are not anticipated during Project construction. Temporary road closures may be employed to minimize potential risks. Any anticipated stoppages are expected to be brief in duration.
- Traffic Demand Management (TDM) strategies will be identified by the Applicant prior to construction as part of a traffic management plan.

[92] Applicant's response to first data request.
[93] Applicant's response to first data request.

Anticipated TDM strategies identified in the Applicant's response to the first data request included measures to minimize the potential for delays during morning and evening peak hours by staggered work hours, implementing appropriate traffic controls and signage, and designating truck delivery routes.

Operations related traffic volumes. The Traffic Study indicated that traffic in the operational phase will be negligible. Further submissions by the Applicant indicate a small number of workers (between 1 and 4) traveling to the site for operations and maintenance on weekdays between 7am and 6pm. Evening maintenance work may occur after 7pm up to 15 days each year. The study concluded that traffic volume and function would not be significantly impacted.

Road degradation. Mayfield Solar does not anticipate any damage to existing roadway infrastructure. The Applicant committed to fix or pay to repair damage to roadways or bridges related to Project transport and will incorporate this in their road use agreements.

Railways. The Paducah and Louisville Railway has a freight spur located east of the Project area. Mayfield Solar has indicated that they will not use this method of transportation for Project deliveries. Construction vehicles may potentially cross street-level railroad crossings when traveling west to the Project site via KY 849 or KY 408, but crossings are not located along the anticipated routes for heavy deliveries.

Fugitive dust. The Applicant expects some dust generation from Project construction and has indicated that best management practices (BMPs) will be employed. These BMPs include covering loads, using dust screens, and applying water to suppress dust. Compacted gravel access roads may also contribute to airborne dust particles and water will be applied as needed.

HE's evaluation of impacts. HE conducted additional research and analyses related to traffic, road degradation and fugitive dust, as described below.

Local road conditions. KY 1241, KY 849, KY 408, Baldree Road, Pittman Road, and Whittemore Road will be the primary local roadways traveled by workers and delivery vehicles connecting to site entrances. McGee Road, Old Plant Road, Olden Road, and an unnamed farm road will also connect with site entrances. To assess road capabilities, gross vehicle weight (gvw) is used as the total weight of the vehicle, including passengers and cargo. According to information provided by the Applicant and obtained from the KYTC Highway Information View and Extract Interface, KY 1241 is rated 80,000 pounds (40-tons) gvw. KY 408 is rated 62,000 pounds (31-tons). KY 849 is rated 44,000 pounds (22-tons) gvw. Baldree, Pittman, and Whittemore Roads are each rated 36,000 pounds (18-tons).

HE made the following observations about local roads during the Project site visit:

- *KY 1241* – two-lane, striped, blacktop road in good condition; recently paved; no shoulders present.
- *KY 849* – two-lane, striped, blacktop road in fair condition; sections are in poor condition with cracking present; no shoulders.

- *KY 408* – two-lane, striped, blacktop road in fair condition; some cracking in areas; no shoulders present.
- *Baldree Road* –single-lane, gravel road in reasonably good condition; short sections of narrow, two-lane chip and seal or asphalt road in poor condition with cracking present; no shoulders. A turn at the northeast corner of the road will be difficult for trucks without widening. The bridge at Baldree and Pittman appears to be in poor condition.[94]
- *Pittman Road*– narrow, unlined, two-lane, blacktop road in fair condition; sections are in poor condition with cracking present; no shoulders.
- *Whittemore Road* – narrow, single-lane, unlined, asphalt road with no shoulders; sections are in poor condition with cracking present. The bridge at the north side of this road is completely washed out and closed to all traffic.

During the site visit (a weekday), there was little traffic on several of the smaller local roads throughout the Project area, and more moderate traffic on other roads surrounding the Project site. Appendix B of this report provides photos from the site visit, including several of local road conditions.

Baseline traffic volumes. The Applicant provided traffic counts for roads in the Project area, as shown previously in Exhibit 5-8. HE confirmed that no additional data for other roads is available.

Construction related traffic impacts. Mayfield Solar provided estimates of the number of construction vehicle trips to and from the Project site on an average and peak day, shown in Exhibit 5-10. Peak day construction vehicle estimates are predicted to be highest while multiple construction activities overlap (Exhibit 3-2). The peak construction period is expected to occur over about seven to nine months. The Applicant anticipates workers will gather at the main entrance upon arrival before dispersing to their work sites and then commute home. This will be finalized when the EPC has been selected.

Exhibit 5-10.
Estimated Daily Vehicle Trips for Mayfield Solar Project Construction

	Vehicle Trips	
	Average Day	Peak Day
Worker Vehicles	245	526
Delivery Trucks	40	40

Notes: (1) Ten percent of workers are predicted to carpool.
(2) Ten percent of workers are predicted to leave and return midday.
(3) Other truck traffic, including number of cement trucks and water trucks, is unknown.

Sources: MYSO, LLC, January 2026 and April 2026; Harvey Economics, 2026.

The estimated traffic increases may create noticeable, but acceptable, increases on US 45 and KY 1241. However, it is difficult to determine the effects on other local roads in the Project area. Those roads are lightly to moderately traveled, so any increases in traffic volume are

[94] Pictures of Baldree Road can be found in Appendix B, Site Visit Photos.

likely to be noticeable. Although the magnitude of change to any single road cannot be determined, HE offers the following observations:

- Although there are multiple access points for the Project, the majority of deliveries and daily workers will arrive at the main entrance on Baldree Road, consolidating the bulk of the morning construction traffic to one entrance and traffic impacts to two connecting roads, US 45 and KY 849.
- A non-participating residence, R-86, is located directly across KY 849 from the intersection with Baldree Road. This residence will be especially impacted by Project construction traffic (visibility, traffic noise, and potential travel delays).
- The relative increase in traffic on local roads could be substantial and will be noticeable, especially during the peak construction period. Since the impact will likely be on local residents, this change may create negative attitudes about the Project.
- The lack of shoulders on local roads in the Project area may require drivers to pull over to pass and will increase the inconvenience to local residents during the construction period.
- Large trucks and a lack of shoulders may create situations on narrower sections of roads where there is nowhere for either the truck or oncoming vehicles to pull over.

This information suggests that carpooling will be important for minimizing traffic impacts to local residents during the construction period. This also suggests that additional traffic management strategies and planning around peak travel times should be implemented for Project deliveries.

Operations related traffic impacts. With limited staff members working during regular business hours and the occasional off-hours maintenance and repair, traffic impacts during operations should be minimal. HE does not expect significant traffic effects related to the operation of the facility.

Impacts to railways. As proposed, the Project will not impact the local railways. There are no rail lines in the Project area or within Graves county.

Road degradation. The lack of information about baseline traffic levels on some roads makes it difficult to predict if road degradation will occur. Potential for degradation due to construction traffic on local roads including Baldree Road, Pittman Road, and Whittemore Road, which have existing areas of damage, should be assessed during pre- and post-construction road surveys. The existing condition and nature of local roads to be used to access the Project suggests that either preventative work will need to be done in advance of Project onset or that degradation will occur, and Mayfield Solar will need to work with the Graves County road authority to correct the damage.

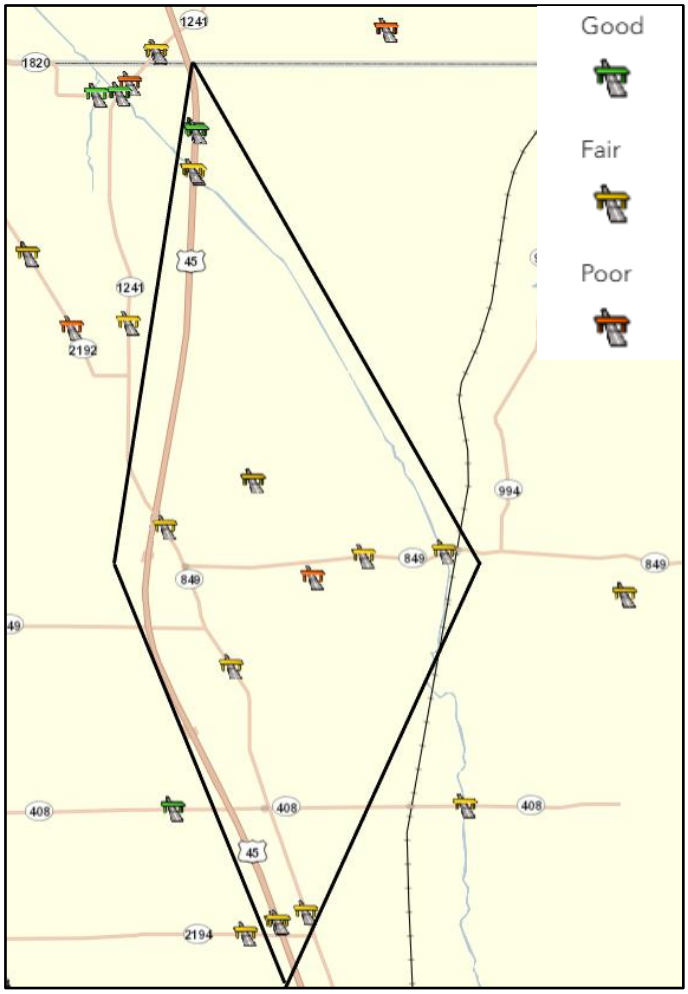
The KYTC's Pavement Conditions interactive map provides data regarding road conditions for individual segments of state and county roads; pavement condition data are not available for local or city roads.[95] Pavement conditions are rated on a scale of green/good, yellow/fair

[95] https://maps.kytc.ky.gov/pavementconditions/

and red/poor. US 45 near the Project site, north of KY 1241, is color coded green, and treatments are not recommended until 2027. South of KY 1241, US 45 is color coded yellow, and treatments were recommended for 2025. Pavement condition data for other local roads are unavailable.

