thoroughbred solar

Exhibit 12
Site Assessment Report

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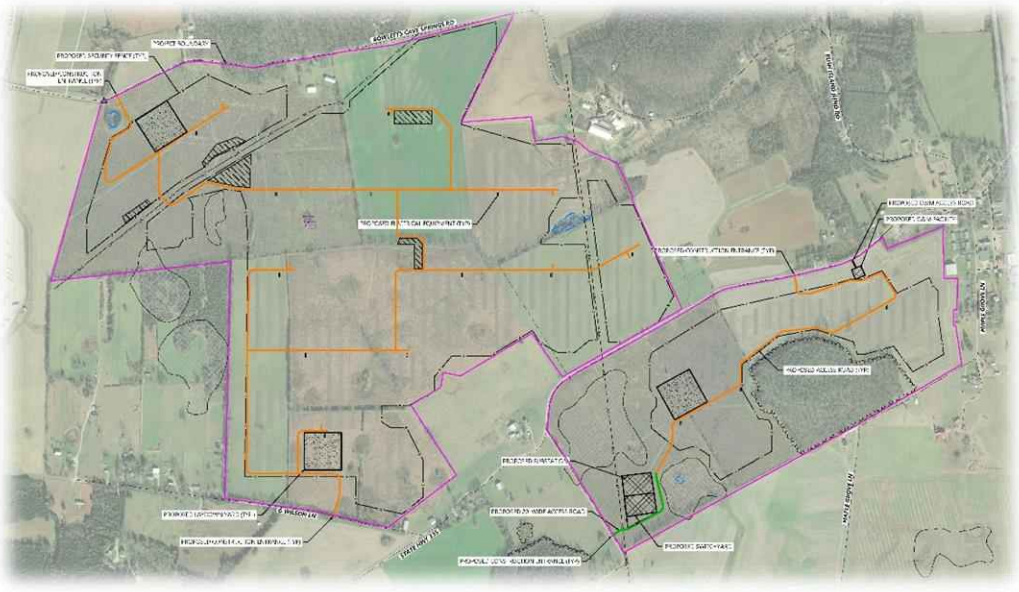
SITE ASSESSMENT REPORT:
THOROUGHBRED SOLAR
HART COUNTY, KENTUCKY



by
Haley & Aldrich, Inc.

for
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Table of Contents **Page**

List of Tables

List of Figures

List of Attachments

1. Introduction

This Site Assessment Report (SAR) is filed on behalf of Thoroughbred Solar, LLC (the Applicant) as specified in the Kentucky Revised Statutes (KRS) 278.708 as a part of its application requesting a certificate of construction for an approximate 50-megawatt (MW) merchant electric solar generating facility (the Project) from the Kentucky State Board on Electric Generation and Transmission Siting (the Board) pursuant to KRS 278.704.

The sections below and the associated attachments provide specific information as follows:

- Section 2 – Description of the Proposed Project (KRS 278.708(3)(a));
- Section 3 – Compatibility of the Project with Scenic Surroundings (KRS 278.708(3)(b));
- Section 4 – Potential Changes in Property Values and Land Use (KRS 278.708(3)(c));
- Section 5 – Anticipated Noise Levels at Property Boundary
- Section 6 – Project Impact on Road Traffic, Rail, and Fugitive Dust (KRS 278.708(3)(d)); and
- Section 7 – Proposed Mitigation Measures (KRS 278.708(3)(e)).

Attachments A through Q are also provided to support the SAR and Application.

2. Description of the Proposed Facility

Pursuant to KRS 278.708(3)(a), the proposed Project is situated on a 530-acre site (the Project Area) located near Rowletts and Munfordville in Hart County, Kentucky (as shown in mapping provided on Figures 1 and 2, and the layout drawing provided in Attachment A). The Project Area is predominantly agricultural fields, with limited forested areas. Agricultural uses include row crops, hay fields, and grazing pastures. Similar to its surroundings, the Project Area is located on gently rolling terrain.