Bridges The Applicant identified 27 bridges within two miles of the Project site in their response to the Siting Board's first data request. HE identified ten bridge locations within the two mile area for evaluation. Two of these bridges are located on local roads within the Project site and eight are located on roads adjacent to the Project area and likely to be used for Project deliveries. Within the Project site, one bridge is on Baldree Road, and the other is on Whittemore Road. Identified bridges in proximity to the Project include: three bridges on US 45, three bridges on KY 1241, and two bridges on KY 849. These bridges are identified below in Exhibit 5-11.

Exhibit 5-11.
Bridge Conditions near the Mayfield Solar Project



Note: Bridges discussed in this section are within the black diamond.

Sources: KYTC Bridge Data Miner, April 2026; Harvey Economics, 2026.

HE consulted KYTC's Bridge Weight Limits and Bridge Data Miner Maps for additional information about relevant bridges in the Project area.[96] Most of the bridges were observed to be in acceptable condition during the site visit, and confirmed by KYTC's Bridge Data Miner, as shown in Exhibit 5-11.[97] Eight of the bridges are rated yellow, which indicates "fair" condition. The bridge on Whittemore Road is rated red, which indicates "poor" condition. This bridge has been washed out and is currently closed to all traffic.[98] During the site visit, HE observed that the bridge on Baldree Road at the intersection of Pittman Road is in need of repair. This bridge will see significant construction traffic and should be further evaluated prior to the start of construction.[99]

On the Bridge Weight Limit Map, eight of the identified bridges are shown as black, which indicates "no restrictions." The Whittemore Road bridge is marked red, indicating closure. The bridge on KY 1241 over Carney Creek is marked green, indicating a posted weight limit (44 tons).

Fugitive dust. Fugitive dust should not be an issue given the Applicant's proposed efforts to reduce dust with the use of best practices, including the application of water, and use of dust screens.

Conclusions and recommendations. Based on our review of the SAR and subsequent information provided by the Applicant, other secondary research conducted regarding roads and dust, and visual inspection during a site visit, HE offers the following conclusions regarding traffic, fugitive dust, and road degradation:

1. Access to the Project site from US 45 and KY 1241 will require cars and semi-trucks to travel on local roads. The site entrances and delivery points planned for the Project site will consolidate construction vehicle traffic primarily to one route, potentially minimizing the distribution of traffic impacts, or might result in a feeling of overwhelming traffic on that route for local residents.

2. Construction traffic will likely be noticeable on local roads surrounding the Project site, particularly KY 849 and Olden Road. The increased traffic will likely be noticeable to local drivers as well as residents near the Project. Construction traffic could be irritating to these local residents.

3. The substation site entrance on Baldree Road, where workers will likely gather in the mornings before dispersing to their worksites, has the potential to create a "chokepoint" for traffic impacts on KY 849 as many vehicles will arrive within a narrow timeframe and without a protected turn onto Baldree Road. KY 849 is the access road between KY 1241 and Baldree Road with several residences, which may result in significant traffic impacts to those residents during construction. Baldree Road is also accessible

[96] https://maps.kytc.ky.gov/bridgedataminer/; https://maps.kytc.ky.gov/bridgeweightlimits/
[97] https://maps.kytc.ky.gov/bridgedataminer/
[98] A photo of this bridge is included in Appendix B, Site Visit Photos.
[99] A photo of this bridge is included in Appendix B, Site Visit Photos.

from US 45, and construction traffic coming from the north would need to cross two lanes of busy roadway without a signal present.

4. The multiple Project access points may reduce construction traffic impacts during lunch breaks and evening commutes when workers are leaving from separate areas across the site.

5. The nature of several of the local roads may require temporary stoppages or that drivers pull over for large vehicles. While residents may be accustomed to this, it might be a point of frustration.

6. Special care should be taken in developing a plan to consider road conditions, bridges and culverts, the presence or lack of road shoulders, and vehicle weights in finalizing Project delivery routes.

7. Road degradation may be an issue for local roads. Some local roads and bridges or culverts may need improvements prior to the start of Project construction.

8. Mayfield Solar should consider incentives or other means of encouraging carpooling to reduce the number of worker vehicles and to minimize traffic-related effects, including the potential for congestion, accidents, noise or dust issues.

9. Heavy delivery vehicles will exceed the gross vehicle weight limits on local roads traveled to reach site entrances.

10. Given the estimates of Project-generated traffic during construction and the lack of available information about road conditions, the Applicant should be prepared to repair any damage due to commuting workers or heavy delivery trucks traveling on the local roadways.

11. Given the small number of employees on-site during operations, HE does not anticipate any noticeable traffic impacts during the operational period.

12. Fugitive dust should not be an issue given the Applicant's proposed efforts to reduce dust with the application of water and other best management practices.

Need for mitigation. The Applicant should consider certain mitigation to reduce impacts associated with traffic and dust:

1. The Applicant shall comply with all laws, permits and regulations regarding the use of roadways and bridges.

2. The Applicant shall consult with the Kentucky Transportation Cabinet (KYTC) regarding truck and other construction traffic and obtain necessary permits from the KYTC.

3. The Applicant shall coordinate with the Graves County Road Department (GCRD) regarding truck and other construction traffic and obtain necessary permits from the GCRD.

4. The Applicant shall develop a transportation plan for the heavy truck delivery route(s) within Kentucky, taking into consideration any weight restricted bridges.

5. The Applicant shall work with the Commonwealth road authorities and the GCRD to perform road surveys, before and after construction activities, on all roads in the Project area to be used by construction vehicles.

6. The Applicant shall comply with any road use agreement executed with Graves County or the GCRD. Such an agreement might include special considerations for overweight loads, routes utilized by heavy trucks, road weight limits and bridge weight limits. It may also include prioritizing access for residents or use of flaggers during heavy commute periods.

7. The Applicant shall fix or pay to repair damage to roads and bridges resulting from any Project-related commuting or heavy vehicle transport to the Project site during construction.

8. The Applicant shall implement a ridesharing plan for construction workers, if feasible, use appropriate traffic controls or allow flexible working hours outside of peak hours to minimize any potential delays during AM and PM peak hours.

9. The Applicant shall develop and implement a traffic management plan for the Project to minimize the impacts on traffic flow and keep traffic and people safe.

10. The Applicant shall respond to any complaints related to traffic management for nearby residents occurring during construction via a timely, formal and clearly developed complaint resolution program.

11. The Applicant shall properly maintain construction equipment and follow best practices related to fugitive dust throughout the construction process.

Economic Impacts

Evaluation of the potential economic effects of the Mayfield Solar Project is based on knowledge of the Project's construction timeline and activities and the solar facility's long-term operational activities. Project employment needs, local expenditures (labor, materials/supplies, equipment) and payment of applicable taxes and other fees are considered over the short- and long-term and placed within the context of existing demographic and economic conditions.

General methods of assessment. Both the construction and operational phases should be evaluated to include:

- Detailed understanding of the project: Specific activities to occur, the timeline of those activities, geographic extent of project effects;

- Quantification of direct effects: Number and domicile of employees, range of wage levels, materials purchases, supplies and equipment and associated sales tax payments, other tax payments including property taxes. Determining the portion of purchases to occur in the local area or within the Commonwealth is key;

- Estimation of total effects: Use of region and industry specific multipliers to estimate indirect and induced effects to calculate total effects such as employment, income and overall economic activity;

- Other social or economic benefits, including potential non-monetary benefits, to the local community or surrounding area; and

- Potential curtailments or impacts to other industries.

Summary of information provided by the Applicant. The Mayfield Solar Application included an Economic & Fiscal Analysis (Exhibit G) prepared by the consulting firm Mangum Economics.[100] That report includes discussion and explanation of the Project's economic benefits, including estimates of employment, labor income and economic output generated by Project construction and operations within Graves County and for the Commonwealth of Kentucky. According to the report, the employment and economic impacts of the facility were assessed using a series of IMPLAN models. Additionally, the report incorporates the economic benefits associated with lease payments made to the participating landowner and the losses resulting from reduced agricultural production within the Project site.

Information provided by the Applicant in the Application materials and as part of subsequent data requests includes the following:

Capital investment: The Applicant expects to invest approximately $290 million in the solar project. That investment involves engineering, site preparation and other development and construction costs, as well as capital equipment costs, including solar panels and other electrical equipment. Approximately $174 million will be spent on capital equipment for the solar project; however, very little of that equipment would likely be available from vendors in the Graves County region or the Commonwealth of Kentucky. Local purchases might include construction materials such as concrete, earth moving equipment, timber cutting, fencing, and landscaping.

Construction employment and earnings: Construction of the Mayfield Soler facility is expected to generate a total of approximately 101 full-time equivalent (FTE) construction

[100] A revised version of the Economic Analysis was submitted in response to the Siting Board's first data request. The revised report includes additional explanation of certain assumptions, but analytical results are the same as in the original report.

positions, including an estimated 32 positions for Graves County residents.[101] Those jobs will include construction managers, earth grader operators, panel installers, electricians, fencers and other skilled labor positions.

Average annual earnings per full-time construction worker are assumed to range from about $62,200 to $72,600 (including benefits). Total direct construction labor compensation (wages and benefits) is estimated to be approximately $7.3 million, of which about $2.0 million would be paid to local workers.

The circulation of construction-related monies throughout the local area and the Commonwealth (induced and indirect effects) would also generate additional jobs and income in other economic sectors.[102] As with the construction workforce, the indirect and induced employment generated by the Project would be temporary; however, these jobs may be more likely to be filled by residents of Graves County or surrounding counties as the result of local construction related spending.

Exhibit 5-12 presents the estimated employment, labor income and economic output generated by Project construction.[103]

[101] 1 FTE = 2,080 hours worked in one year. A part-time or temporary position would constitute a fraction of one job or FTE. Therefore, the number of individual people hired for construction will be greater than the estimated number of FTEs.
[102] Indirect impacts stem from expenditures made in industry sectors that support firms directly engaged in construction activities. Induced impacts are associated with increased household spending from income generated by construction activities.
[103] Economic output reflects the total value of goods and services produced, including business revenues; wages and benefits; taxes; and other income generated by the Project.

Exhibit 5-12.
Estimated Economic Benefits of the Proposed Mayfield Solar Project, Graves County and Kentucky, Construction Phase

Graves County

	Employment	Wages and Benefits	Economic Output
Direct	32	$1,989,600	$10,145,800
Indirect / Induced	93	$3,517,800	$12,339,400
Total	**125**	**$5,507,300**	**$22,485,200**

Commonwealth of Kentucky

	Employment	Wages and Benefits	Economic Output
Direct	101	$7,336,400	$32,354,600
Indirect / Induced	203	$9,766,900	$32,246,900
Total	**305**	**$17,103,300**	**$64,601,500**

Notes: (1) Employment is defined as full-time equivalents.
(2) Wages and benefits are included in economic output.
(3) Data presented for the Commonwealth is inclusive of Graves County.

Source: MYSO, LLC, January 2026.

Project employment and earnings during operations: Mayfield Solar would employ approximately one full-time equivalent on-site technician for maintenance of the facility, with an estimate salary of approximately $92,800 per year. The circulation of operations-related monies throughout the local area (induced and indirect effects) would also generate additional new jobs and income in other economic sectors.[104] Jobs generated by Project operations are more likely to be filled by residents of Graves County or surrounding counties.

Exhibit 5-13 presents the employment, labor income and total economic output generated by Project operations.[105]

[104] The economic benefits associated with the landowner lease payments are included in the Indirect / Induced benefits during the operational period. The Good Neighbor Agreement payments were not included in the economic analysis.
[105] Economic output reflects the total value of goods and services produced, including business revenues; wages and benefits; taxes; and other income generated by the Project.

Exhibit 5-13.
Estimated Economic Benefits of the Proposed Mayfield Solar Project, Graves County and Kentucky, Operations Phase

Graves County

	Employment	Wages and Benefits	Economic Output
Direct	1	$92,800	$764,500
Indirect / Induced	6	$249,000	$796,600
Total	**7**	**$341,800**	**$1,561,100**

Commonwealth of Kentucky

	Employment	Wages and Benefits	Economic Output
Direct	1	$92,800	$764,500
Indirect / Induced	7	$287,700	$928,600
Total	**8**	**$380,500**	**$1,693,100**

Notes: (1) Employment is defined as full-time equivalents.
(2) Wages and benefits are included in economic output.
(3) Data presented for the Commonwealth is inclusive of Graves County.

Source: MYSO, LLC, January 2026.

Tax revenues: Graves County and the Commonwealth of Kentucky levy property taxes on real estate and tangible property, and the Commonwealth taxes the value of manufacturing machinery.

The acreage within the Project site owned by PARIA is presently treated as tax-exempt industrial authority property, so Graves County receives essentially no ad valorem tax revenue from that land under current use. Under the Applicant's long-term lease, the actively used project acreage will be placed on the tax rolls and "reassessed at a commercial use value" and taxed on land, improvements, tangible personal property, and manufacturing machinery. The Applicant has stated that it would be open to a discussion with the County regarding the development of a potential payment-in-lieu-of-taxes (PILOT) agreement; however, no discussions of that type have occurred at this point.[106]

According to the Economic & Fiscal Analysis, Graves County jurisdictions can expect to receive about $5.7 million in property tax revenues over the 40-year life of the Project, including the following:

[106] This background information was provided by the Applicant in response to the Siting Board's second data request.

- Graves County School District:[107] $3,602,600
- Other Graves County Jurisdictions:[108] $2,096,600

The Commonwealth would receive about $7.6 million in total property tax revenue over the 40-year life of the Project, much of that due to the tax on manufacturing machinery.

The Economic & Fiscal Analysis did not address the potential for a Graves County occupational tax on wages and salaries to generate additional revenue for the County. However, if such a tax were applicable, construction activities would generate a small one-time increase in tax revenues. The operations phase would generate a small amount of additional tax revenue each year of the life of the Project.

Lost economic activity from farming: The conversion of agricultural land to a solar farm involves both positive and negative economic effects on the regional economy. The negative effects involve the reduction in farming activity, and the linkages that it has on local suppliers of seed, feed, fertilizer, equipment and labor, summarized by a reduction in business activity employment and personal income. The Economic & Fiscal Analysis and subsequent information provided offers the following information regarding the agricultural impacts of the Mayfield Solar Project.

- About 1,500 acres within the Project site currently supports agricultural activities, including production of corn and soybeans. That acreage will be removed from production.

- The full economic impact of the agricultural revenues currently generated on the Project site includes a total of seven jobs (four direct workers) and over $701,000 in total labor income. This includes direct jobs and income in the agricultural sector, as well as the indirect and induced jobs created by business and household spending.

- The overall loss in economic output due to reduced agricultural production would amount to about $1.6 million per year.

Net economic impacts from Project operations: Exhibit 5-14 presents the net economic impacts of Mayfield Solar operations, accounting for operation and maintenance of the solar facilities, the effects of additional household spending by participating landowners associated with lease payments, and the loss of agricultural activity within the Mayfield project site.

Overall, during operations, seven jobs would be lost in the agricultural sector, and seven jobs would be generated by Project operations, for a net zero change in jobs. However, there would be a net loss in local income and in economic output (wages and benefits) due to the higher

[107] The net financial benefit to the schools is complex. Extra property tax revenues to the County school system would trigger a reduction in state funding to the district.
[108] Including Extension Service, Fiscal Court, Health Department, Library services and the J U Kevil Memorial Foundation.

economic values associated with lost agricultural production as compared to solar facility operations.

Exhibit 5-14.
Net Estimated Annual Economic Impact of the Proposed Mayfield Solar Project, Operations Phase

	Employment	Labor Income (Annual)	Labor Income (40-Year Total)	Economic Output (40-Year Total)
Solar Facility Operations	7	$341,800	$13,672,000	$62,444,000
Lost Agricultural Activity	(7)	($701,200)	($28,048,000)	$64,072,000
Net	**0.0**	**-$359,400**	**-$14,376,000**	**-$1,628,000**

Notes: (1) Employment is defined as full-time equivalents.
(2) Labor income (wages and benefits) is included in economic output.
(3) These impacts do not account for any economic benefits associated with construction activities or decommissioning activities.

Source: MYSO, LLC, January 2026, March 2026, May 2026.

Estimated decommissioning benefits: The Economic & Fiscal Analysis also included estimates of the economic benefits generated by decommissioning activities, including employment, wages, economic output and state and local tax revenues.[109] Exhibit 5-15 outlines the benefits to Graves County and to the Commonwealth from decommissioning.

[109] Economic output reflects the total value of goods and services produced, including business revenues; wages and benefits; taxes; and other income generated by the Project.

Exhibit 5-15.
Estimated Economic Benefits of the Proposed Mayfield Solar Project, Graves County and Kentucky, Decommissioning

Graves County

	Employment	Wages and Benefits	Economic Output	State and Local Tax Revenue
Direct	26	$2,265,100	$9,341,800	
Indirect / Induced	38	$2,569,100	$9,004,200	
Total	**63**	**$4,834,200**	**$18,346,000**	**$718,000**

Commonwealth of Kentucky

	Employment	Wages and Benefits	Economic Output	State and Local Tax Revenue
Direct	47	$4,676,800	$15,337,300	
Indirect / Induced	79	$5,431,300	$17,966,900	
Total	**126**	**$10,108,100**	**$33,304,200**	**$1,415,300**

Notes: (1) Employment is defined as full-time equivalents.
(2) Wages and benefits are included in economic output.
(3) Data presented for the Commonwealth is inclusive of Graves County.

Source: MYSO, LLC, January 2026.

The economic benefits of decommissioning activities would be somewhat smaller than those of construction activities. Fewer workers would be required to complete facility removal activities and less economic output would be generated.

HE's evaluation of impacts. An economic impact analysis can be an opportunity to identify the monetary and other benefits provided by Project construction and operational activities. A meaningful discussion of the monetary and other benefits must provide some quantification of said benefits, along with additional context to determine the magnitude of those benefits:

- For most solar facilities, the purchase of materials, supplies and equipment makes up a large portion of total project construction costs. The majority of those capital expenditures are likely to occur out-of-state, limiting the economic benefits to Graves County or the Commonwealth. Therefore, the economic benefits of construction will come mainly from labor activities.

- It is also important to note that direct construction jobs, as well as indirect and induced, will be temporary, resulting from the approximately 18- to 24-month construction period. A small number of total construction jobs are estimated to be local (Graves County) hires. However, that will depend on the number of available and qualified workers in the area.

- Annual operations and maintenance expenditures for the Project would be small. The majority of economic benefits generated during operations would result from employee earnings and various tax payments.

- Annual lease payments to participating landowners would provide additional household income, as would the one-time payments made to landowners with Good Neighbor Agreements. Household spending would generate a limited number of additional local jobs and income over the operational period.

- Economic losses would result from reduced agricultural production within the Project site during operations. Overall, the lost agricultural revenues and reduced employment and labor income would amount to a negligible portion of the County's overall agricultural economy.