The Project is a 50-MW merchant solar energy generating facility capable of providing renewable energy that will be supplied to the existing electrical system via connection to an existing 69-kilovolt (kV) overhead electrical line owned by East Kentucky Power Cooperative (EKPC). Photovoltaic (PV) solar modules will be used to convert sunlight into direct current (DC) electricity which will then be converted to alternating current (AC) electricity using inverters that will be placed in 15 locations throughout the Project layout (as shown in Attachment A). At the inverter locations, integrated low-voltage transformers will increase the voltage from 0.63 kV to 34.5 kV before reaching the medium voltage collection cabling. Electrical collection lines (either below ground or in trays below panel height) will deliver the generated electricity to a separately-fenced substation serving the Project (the Project Substation), where a step-up transformer will increase (or step up) the AC electricity to 69 kV to match the existing electrical system. The electricity will then be delivered to a separately-fenced switchyard that will be owned by EKPC (the Utility Switchyard) so it can connect to the regional PJM transmission grid. All related facilities are located completely within the Project Area.

Sections 2.1 through 2.8 that follow provide information regarding:

- 2.1 Surrounding land uses for residential, commercial, agricultural, and recreational purposes;
- 2.2 The legal boundaries of the proposed site;
- 2.3 Proposed access control to the Project Area;
- 2.4 The location of Project buildings, transmission lines, and other structures;
- 2.5 Location and use of access ways, internal roads, and railways;
- 2.6 Existing or proposed utilities to service the Project;
- 2.7 Compliance with applicable setback requirements as provided under KRS 278.704(2), (3), (4), or (5); and
- 2.8 Evaluation of the noise levels expected to be produced by the Project.

2.1 SURROUNDING LAND USES FOR RESIDENTIAL, COMMERCIAL, AGRICULTURAL, AND RECREATIONAL PURPOSES

The area surrounding the Project Area is similar in nature to the Project Area, consisting of rolling terrain of a generally rural character. The Project Area consists of two aggregations of land separated by Kentucky State Route 335 (KY-335), also known in this area as L and N Turnpike Road.

The northwestern portion of the Project Area is generally bounded to the southwest by G Wilson Lane, to the west by Interstate 65 (I-65) and intervening residences, to the north by Rowletts Cave Springs Road, to the east by open land located north of KY-335, and to the southeast by KY-335. The northwestern portion of the Project Area is traversed by an existing natural gas pipeline right-of-way (ROW), the Bowling Green to Munfordville system operated by Texas Gas Transmission, LLC (TGT), as

well as a portion of the EKPC 69-kV overhead electric transmission line ROW to which the Project will connect. This portion of the Project Area consists of open pastureland interspersed with trees along internal fencerows; some portions of the property are occasionally used for row-crop agriculture. Dense fencerow vegetation also exists along much of the Project Area boundary.

The southeastern portion of the Project Area is bounded by KY-335 to the north, Johns Lane to the west, open land west of Maple Grove Lane to the east, and Maple Grove Lane and agricultural land to the south. This portion of the Project Area includes, in addition to the vegetated fencerows, a 23-acre area of forest that will be preserved by the Project. The existing EKPC 69-kV overhead electric transmission line extends within this portion of the Project Area as well. The proposed Project Substation and Utility Switchyard will be located immediately adjacent to the existing electric line in the southwest corner of this portion of the Project Area.

Figure 3 illustrates land use cover types within 2 miles of the Project Area. Additional details regarding land uses within 2 miles are shown on Figure 4. As shown, the Project Area's westernmost extent is generally bounded by I-65 and its Horse Cave Rest Area. Rowletts Cave Springs Road (which bounds the Project Area to the north) crosses above I-65 west of the Project Area and turns south to parallel I-65 on the opposite side. Scattered residences and farms are located along Rowletts Cave Springs Road both in the vicinity of the Project Area and west of I-65. Two I-65 interchanges are located just outside the 2-mile-radius both north (at the Route 31W exit) and south (at the KY-335 exit) of the Project Area. The remaining area to the west and north generally consists of farmed or wooded open land. The Green River State Natural Area is located approximately 0.6-mile to the north of the Project Area. The Munfordville First United Methodist Church is located approximately 1.9 miles to the northeast along Hardyville Road. The Lonoke Church is located approximately 2 miles to the west along Lonoke Road. The Green River also flows along a winding path north and west of the Project Area, with its closest distance approximately 0.5-mile from the Project Area. A small boat access from the Green River is located approximately 1.8 miles to the northeast of the Project Area (as shown on Figure 4).