- During the operational period, there would be a net loss of wages and benefits for local workers due to the loss of agricultural production on the Project site which would not be fully offset by income generated by solar facility operations.

- Property tax payments distributed to local entities within Graves County would provide additional revenue to those entities; however, the additional revenue would generally amount to a small percentage of total tax revenues for any individual entity in any single year.

- Decommissioning activities would also generate local employment and income, as well as a small amount of local tax revenue. Those benefits would be temporary, occurring only over the decommissioning period, and would not be realized by the County for many years once Project operations ceased.

Conclusions and recommendations. Construction and operation of the Mayfield solar facility would provide some limited economic benefits to the region and to the Commonwealth. Overall, the Project would result in measurable, but temporary, positive economic effects to the region during the construction phase. Construction activity would generate regional employment and income opportunities. Those effects would be temporary, but local hires would increase employment and incomes for local residents. Most construction purchases would be made outside of Kentucky.

Operational economic benefits would be confined mostly to tax revenues, although these are assumed to be relatively minor in terms of total County tax revenues. Those payments would generally amount to a small percentage of total tax revenues for any individual public entity. Operational employment would be very small, but would generate local income, and local purchases of materials or supplies would generate additional economic activity. However, the loss of employment, income and economic output resulting from the reduction in agricultural activity on the Project site would not be fully offset by Project operations.

Decommissioning activities would also generate regional employment and income opportunities. Similar to construction, those effects would also be temporary, but local hires would increase employment and incomes for local residents.

Need for mitigation. Socioeconomic impacts of the Mayfield facility represent a positive, albeit small, contribution to the region, mainly related to construction and decommissioning activities. The following mitigation measures could be implemented to increase economic benefits within Graves County:

1. The Applicant should attempt to hire local workers and contractors to the extent they are qualified to perform the construction and operations work.

2. The Applicant should consider opportunities to optimize local benefits; for example, by purchasing materials, if possible, in the local area during construction and operation.

Decommissioning Activities

Decommissioning is the process of safely closing the solar facility to retire it from service and subsequently returning the land to its original condition.[110] This might include removal of solar panels and all associated facilities, and restoration of the property to pre-Project conditions. Although not specifically addressed in the statutes, the Siting Board requested that HE discuss the potential impacts associated with decommissioning activities.

General methods of assessment. The types of impacts likely to result from decommissioning might be similar in nature to those experienced during construction. For example, workers would need to commute to the site daily, trucks would be required to haul equipment away using local roads and noise may be generated by all of the activity. Therefore, the methods of assessing decommissioning impacts would be similar to those employed to evaluate the construction phase effects. Removal and disposal of the project components should also be addressed in this assessment.

Summary of information provided by the Applicant. A Decommissioning Plan for the Project was submitted by the Applicant (Exhibit I, amended), including an overview of the primary decommissioning activities, including the dismantling and removal of facilities and restoration of land, as well as a summary of projected costs and salvage values associated with decommissioning the Project. The amended plan was prepared for the Applicant by Tetra Tech in February 2026. According to the Applicant, the Mayfield solar facility would have an expected useful life of approximately 40 years.[111]

Decommissioning plan and activities. According to the Decommissioning Plan, it is anticipated that decommissioning will begin within 18 months of the facility ceasing to produce electricity, according to Kentucky Revised Statutes. The decommissioning and restoration process includes removal of all aboveground structures; removal of below-ground structures

[110] Project decommissioning may be triggered by events such as the end of a power purchase agreement, expiration of lease agreement(s), abandonment or when the Project reaches the end of its operational life. (KRS) 278.706(2)(m) requires that decommissioning activities be completed within 18 months of the Project ceasing to produce electricity for sale unless the deadline has been extended by the Secretary of the Kentucky Energy and Environment Cabinet ("EEC"). Monitoring and site restoration may extend beyond this period to ensure successful revegetation and rehabilitation.

[111] The amended Decommissioning Plan states a Project life of 30 years; however, the Applicant has noted that estimate is an error and that the actual expected Project life is 40 years.

up to a depth of 3 feet, unless otherwise requested by the landowner; and regrading and re-seeding disturbed areas and otherwise returning the land to a substantially similar state as it was prior to the commencement of construction. The following general decommissioning activities are anticipated, with overlap in activities expected:[112]

- PV array removal
- Racking and fencing removal
- Access road removal
- Site recontouring
- Drainage restoration
- Revegetation

Some components may be left in place under certain circumstances, as noted in the Decommissioning Plan. For example, the Project substation which will remain in place for future use unless otherwise requested by the landowner.

According to the Decommissioning Plan, the goal of site restoration is to restore the topography, vegetative cover, and hydrologic function of the site to a substantially similar condition as it was prior to commencing construction of the Project.

Anticipated decommissioning costs. Decommissioning costs include costs associated with disposal of components not sold for salvage, including materials which will be disposed of at a licensed facility, as required. Decommissioning costs also include restoration of the proposed Project site. Additionally, decommissioning costs account for a potential future decommissioning of the substation, should it be requested at a later date by the landowner. Cost estimates do not include decommissioning of the BESS or of a separate proposed nonregulated transmission line. Exhibit 5- 16 presents the estimated decommissioning costs before and after returns for salvaged materials.

Exhibit 5-16.
Estimated Decommissioning Costs of the Proposed Mayfield Solar Project

Initial Cost Estimate (Before Salvage)	Net Cost Estimate (After Salvage)
$15,318,666	$11,373,066

Notes: (1) Estimated costs are presented in 2026 US dollars.
(2) Estimated costs account for decommissioning of the substation.

Source: MYSO, LLC, February 2026.

[112] The Decommissioning Plan does not include a proposed nonregulated transmission line, described as between approximately five and six miles in length. The Applicant will file a separate application for that infrastructure.

Financial assurance. The Applicant has indicated they will comply with KRS 278.706 requirements. A decommissioning bond will be provided prior to the beginning of construction. The Decommissioning Plan and cost estimate shall be reviewed and updated every five years, and the security revised as appropriate based upon the revised cost estimate at the Applicant's expense.

Conclusions and recommendations. HE believes that decommissioning the facility and returning the site to its original condition can be accomplished once all the components have been removed. Completion of reclamation activities would eliminate long term Project-related negative impacts, as compared with simply shutting the solar facility. This process will also have a modest and temporary positive economic stimulus to the region.

The Applicant has suggested that economic incentives exist for decommissioning, but HE believes that is highly uncertain due to variable costs for decommissioning and metal prices 40 years in the future.

Need for mitigation. The Applicant's approach to decommissioning and restoration includes removal of applicable above ground and underground structures associated with the Project, as well as site restoration activities. To ensure that all decommissioning commitments are met, we recommend the following:

1. The Applicant shall file a final decommissioning plan with the Siting Board, or its successors, as well as Graves County, which complies with Kentucky Revised Statutes (KRS) 278.706(2)(m). The plan shall commit the Applicant to the removal of all applicable Project components and required restoration activities. The final decommissioning plan shall be completed at least one month prior to construction of the Project.

2. The Applicant, its successors, or assigns shall notify Graves County officials of upcoming decommissioning activities at least 30 days prior to the commencement of decommissioning.

3. As applicable to individual lease and easement agreements, the Applicant, its successors, or assigns will abide by the specific land restoration commitments agreed to by individual property owners, as described in each executed lease and easement agreement.

4. The Applicant shall provide a bond or similar security to ensure financial performance of decommissioning in accordance with the requirements of (KRS) 278.706(2)(m)(5).

5. The bond amount should be reviewed and updated every five years at the expense of the Applicant to determine and update the cost of facility removal. This review shall be conducted by an individual or firm with experience or expertise in the costs of removal or decommissioning of electric generating facilities. Certification of this review shall be provided to the Siting Board or its successors and the Graves County Fiscal Court. Such certification shall be by letter and shall include the current amount of the anticipated bond and any change in the costs of removal or decommissioning.

6. If the Applicant proposes to retrofit the current proposed facility, it shall demonstrate to the Siting Board that the retrofit facility will not result in a material change in the pattern or magnitude of impacts compared to the original project. Otherwise, a new Site Assessment Report will be submitted for Siting Board review. The term retrofit is defined as the facility being re-designed such that the facility has a different type of operations or function, i.e., no longer operates as a solar electric generation facility.

7. The Applicant shall also prepare a new Site Assessment Report for Siting Board review if the Applicant intends to retire the currently proposed facility and employ a different technology.

8. The Applicant, its successors, or assigns must provide notice to the Siting Board if during any two-year period it replaces more than twenty percent of its facilities. The Applicant shall commit to removing the debris and the older facility components from the Project site upon replacement. The Applicant must inform the Siting Board of where the removed facility components are being disposed of.

9. Any disposal or recycling of Project equipment, during operations or decommissioning of the Project, shall be done in accordance with applicable laws and requirements.

Public Outreach and Communication

The Application details the public involvement activities undertaken by Mayfield Solar representatives. Those activities included the following events and actions taken to notify and inform Graves County officials and residents about the Project:

- Public meetings and events:
    - A public meeting was held on the evening of August 12, 2025, at the Graves County Cooperative Extension Service Office in Mayfield to inform the public about the Project and answer questions. A notice announcing the public meeting was published in the Mayfield Messenger, the local newspaper, on July 23, 2025. Letters were also sent to adjacent landowners. Approximately 19 individuals attended the public information meeting.
    - On January 14, 2026, notice of application letters were sent to landowners whose property borders the proposed Project site. The notice was also published in the Mayfield Messenger on January 14, 2026.
- Outreach to local officials, surrounding landowners and others:
    - Graves County Economic Development Office
    - Graves County Fiscal Court
    - Following the August 2025 public meeting, the Applicant initiated follow up communications to each adjacent nonparticipating neighbor, offering one-on-one meetings to discuss the Project, setbacks, landscaping, and to review the Good Neighbor Agreement (GNA) option. The Project team then met in person

with the majority of these landowners, walked properties where requested, and offered GNAs with interested neighbors.