To the south of the Project Area, several homes are located along G Wilson Lane, some extending north between the Project Area and I-65. Some of the homes in this area qualify, on a density basis, as a "residential area" as defined in KRS 278.700. KY-335 continues to extend south and west of the Project Area, with increasing numbers of businesses and homes along this road as it extends southwest to the interchange with I-65. The Dutch Country Safari Park is a private recreational facility located off KY-335 within 2 miles of the Project Area (as shown on Figure 4). Local roads, scattered residences and farms, and open agricultural or wooded area comprise the remaining land uses to the south. The EKPC overhead 69-kV electric transmission line continues to extend generally south from where it passes through the Project Area.

More settled areas exist to the east, where the town of Rowletts is located, generally at the intersection of KY-335 and Maple Grove Lane. Rental residences and a storage facility are located west of Maple Grove Road adjoining the Project Area. Two churches are located in this area, a Kingdom Hall of Jehovah's Witnesses located off KY-335 and the Rowletts Baptist Church, and related facilities located between Maple Grove Lane and Church Street. Certain areas east of the Project Area also qualify, on a density basis, as a "residential area" as defined in KRS 278.700.

Farther east, between Church Street and Route 31W (South Dixie Highway), the CSX Transportation (CSXT) Railroad – an active freight line – extends in a generally north-south direction. A greater proportion of commercial uses can be found along Route 31W, with increasing density to the north, approaching Munfordville. Caveland Country Club (a semi-private 9-hole golf course) is located just east of Route 31W, the Hart County Fairgrounds are located approximately 0.3-mile northeast of the Project Area, and the Battle for the Bridge Historic Preserve is located approximately 1.3 miles to the northeast.

The remaining area to the east is open agricultural fields, forests, or scattered residential and commercial areas.

2.2 LEGAL BOUNDARIES OF THE PROPOSED SITE

Pursuant to KRS 278.708(3)(a)(2), Attachment B contains the legal boundaries of the Project Area. The Project Area consists of portions of land owned by three families, each of which will continue to use property not leased to the Applicant for residential and/or agricultural purposes.

2.3 PROPOSED ACCESS CONTROL TO THE SITE

Pursuant to KRS 278.708(3)(a)(3), the proposed layout is provided on Figure 5, and the site plan is provided in Attachment A. Access to the Project Area will be controlled in accordance with applicable guidelines of the North American Electric Reliability Corporation (NERC), National Fire Protection Association (NFPA), the National Electric Safety Code (NESC), the Occupational Safety and Health Administration (OSHA), and specific requirements of EKPC for the electrical components of the Project.

Project solar arrays and associated equipment will be enclosed by a 7-foot-tall agricultural-style fence with 8-foot-tall wooden posts and wire mesh fencing. Locked access gates will be provided at each of the five entrances to the Project. The Project Substation and Utility Switchyard will each be separately enclosed, using 7-foot-tall chain link fencing around each area. Security lighting will be available at each entrance and at the operations and maintenance (O&M) building that can be activated if maintenance access is necessary at night. Remote monitoring of the Project will occur for security as well as operational performance purposes.

Appropriate signage will be installed at the Project in locations visible to the public to warn potential trespassers, including within areas where electrical equipment could pose particular hazards.

2.4 LOCATION OF FACILITY BUILDINGS, TRANSMISSION LINES, AND OTHER STRUCTURES

Project structures include those within the PV solar area, and separately-fenced areas encompassing the Project Substation and Utility Switchyard. Specific characteristics of the Project Area, and structures associated with the Project are described below.

2.4.1 Project Area Characteristics

As noted in Section 2.1, the Project Area is generally in active agricultural use, with smaller areas of trees. Portions of the land are enrolled into the Conservation Reserve Program (CRP). The CRP is a land conservation program in which farmers agree to remove environmentally-sensitive land from agricultural production and plant species that will improve the environmental health and quality of the land. An existing TGT natural gas pipeline ROW and EKPC overhead electric transmission line ROW extend through the Project Area. A small private family cemetery, which is not currently accessed or used, is located on the northern portion of the Project Area. The few headstones present do not have clear inscriptions. The headstones are surrounded by a grove of trees that will remain within the Project Area, and the Project will not impact the cemetery.