- A Project website has been developed to provide information online: https://brightnightpower.com/what-we-do/our-projects/mayfield-community/

The Applicant has stated that they will continue to provide periodic updates through public materials and direct contacts to ensure residents near the boundary remain informed about construction timing, design refinements, and points of contact throughout development.

Public comments. The Kentucky PSC document website for the Mayfield Project provides all the formally submitted comments from members of the public. As of the date of this report, no comments have been filed.

HE site visit summary. As part of HE's site visit to the Project area on April 9, 2025, HE met with local officials, including the Graves County Property Value Administrator (PVA) Mr. Lee Martin and Graves County Commissioner Mr. Tyler Goodman. Although local residents may be generally aware of the Project, they have not voiced either general or specific concerns to either the PVA or the County Commissioner at this point. However, the Commissioner has some general concerns regarding potential road and bridge damage from construction vehicles. He also voiced concerns about residents living south of KY 849 in close proximity to the Project site; he indicated that he wants Project representatives to address any concerns brought up by those residents.

Need for mitigation. The following measures should be undertaken to continue public outreach and communication:

1. The Applicant should continue to engage with local residents, businesses and others to provide additional information about the Project, provide a forum for hearing comments and concerns, and to address questions as they arise.

Complaint Resolution

The Applicant states that "A formal Complaint Resolution plan has not been developed at this time but will be developed prior to commencing construction. The Applicant anticipates creating a program similar to those created in Starfire and Frontier solar projects."

In response to the Siting Board's second data request, the Applicant provided a copy of the Frontier Solar Complaint Resolution Plan, which provides contact information for (Frontier) Project representatives and very briefly explains the complaint resolution process as follows:

"Complaints will be logged, acknowledged promptly, investigated, and resolved or otherwise responded to with appropriate follow-up communication. Records of complaints and responses will be maintained for the duration of construction." The document goes on to state that the "goal is to address any issues that arise during the development, construction, and operation of our projects in a transparent and efficient manner.

In response to a Siting Board request for clarification, the Applicant stated that all community members and workers are able to participate in the Complaint Resolution program, regardless of whether they are participating landowners, Good Neighbor Agreement signatories, or non-participating neighbors.

Need for mitigation. The following measures should be undertaken as part of the Applicant's Complaint Resolution Plan:

1. A final Complaint Resolution Plan, including specific Applicant contact information for those filing a complaint, should be provided to the Graves County Fiscal Court and the Siting Board prior to the start of construction.

2. The Applicant's final Complaint Resolution Plan should include an explanation of the expected timing of complaint acknowledgment, investigation and resolution.

3. The Applicant's final Complaint Resolution Plan should include an explanation of how resolution will be determined if the complainant is not satisfied with the response from the Applicant.

4. The Applicant should publish a summary of the Complaint Resolution Plan on the Project's website at least two weeks prior to the commencement of construction and also make the Plan available at the temporary construction office.

5. The Applicant should maintain a complain log detailing each complaint and the actions taken to resolve the complaint. The complaint log should be made available to the Graves County Fiscal Court for inspection upon request.

6. The Applicant should submit to the Siting Board, annually, a status report associated with the complaint resolution plan, recounting the individual complaints, how the Applicant addressed those complaints and the ultimate resolution of those complaints.

7. The Applicant should provide the Graves County Fiscal Court with updated contact information for those submitting complaints within 30 days of any change in contact information. The Applicant should also update contact information on the Project's website within 30 days of any change.

SECTION 6
Recommended Mitigation

This section identifies actions the Applicant can take to mitigate potential negative impacts on certain regional resources. Other regulatory processes will determine the need for particular actions on other resource topics. These are only noted here, and HE makes no recommendation as to their merit. Beyond those actions, HE recommends a list of mitigation actions for Siting Board and Applicant consideration.

Regulatory Actions and Mitigation Outside Siting Board Jurisdiction

The Siting Board should be aware of the following permitting and regulatory actions that will require Applicant compliance and possible mitigation efforts (in addition to this effort to obtain a Certificate of Construction from the Siting Board).[113] No action on these actions is required by the Siting Board since these are outside the Siting Board's jurisdiction. The Applicant states that Mayfield Solar intends to comply with all applicable permitting requirements and provided a list of permits that may be required prior to either construction or operation of the facility. Exhibit 6-1 provides that list.

Additionally, the Applicant has prepared and submitted a Cumulative Environmental Assessment (CEA), as required by Section 224.10-280 of the KRS.

[113] Information provided in response to the Siting Board's first data request.

Exhibit 6-1.
Permits or Consultations Potentially Required for Construction or Operation of the Mayfield Solar Facility

Permit	Agency	Status
Federal		
Clean Water Act Sec. 404 and/or Section 10 Permit(s)	USACE	Not yet Submitted
Endangered Species Act Section 7 Consultation	USFWS	Not yet Submitted
National Historic Preservation Act (NHPA) Section 106	KYC-SHPO	Not yet Submitted
Pre-Screening Tool and Determination	FAA	Not yet Submitted
Spill Prevention, Control, and Countermeasures (SPCC) Plan	USEPA	Not yet Submitted
State		
Kentucky Endangered Species Protection	KDFWR	Not yet Submitted
Construction Certificate	KY Siting Board	Underway
Plan Review	KY DHBC	Not yet Submitted
Certificate of Occupancy	KY DHBC	Not yet Submitted
Federal Water Pollution Control Act/Kentucky Pollutant Discharge Elimination System (KPDES)	KY EEC, DOW	Not yet Submitted
Kentucky KYR100000 Construction General Permit for Discharges from Construction Activities	KY EEC, DOW	Not yet Submitted
Section 401 Water Quality Certification	KY EEC, DOW	Not yet Submitted
State Floodplain Construction General Permit	KY EEC, DOW	Not yet Submitted
Overweight/Over-dimensional permit(s)	KYTC	Not yet Submitted
Encroachment/Driveway Permit(s)	KYTC	Not yet Submitted
Utility Crossings	KYTC	Not yet Submitted
Zoning permit	KAZC	Not yet Submitted
Local		
No Local Permits Required		

Source: MYSO.LLC, April 2026.

Mitigation for Siting Board and Applicant Consideration

The following mitigation measures are based upon: (1) Applicant commitments set forth in the SAR; (2) measures discussed with the Applicant in subsequent information exchanges or discussions; and (3) additional mitigation steps HE believes will reduce or eliminate negative Project impacts and are reasonable for the Applicant to undertake.

In performing this comprehensive review of the Mayfield solar Application and supplemental materials, HE has gained an understanding of the Project, the location, the construction and operational activities, the Applicant's intentions, and the Project's impacts. Our recommended mitigation actions are intended to reduce or eliminate potential adverse impacts.

A. Site development plan:

1. A final site layout plan should be submitted to the Siting Board upon completion of the final site design. Deviations from the preliminary site layout plan, which formed the basis for HE's review, should be clearly indicated on a revised graphic. Those changes could include, but are not limited to, the location of solar panels, inverters, transformers, operations and maintenance building, substation, battery energy storage systems or other Project facilities or infrastructure, including internal access roads.

2. Any change in Project boundaries, including easements, from the information which formed this evaluation should be submitted to the Siting Board for review.

3. The Siting Board will determine if any deviation in the site boundaries or site layout plan is likely to create a materially different pattern or magnitude of impacts. If not, no further action is required, but if yes, the Applicant will support the Siting Board's effort to revise its assessment of impact and mitigation requirements.

4. A final, Project-specific construction schedule, including revised estimates of on-site workers and commuter vehicle traffic, should be submitted to the Siting Board. Deviations from the preliminary construction schedule should be clearly indicated.

5. The Siting Board will determine whether any deviation to the construction schedule or workforce estimates is likely to create a materially different pattern or magnitude of impacts. If not, no further action is required. If so, the Applicant will support the Siting Board's effort to revise its assessment of impacts and mitigation requirements.

6. The Applicant shall submit a status report every six months until the project commences construction to update the Siting Board on the progress of the Project.

7. The Applicant or its contractor will control access to the site during construction and operation. Site entrances will be gated and locked when not in use.

8. The Applicant's access control strategy will include appropriate signage to warn potential trespassers. The Applicant will ensure that the site entrance and boundaries

have adequate signage, particularly in locations visible to the public, local residents and business owners.

9. The fence enclosing the substation will adhere to North American Electric Reliability Corporation (NERC) safety standards and will be appropriately spaced, bonded, and grounded in compliance with National Electrical Safety Code (NESC) requirements prior to installation of any electrical equipment.

10. The Applicant will meet with local law enforcement agencies, EMS and fire services to provide information and ensure they are familiar with the plan for security and emergency protocols during construction and operations.

11. Prior to construction, the Applicant will provide an Emergency Response Plan to the local fire district, first responders, and any County Emergency Management Agency. The Applicant will provide site-specific training for local emergency responders at their request. Access for fire and emergency units shall be set up after consultation with local authorities.

B. Compatibility with scenic surroundings:

1. Existing vegetation between the solar arrays and nearby roadways and homes shall be left in place, to the extent feasible, to help minimize visual impacts and screen the Project from nearby homeowners and travelers.

2. The Applicant will not remove any existing vegetation except to the extent it must remove such vegetation for the construction and operation of Project components.

3. The Applicant will implement vegetative screening as proposed in the submitted Landscape Map as a minimum, including vegetative screening along roadways and near the Project substation / BESS area.