Table 1 indicates the approximate acreage of each type of use within the Project Area.

Table 1. Project Area Land Uses

Land Use Type	Approximate Acreage
Active Row Crops	293.98
Agricultural Pastures/Hay Fields	178.16
Forest	34.46
Infrastructure Corridors*	18.41
Other (private cemetery, deep sinkholes)	3.98
Total	*528.99*

*Infrastructure corridors are also in use as agricultural land.

A preliminary geotechnical survey (Attachment C) has been completed to confirm appropriate conditions for Project design and construction. Two deep sinkholes were delineated within the Project Area; both are currently avoided by the active agricultural uses and have also been avoided by Project components. Given the geology of the region, a more detailed review of conditions associated with karst has been undertaken within the Project Area to identify potential sinkhole areas and to plan for appropriate layout, construction, and operational measures to support the Project in this location. Detailed information is provided regarding karst issues in Attachment D.

A formal wetland and stream delineation has been conducted (Attachment E), which has confirmed that no streams are present within the Project Area. One wetland was formally delineated and will be avoided by the Project. Three mapped 100-year floodplain areas are present within the Project Area and will also be avoided by Project components (Figure 6).

Communication has occurred with the Kentucky Energy and Environment Cabinet, Office of Kentucky Nature Preserves (OKNP), and with the United States Fish and Wildlife Service (USFWS) to confirm that no listed threatened or endangered species will be impacted by the Project. OKNP file review was completed for an area including a 1-mile buffer around the Project Area, encompassing such areas and resources as the Green River. As indicated in correspondence provided in Attachment F, none of the identified state-listed species are expected to be impacted by the Project.

USFWS provided correspondence indicating a request to investigate the sinkholes present within the Project Area to determine whether openings existed that could potentially provide winter habitat for listed bats. In response to that request, the Applicant conducted a field survey (Attachment F), which confirmed no openings exist that would provide for suitable winter bat habitat. For further protection of the listed bat species, the Applicant has committed to restricting tree clearing to avoid the summer roosting and migration season. Therefore, tree clearing will only occur from November 15 through March 31. The 23-acre stand of trees located within the Project Area will remain intact, continuing to provide habitat and visual screening in the area. The trees planned for clearing consist of scattered trees and vegetated fencerows, totaling approximately 20 acres. Where trees exist along Project Area boundaries, they are not planned for clearing, and as previously noted, the stand of trees encircling the private cemetery will remain.

2.4.2 Project Structures

2.4.2.1 PV Solar Area

The PV solar area will be secured by an agricultural-style, 7-foot-tall fence, with taller wooden posts (as shown on Figure 7). This type of fence meets NESC requirements. Approximately 38,150 linear feet of perimeter fence will surround the Project.

Within the fence will be:

- PV solar panels;
- Collection lines to gather the electricity generated by each panel to reach the Project Substation;
- A total of 15 inverters;
- Meteorological stations;
- An O&M building;
- Gravel access roads that extend into the fenced areas from four points off local roadways, as further discussed in Section 2.5; and
- Temporary uses that will occur only during the construction phase, for worker parking and equipment laydown and workspace.

The various structures and components are discussed further below.

2.4.2.1.1 PV Solar Panels

Project components within the fence will include PV solar modules (groups of panels) mounted on single-axis trackers that will allow the solar panels to follow the sun throughout the day. The PV solar modules will be supported by racking systems and oriented in rows running from north to south. With this orientation, the panels will face east toward the rising sun in the morning, will be parallel to the ground at mid-day, and will rotate west to the setting sun in the afternoon. A small motor at the pivot point (approximately 5 feet from the ground surface) slowly moves the panels to track the position of the sun throughout the day. This approach optimizes the angle of the panels relative to the sun and maximizes the production of electricity from the Project. The tallest height of the panels at maximum tilt will be 15 feet.

Although the manufacturer has not yet been selected, the panels will have a Tier I designation to demonstrate proven and financeable technology, and the panels will meet Toxicity Characteristic Leaching Procedure (TCLP) standards. As affirmed by a Department of Health review in nearby states, the crystalline silicone used in solar panels is non-toxic to humans. While there may be some hazardous chemicals used in the construction of a PV panel, the substances are fully encapsulated by non-toxic, non-porous substances like glass; therefore, they are not likely to adversely affect public health. Anti-reflective coatings will be applied to the surface of the panels to maximize solar capture.