4. The Applicant will provide any changes to the Landscape Map to the Siting Board.

5. The Applicant will maintain planted screening vegetation, including establishment, supplemental plantings and on-going maintenance.

6. Any changes to the site infrastructure layout (i.e., panels, inverters, etc.) included in the Application materials will be submitted to the Siting Board for review. If the Siting Board deems those changes to be significant, the Siting Board may require the Applicant to revise the submitted Landscape Map.

7. The Applicant will work with local homeowners, other landowners and area residents to address and resolve complaints related to view of Project facilities via the Applicant's Complaint Resolution Plan.

8. To the extent that an affected adjacent property owner indicates to the Applicant that a visual buffer is not necessary, the Applicant will obtain that property owner's written consent and submit such consent in writing to the Siting Board.

9. The Applicant will use anti-glare panels and operate the panels in such a way that glare from the panels is minimized or eliminated. The Applicant will work with affected local residents or Graves County representatives to address and resolve complaints related to glare via the Applicant's Complaint Resolution Plan.

C. Potential changes in property values and land use:

1. No unique mitigation measures are recommended related to potential impacts to property values or adjacent land uses because other mitigation already recommended can accomplish this. However, coordination by the Applicant with local homeowners regarding potential visual impacts and impacts from noise, traffic or other Project activities should be initiated.

D. Anticipated peak and average noise levels:

1. The Applicant shall notify all residents and businesses within 2,400 feet of the Project boundary about the construction plan, noise potential, complaint resolution process, and mitigation plan at least one month prior to the start of construction.

2. The Applicant shall respond to any complaints related to noise levels or noise causing activities occurring during construction or operations via a timely, formal and clearly developed complaint resolution program.

3. If pile driving activity occurs within 1,500 feet of a noise sensitive receptor, the Applicant shall implement a construction method that will suppress the noise generated during the pile driving process (i.e., semi-tractor and canvas method; sound blankets on fencing surrounding the Project site; or any other comparably effective method).

4. The Applicant should limit the construction activity, process and deliveries to the hours of 8:00 am to 5:00 pm, Monday through Saturday. No construction work should be conducted on Sundays.

5. The Applicant shall maintain functional mufflers on all diesel-powered equipment.

6. The Applicant should coordinate with the Folsomdale Church to limit pile driving and heavy or oversize deliveries passing near the Church during their services, including funerals.

7. The Applicant shall place panels, inverters, BESS units, and substation equipment consistent with the distances to noise receptors indicated in the Applicant's acoustic assessment and with the Applicant's proposed setbacks. Nevertheless, the Applicant shall not place solar panels or inverters closer than 150 feet from a residence, church or school, 25 feet from non-participating adjoining parcels, and 50 feet from adjacent roadways. The Applicant shall not place a central inverter, and, if used, energy storage systems closer than 450 feet from a residence, church, or school. These setbacks shall not be required for residences owned by landowners involved in the Project that explicitly agree to lesser setbacks and have done so in writing. All agreements by

participating landowners to lesser setbacks must be filed with the Siting Board prior to commencement of construction of the Project.

E. Road and rail traffic, fugitive dust, and road degradation:

1. The Applicant shall comply with all laws, permits and regulations regarding the use of roadways and bridges.

2. The Applicant shall consult with the Kentucky Transportation Cabinet (KYTC) regarding truck and other construction traffic and obtain necessary permits from the KYTC.

3. The Applicant shall coordinate with the Graves County Road Department (GCRD) regarding truck and other construction traffic and obtain necessary permits from the GCRD.

4. The Applicant shall develop a transportation plan for the heavy truck delivery route(s) within Kentucky, taking into consideration any weight restricted bridges.

5. The Applicant shall work with the Commonwealth road authorities and the GCRD to perform road surveys, before and after construction activities, on all roads in the Project area to be used by construction vehicles.

6. The Applicant shall comply with any road use agreement executed with Graves County or the GCRD. Such an agreement might include special considerations for overweight loads, routes utilized by heavy trucks, road weight limits and bridge weight limits. It may also include prioritizing access for residents or use of flaggers during heavy commute periods.

7. The Applicant shall fix or pay to repair damage to roads and bridges resulting from any Project-related commuting or heavy vehicle transport to the Project site during construction.

8. The Applicant shall implement a ridesharing plan for construction workers, if feasible, use appropriate traffic controls or allow flexible working hours outside of peak hours to minimize any potential delays during AM and PM peak hours.

9. The Applicant shall develop and implement a traffic management plan for the Project to minimize the impacts on traffic flow and keep traffic and people safe.

10. The Applicant shall respond to any complaints related to traffic management for nearby residents occurring during construction via a timely, formal and clearly developed complaint resolution program.

11. The Applicant shall properly maintain construction equipment and follow best practices related to fugitive dust throughout the construction process.

F. Economic impacts:

1. The Applicant should attempt to hire local workers and contractors to the extent they are qualified to perform the construction and operations work.

2. The Applicant should consider opportunities to optimize local benefits; for example, by purchasing materials, if possible, in the local area during construction and operation.

G. Decommissioning:

1. The Applicant shall file a final decommissioning plan with the Siting Board, or its successors, as well as Graves County, which complies with Kentucky Revised Statutes (KRS) 278.706(2)(m). The plan shall commit the Applicant to the removal of all applicable Project components and required restoration activities. The final decommissioning plan shall be completed at least one month prior to construction of the Project.

2. The Applicant, its successors, or assigns shall notify Graves County officials of upcoming decommissioning activities at least 30 days prior to the commencement of decommissioning.

3. As applicable to individual lease and easement agreements, the Applicant, its successors, or assigns will abide by the specific land restoration commitments agreed to by individual property owners, as described in each executed lease and easement agreement.

4. The Applicant shall provide a bond or similar security to ensure financial performance of decommissioning in accordance with the requirements of (KRS) 278.706(2)(m)(5).

5. The bond amount should be reviewed and updated every five years at the expense of the Applicant to determine and update the cost of facility removal. This review shall be conducted by an individual or firm with experience or expertise in the costs of removal or decommissioning of electric generating facilities. Certification of this review shall be provided to the Siting Board or its successors and the Graves County Fiscal Court. Such certification shall be by letter and shall include the current amount of the anticipated bond and any change in the costs of removal or decommissioning.

6. If the Applicant proposes to retrofit the current proposed facility, it shall demonstrate to the Siting Board that the retrofit facility will not result in a material change in the pattern or magnitude of impacts compared to the original project. Otherwise, a new Site Assessment Report will be submitted for Siting Board review. The term retrofit is defined as the facility being re-designed such that the facility has a different type of operations or function, i.e., no longer operates as a solar electric generation facility.

7. The Applicant shall also prepare a new Site Assessment Report for Siting Board review if the Applicant intends to retire the currently proposed facility and employ a different technology.

8. The Applicant, its successors, or assigns must provide notice to the Siting Board if during any two-year period it replaces more than twenty percent of its facilities. The Applicant shall commit to removing the debris and the older facility components from the Project site upon replacement. The Applicant must inform the Siting Board of where the removed facility components are being disposed of.

9. Any disposal or recycling of Project equipment, during operations or decommissioning of the Project, shall be done in accordance with applicable laws and requirements.

H. Public outreach and communication:

1. The Applicant should continue to engage with local residents, businesses and others to provide additional information about the Project, provide a forum for hearing comments and concerns, and to address questions as they arise.

I. Complaint resolution program:

1. A final Complaint Resolution Plan, including specific Applicant contact information for those filing a complaint, should be provided to the Graves County Fiscal Court and the Siting Board prior to the start of construction.

2. The Applicant's final Complaint Resolution Plan should include an explanation of the expected timing of complaint acknowledgment, investigation and resolution.

3. The Applicant's final Complaint Resolution Plan should include an explanation of how resolution will be determined if the complainant is not satisfied with the response from the Applicant.

4. The Applicant should publish a summary of the Complaint Resolution Plan on the Project's website at least two weeks prior to the commencement of construction and also make the Plan available at the temporary construction office.

5. The Applicant should maintain a complain log detailing each complaint and the actions taken to resolve the complaint. The complaint log should be made available to the Graves County Fiscal Court for inspection upon request.

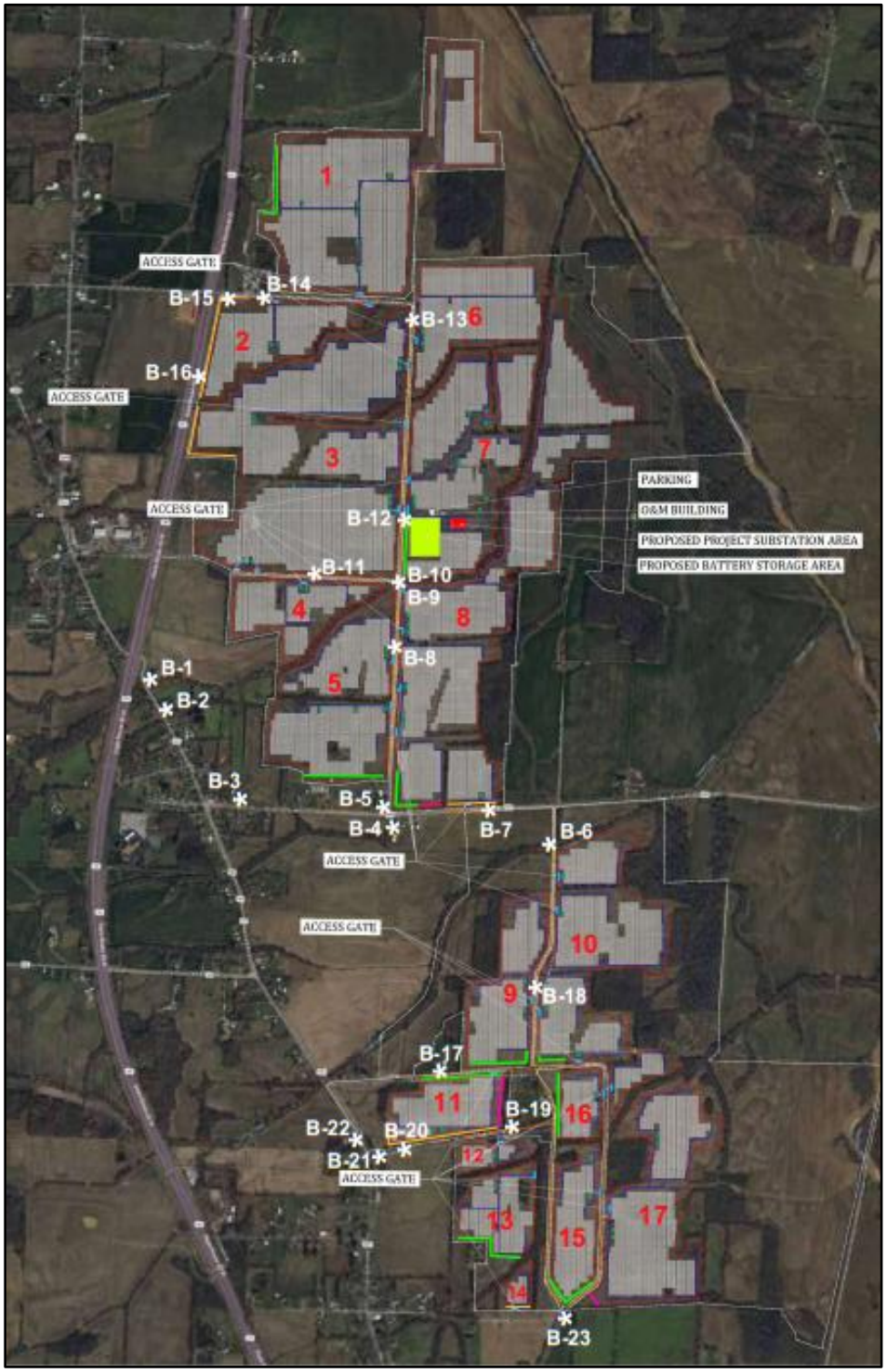
6. The Applicant should submit to the Siting Board, annually, a status report associated with the complaint resolution plan, recounting the individual complaints, how the Applicant addressed those complaints and the ultimate resolution of those complaints.

7. The Applicant should provide the Graves County Fiscal Court with updated contact information for those submitting complaints within 30 days of any change in contact information. The Applicant should also update contact information on the Project's website within 30 days of any change.

APPENDICES

Appendix A

Photo Log Index Map



Note: Red numbers identify individually fenced areas of solar panel arrays.
Source: MYSO, LLC, 2026; Harvey Economics, 2026.

Appendix B

Site Photos

Exhibit B-1.
Masonic Lodge (M-1), Facing NE toward Project

Exhibit B-2.
Folsomdale Church of Christ (CH-1), Facing NE toward Project

Exhibit B-3.
Neighborhood 7 near Residence R-111 (NP)[1] on KY-849, Facing E

Exhibit B-4.
Residence R-86 (NP) at Intersection of KY-849 & Baldree Rd, Facing S

[1] NP = Non Participating Landowner

Exhibit B-5.
Residence R-107 (GNA)[2], at Intersection of KY-849 & Baldree Rd, Facing NW

Exhibit B-6.
Closed Bridge on Whittemore Rd, Facing S toward Project

[2] GNA = Good Neighbor Agreement Landowner

Exhibit B-7.
View of SE Section of Panels (PA 8)[3] & Access Point from KY-849, Facing WNW

Exhibit B-8.
Baldree Rd between PA 5 & PA 8 at Access Points, Facing NW/NE

[3] PA = Panel Area

Exhibit B-9.
Bridge on Baldree Rd at Pittman Rd, Facing NW to PA 3

Exhibit B-10.
Unpaved Section of Baldree Rd from Pittman Rd, Facing NE to BESS Area

Exhibit B-11.
Pittman Rd between PA 3 & PA 4 near Access Point, Facing W

Exhibit B-12.
Substation, O&M, BESS Area on Baldree Rd near Access Points, Facing E-SE

Exhibit B-13.
Turn at NE Corner of Baldree Rd near PA 6 Access Point, Facing N

Exhibit B-14.
Residence R-156 (P) on Baldree Rd near PA 2 Access Point, Facing E

Exhibit B-15.
View from Baldree Rd near US 45 of PA 2, Facing SE

Exhibit B-16.
View of PA 2 from US 45, Facing NE to R-156 (P)[4]

[4] P = Participating Landowner

Exhibit B-17.
Residence R-63 (NP) on Old Plant Rd w/ View of PA 11 & R-57 (GNA)

Exhibit B-18.
PA 9 & PA 10 near Access Points on Whittemore Rd, Facing N

Exhibit B-19.
Residence R-57 (GNA) on McGee Rd w/ View of PA 11 & R-63 (NP)

Exhibit B-20.
View of PA 11 and Residence R-63 (NP) from McGee Rd, Facing E

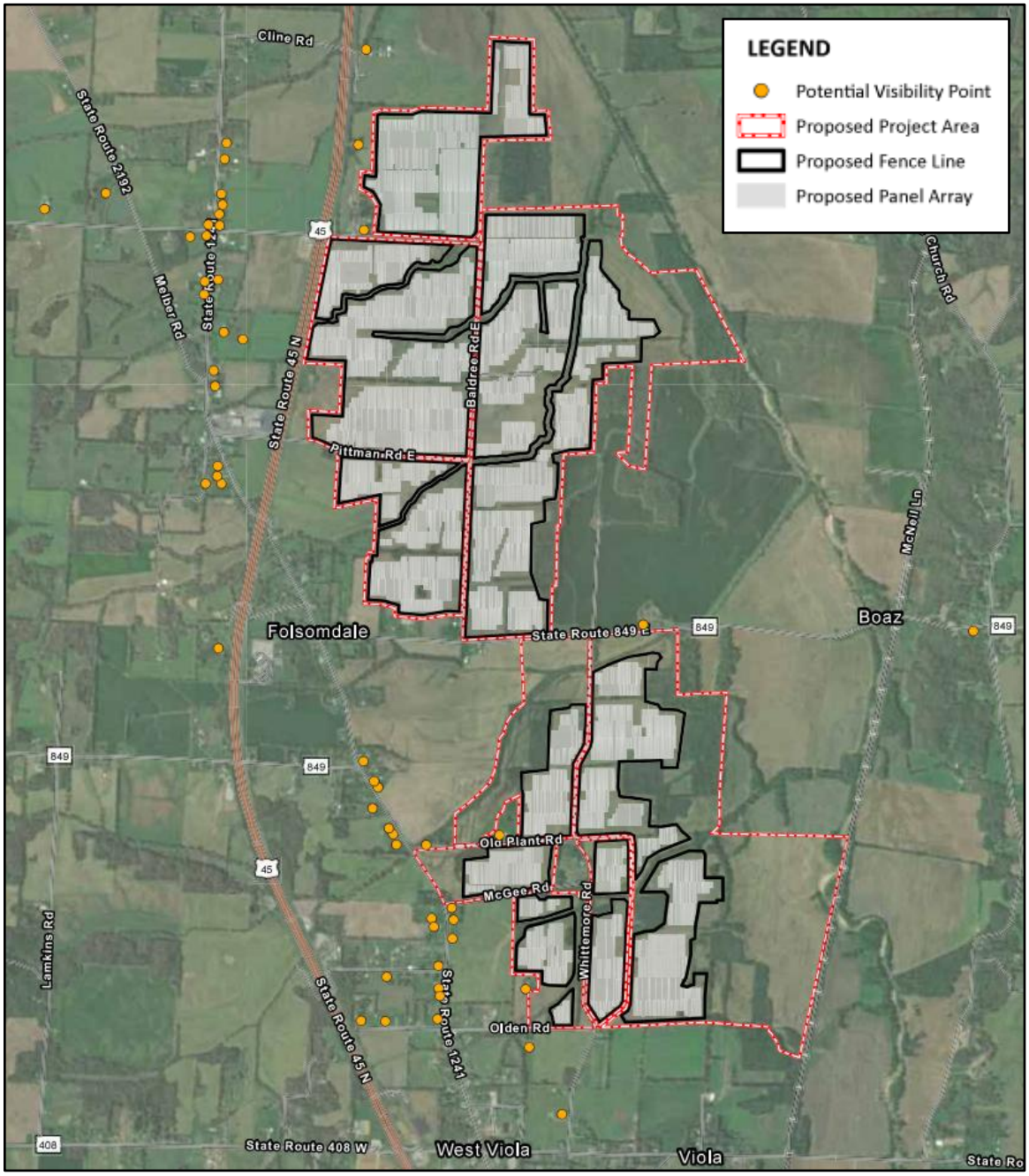
Exhibit B-21.
Residence R-56 (NP) on McGee Rd across from PA 11, Facing E