The Project Area has rolling topography throughout. To minimize substantial grading for the Project, the proposed racking technology will be capable of conforming to the terrain as shown in Figure 7. This style of racking allows for solar modules to follow the existing terrain as well as account for a 15 percent maximum slope in the north-south direction. By minimizing the need for substantial grading, there will be a decreased need for cut and fill, and the existing terrain features will be minimally changed. This also allows for preservation of existing soil and topsoil within much of the Project Area.

The racking system will be supported by approximately 30,000 steel posts installed with a combination of pile-driving machines and augers, driven to a depth of approximately 5 to 8 feet below the ground surface, as indicated by the schematic diagram on Figure 8.

As shown in Figure 5, the panels will be placed in several groupings throughout the two portions of the Project Area (on either side of Route 355). The PV panels are set back at least 275 feet from the closest

residence, with most at greater distances. The closest of the 15 inverters is located a minimum distance of approximately 490 feet from the closest residence. The Utility Switchyard is approximately 680 feet from the closest residence, positioned in the southernmost area to allow for easy EKPC access along its existing transmission line. The Project Substation is set back farther, approximately 680 feet from the closest residence.

2.4.2.1.2 Collection Lines

The modules will be connected using DC cables that can either be buried in a trench or attached to the racking system (as shown in Figure 9). The DC cables gather at the end of the racking systems to combiner boxes which are connected to cables routing to an inverter. From the inverters, AC collection lines will extend toward the Project Substation to allow generated electricity from all of the modules to interconnect at that point.

The AC collection system (shown on Figure 5) is anticipated to be underground and/or in cable trays below panel height. Underground segments of the AC collection system will be buried a minimum of 3 feet below grade. Approximately 18,000 linear feet of collection system cable routing is reflected within the Project Area. Where possible, collection cables will be co-located in common trenches and run adjacent to one another. As shown on Figure 5, collection lines will gather all generated electricity for delivery to the Project Substation. Figure 9 illustrates installation of collection lines for a similar solar project.

2.4.2.1.3 Inverters

A total of 15 inverters will be installed throughout the Project Area (as shown on Figure 5) to convert the DC power from the 1,500-volt DC collection system to AC power. Step-up transformers integral to the inverter skid then increase the power to 34.5 kV, which will then be transmitted to the Project Substation via the 34.5 kV AC collection system described above. Although the specific vendor for the inverter has not yet been selected, a representative image of a model similar what will be selected is provided in Figure 10.

The equipment will be placed on a concrete slab or pier foundation, which may be precast and assembled off site.

2.4.2.1.4 Meteorological Stations

The Project will include up to two monitors of up to 15 feet in height, which will track weather conditions that have an impact on the Project's performance and efficiency. It is expected that one will be located within the northwestern portion of the Project, and the other in the southwestern area. Smaller integrated monitoring devices will be positioned throughout the PV arrays to track and optimize performance.

2.4.2.1.5 O&M Building

There will be an O&M building constructed on site that will remain throughout the lifetime of the Project. As shown on Figure 5, the O&M building is located proximate to the site entrance off KY-335. This building will house one to three full-time workers who will monitor the Project and address any issues that may arise during operation. The equipment at the O&M building will include the supervisory control and data acquisition (SCADA) monitoring system, spare parts, and safety equipment. The employees will be present on site during normal working hours, and remote monitoring will occur at night and during off hours. Along with the building, the O&M area will include sufficient parking for

workers/visitors (at least one spot per employee and additional room for deliveries), storage areas, any necessary septic and leach fields for the building, and a potential water well sized for sanitary purposes.

2.4.2.1.6 Access Roads

As discussed further in Section 2.5, five points of access off local roads have been established for the Project, along with an internal network of gravel roads that will allow access to the equipment located throughout the Project Area.

2.4.2.1.7 Temporary Uses

During construction, the Project will include temporary laydown yards, construction management trailers, and stormwater management features. The laydown yards will include parking areas for construction workers in addition to areas for receiving shipments of posts and modules. After construction, the trailers will be removed, and the laydown yards will be returned to vegetated conditions. The three work areas will overlap with areas within which equipment will be installed, moving it as necessary throughout the construction effort.

2.4.2.2 Electrical Interconnection Area

The Project Substation and Utility Switchyard will be located adjacent to the existing approximately 85-foot-tall EKPC 69-kV overhead electric transmission structures and will be surrounded by a 7-foot-tall chain link fence that complies with required security standards. While the details of the design will be specified by EKPC, Figure 11 provides an illustration of the conceptual design for the Project Substation and Utility Switchyard. All structures within the proposed Project are expected to be at heights lower than the existing structures. Table 2 outlines anticipated equipment expected to be located within each area. Once construction is completed, the approximately 110-foot tap between the Project Substation and the Utility Switchyard, the Utility Switchyard, and the tap between the Utility Switchyard and the existing overhead line will all be owned by EKPC. The Applicant will continue to own the Project Substation.

Table 2. Electrical Equipment

Equipment	Project Substation	Utility Switchyard
Transformer	✓	N/A
Buswork	✓	✓
Terminal Structures or Poles	✓	✓
Insulators/Conductors	✓	✓
Switches/Circuit Breakers	✓	✓
Surge Arrestors	✓	✓
Concrete Foundation	✓	✓
Control House	✓	✓
Metering Equipment	✓	✓

2.5 LOCATION AND USE OF ACCESS WAY, INTERNAL ROADS, AND RAILWAYS

Pursuant to KRS 278.708(3)(a)(5), proposed access points are shown on Figure 5 and in Attachment A. Approximately 23,240 linear feet of private gravel access roads will be built for use within the Project Area. The roads are planned to be no more than 20 feet in width. As noted in Section 2.4.1, five points of access/egress are proposed for the Project, off Rowletts Cave Springs Road, G Wilson Lane, Johns Lane, and two off KY-335. One is intended for access to the O&M building, while the other two provide double points of access/egress for the northwestern and southeastern portions of the Project Area, respectively.

The Project is proximate to I-65, with exits located both north and south of the Project Area. Construction is planned to use the existing roadway network, as further discussed in Section 6. Although railroad infrastructure is located immediately to the east, it is not planned for use by the Project.

Locking gates will be provided at each of the five points of access/egress for Project security.

Design of the roads will allow for safe passage of Project vehicles and for emergency vehicles. While all equipment will be accessible within the Project Area, not all panels will necessarily have direct road access. This design minimizes the amount of ground disturbance associated with roads while still providing effective, efficient, and safe site access.

2.6 EXISTING OR PROPOSED UTILITIES TO SERVICE THE PROJECT

Pursuant to KRS 278.708(3)(a)(6), existing utilities within the Project Area are described in this section, and information about proposed utilities is provided. Pursuant to KRS 278.708(3)(a)(4), the proposed locations of all Project infrastructure (buildings, transmission lines, and other structures) are included in the Preliminary Site Layout in Attachment A.

An existing 69-kV overhead electric transmission line owned by EKPC extends through the Project Area in a generally north-south direction. At 69-kV, the poles have a height of approximately 85 feet and have a 50- to 75-foot-wide ROW. The Project will connect into this utility infrastructure. In order to do so, a Project Substation will be constructed adjacent to the EKPC electric transmission line that will include one 60-mega-volt-ampere (MVA) transformer and related equipment. All collection lines will feed into the Project Switchyard, and the electricity will be transformed from 34.5 kV to 69 kV to match the EKPC line voltage.

From the Project Substation, a short (approximately 110 feet) overhead electrical line will extend to the adjacent Utility Switchyard. The switchyard is where the high-voltage electricity will tie into the existing 69-kV EKPC line. The Utility Switchyard will be constructed and owned by EKPC. EKPC will also implement the interconnection of the Utility Substation to the existing electric transmission line via an approximately 110-foot overhead electrical line. No new structures outside the Project Substation and Utility Switchyard are planned, and all related components will be entirely within the Project Area. The tallest components within the Project Substation and Utility Switchyard are estimated to be 40 to 65 feet tall, which is considerably shorter than the existing 85-foot transmission line structures.

In addition to the existing transmission line, a natural gas pipeline operated by TGT extends through an easement located in a northeast-southwest direction within the westerly portion of the Project Area. Project features will be positioned to avoid this feature.