Exhibit B-22.
Unknown Residence (NP) on KY-1241 northwest of McGee Road

Exhibit B-23.
Residence R-33 (GNA) on Olden Rd

Appendix C

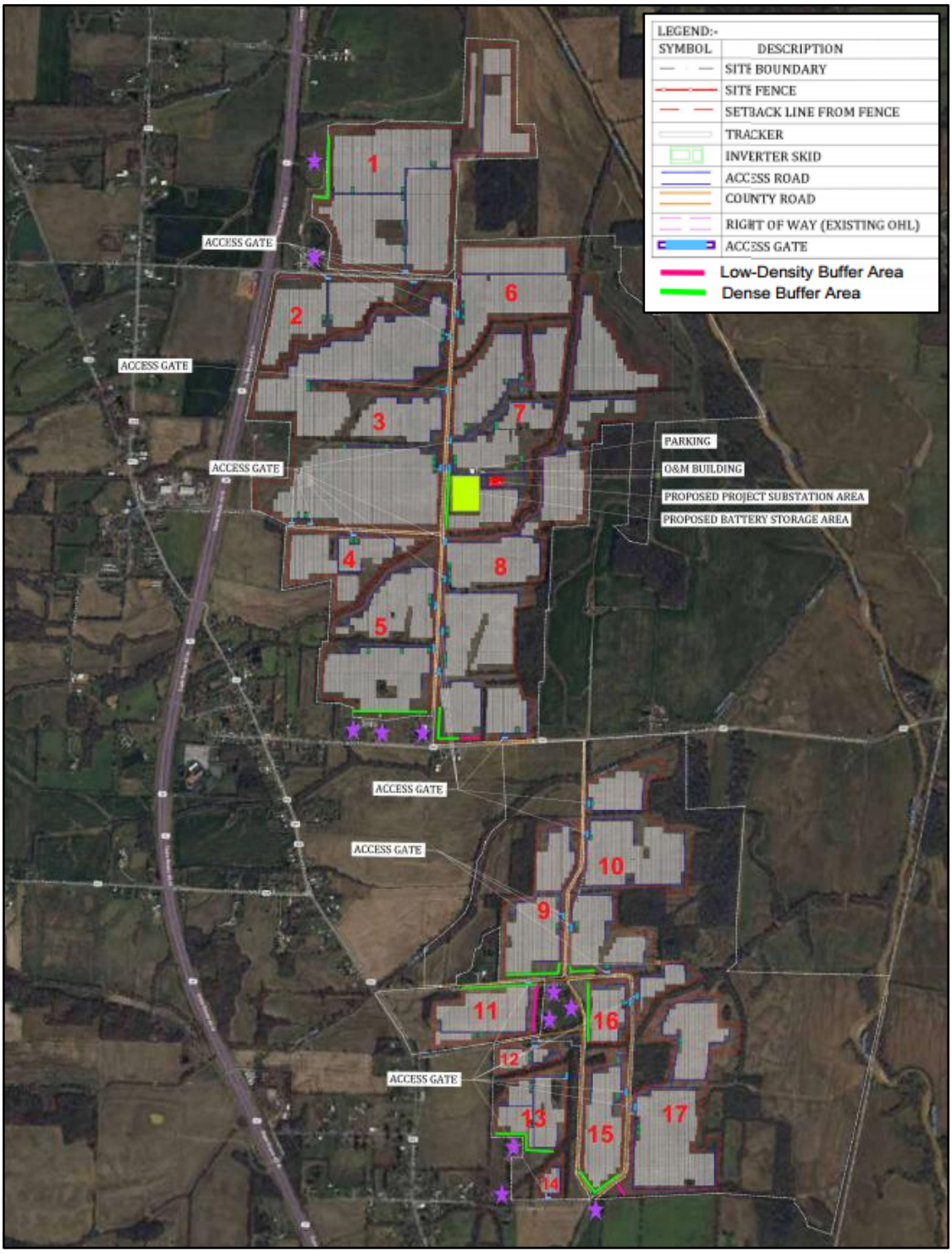
Residences with Potential Project Visibility



Source: MYSO, LLC, May 2026.

Appendix D

Proposed Landscape Plan Map



Notes: Red numbers identify fenced areas of solar arrays; Purple stars indicate participating and GNA residences.
Source: MYSO, LLC, March 2026, Harvey Economics, April 2026.

Appendix E

Summary of Literature Regarding Impacts of Solar Facilities on Property Values

Abashidze, N. ***The Local Cost of Clean Energy: Evidence from Solar Farm Siting and Home Prices.*** **May 2025.**

This study quantifying the impact of solar farm construction on residential property prices in North Carolina suggests an 8.7 percent reduction in price for homes within one mile of a solar facility, relative to homes further away. The largest effects were concentrated on homes within 0.5 miles of the facility; beyond one mile, no price differences were attributable to the solar facility. This study also found evidence that local housing market activity declines after a solar farm becomes operational, with the number of homes sold in the area falling by roughly 6%. However, this study mainly includes smaller scale facilities (less than 5 MWs) and notes that relatively few home sales have occurred near the larger facilities. Additionally, the authors note that "enhancing visual buffers or setbacks could alleviate aesthetic concerns, potentially reducing negative price effects."

Subsequent to HE's obtaining this study, the paper has been removed from the website at the request of the author or other parties.

Hao, S., and G. Michaud. ***Assessing property value impacts near utility-scale solar in the Midwestern United States.*** **Solar Compass, Volume 12, 2024.**[114]

This study focusing on the potential impacts to property values of utility-scale solar facilities in the mid-west found that the presence of these types of solar facilities increases property values by between 0.5 percent and 2.0 percent, although the study also notes that larger facilities (greater than 20 MWs) have less of a positive impact than small facilities. As noted in the report, many counties in the mid-west require relatively large setbacks; those setbacks may reduce views of the projects. The majority of projects included in this study were identified as being located in urban or suburban areas, with a smaller number of projects located in rural settings. Overall, the study acknowledges that utility scale solar projects are not the main driving factor for the change or differences in property values.

Gaur, V., and C. Lang. ***House of the rising Sun: The effect of utility-scale solar arrays on housing prices.*** **Energy Economics, forthcoming, 2023.**

This study focusing on utility-scale solar facilities in Massachusetts and Rhode Island found that homes within about 0.6 miles of a facility depreciate by between 1.5 percent and 3.6 percent following facility construction. In this study, researchers found that those reductions are primarily driven by developments on farm and forest lands in rural areas.[115] At least a

[114] This article was noted as being published on behalf of International Solar Alliance.
[115] Previous work by Guar and Lang (2020) indicated that declines in property values as associated with commercial scale solar facilities were driven by developments in non-rural areas.

portion of the effects may be related to distance to the solar facility, visibility of the facility, loss of open space and changes in rural character.

Elmallah, S. et al. *Shedding light on large-scale solar impacts: An analysis of property values and proximity to photovoltaics across six U.S. states*, Energy Policy, Vol. 175, April 2023.

This study examining the impact of large-scale photovoltaic projects on residential home prices in six U.S. states found that homes within 0.5 mi of the solar facility experienced an average home price reduction of 1.5%, as compared to homes two to four miles away. Measurable effects were seen for facilities constructed on agricultural land, for larger solar facilities and for rural homes. However, adverse effects on property values were only seen in three of the six states analyzed.[116]

Abashidze, N. and Taylor, R. *Utility-Scale Solar Farms and Agricultural Land Values*, Land Economics, Vol. 99, Issue 4, November 2023.

This study using property value models found that utility-scale solar facilities do not have direct positive or negative spillover effects on nearby agricultural land values. However, the authors did "find evidence that suggests construction of a solar farm may create a positive option-value for landowners that is capitalized into land prices." Specifically, after construction of a nearby solar farm, study findings indicated that agricultural land that is also located near transmission infrastructure could increase in value.

Gaur, V., and C. Lang. *Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island*. University of Rhode Island, Department of Environmental and Natural Resource Economics, September 2020.

This study completed by economists at the University of Rhode Island found that in areas of high population density, houses within a one-mile radius depreciate by about 1.7 percent following construction of a solar array. The study found "substantially larger negative effects for properties within 0.1 miles and properties surrounding solar sites built on farm and forest lands in non-rural areas." However, additional analysis focused on impacts in more rural areas found that the "effect in rural areas is effectively zero (a statistically insignificant 0.1%) and that the negative externalities of solar arrays are only occurring in non-rural areas." The researchers note that this may be due to solar facilities being less visible in rural areas (due to land abundance for vegetative buffers).

Koster, H. and M. Droes. *Wind turbines and solar farms drive down house prices*. VoxEU, September 2020.

This study focusing on the property value effects of wind turbines and solar facilities in the Netherlands states evidence suggesting that the negative effects of solar facilities (including noise (buzzing sounds), glare and visibility) results in decreased residential housing prices (2-

[116] A webinar presented by the study authors indicated that the results should not be applied to larger projects (i.e., those above 18 MWs) and that the study did not consider site design, setbacks or landscaping features.

3%). They found these effects to be localized (within 1km of the facility, or a little more than half a mile). However, the researchers also note that the relatively small number of solar facilities in the Netherlands makes the results less precise (as compared to the wind farm analysis).

Coffey, Darren. *Planning for Utility-Scale Soar Energy Facilities*. American Planning Association, PAS Memo, September – October 2019.

This article produced by the American Planning Association (APA) indicates that the "impact of utility-scale solar facilities is typically negligible on neighboring property values." The issue of property value impacts "can be a significant concern of adjacent residents, but negative impacts to property values are rarely demonstrated."

Al-Hamoodah, Leila, et al. *An Exploration of Property-Value Impacts Near Utility-Scale Solar Installations.* Policy Research Project, LBJ School of Public Affairs, The University of Texas at Austin, May 2018.

This study included a geospatial analysis and a survey of residential property assessors to determine the potential for property value impacts. The results show "that while a majority of survey respondents estimated a value impact of zero, some estimated a negative impact associated with close distance between the home and the facility, and large facility size. Regardless of these perceptions, geospatial analysis shows that relatively few homes would be impacted."