2.7 COMPLIANCE WITH APPLICABLE SETBACKS

Pursuant to KRS 278.708(3)(a)(7), applicable setback requirements for the Project have been considered and proposed. The Hart County Planning Commission has jurisdiction over the location of the Project. The Hart County Planning Commission has no zoning ordinance or setback requirements for solar facilities.

As shown on Figure 4, no schools, hospitals, or nursing home facilities are located within 2,000 feet of the Project Area. As also shown, three areas exist within 2,000 feet of the Project Area where the definition of “residential neighborhood” applies per KRS 278.700(6); i.e., a populated area of 5 or more acres containing at least 1 residential structure per acre.

Pursuant to KRS 278.704(4), Applicant will file a request to deviate from the setback requirement in KRS 278.704(2) for residential neighborhoods; thus, it will comply with the relevant setback requirements provided at KRS 278.704. A minimum of 275 feet setback from any residential structure is proposed. Given the terrain, existing vegetative screening, planned landscaping, and minimal sound levels, this distance is expected to appropriately mitigate potential impacts to residences.

2.8 EVALUATION OF NOISE LEVELS

Pursuant to KRS 278.708(3)(a)(8), a noise assessment was completed for the Project by RSG, Inc. (Attachment G). The analysis considered both construction sound levels, which will be temporary in nature, as well as sound associated with Project operations. As described in more detail in Section 5, construction sounds levels will vary over time and will include relatively loud activities for short periods. Operational sound from the Project is expected to be primarily associated with the inverters (which are set back at least approximately 490 feet from the closest residence) and with the Project Substation. Tracker motor usage and electricity generation will only occur during daytime hours, although inverter sound for Volt-Amps Reactive (VAR) control is incorporated into nighttime levels. Site visits and maintenance activities, including single vehicular traffic and mowing, will be negligible, as they are similar to the background agricultural noise characteristics. All site visits, outside of emergency maintenance, will occur during daylight hours (planned between 7:00 a.m. to 7:00 p.m.).

3. Compatibility with Scenic Surroundings

The Project is located on generally open, rolling terrain. A narrow row of trees located along fencerows within the Project Area will be cleared; however, fencerow trees located along the Project Area boundary and one large area of trees (approximately 23 acres) within the Project Area will remain. Designated scenic surroundings (none of which are proximate to the Project Area), input from neighbors and local officials, and proximity of residences has been considered in the layout and incorporation of landscaping for the Project.

Solar panel heights will not exceed 15 feet from the ground at maximum tilt and will be at lower heights during much of the day, as the panel angle shifts to follow the sun. The panels will use anti-reflective technology to minimize reflection. All other Project-related features (other than the Project Substation and Utility Switchyard) will be at even lower heights. Additionally, Project features other than roadways, stormwater management grading, and landscaping will be set back at least 50 feet from the perimeter of the Project Area and at least 275 feet from any existing residence. Except in locations where access to the Project Area is required, existing perimeter trees will be maintained and will continue to provide their existing visual screening.

The Project is not expected to affect views from residences greater than one-half mile from the Project Area, or from designated recreational facilities within 2 miles; small areas may exist where the Project would be visible at a distance through the trees from the golf course. From the west, berming along I-65 in the vicinity of the rest areas blocks views from that direction. Some residences located where there are open fields along Rowletts Cave Springs Road, to the north, may have the potential for views (see Figure 12, reflecting one such view), although much of that road is lined by trees and vines that currently restrict views toward the Project Area.

East of the Project Area, the community of Rowletts reflects a more densely developed area of residences and churches. The Kingdom Hall of Jehovah's Witnesses has existing trees located along the western edge of its parking lot, limiting the potential for views of the Project. Along Maple Grove Lane and east to the rail line and Route 31, elevations drop off with distance from the Project Area. The lower elevation coupled with the setbacks designed into the Project layout greatly limit the potential for Project visibility. Figure 13 illustrates a view from Maple Grove Road east of the Project Area. Maintaining the existing 23-acre forested area and existing perimeter vegetation within the Project Area provides good screening from the southeast. The neighborhood located off G Wilson Lane has the potential for visibility from some locations; however, it also has considerable existing screening along the perimeter of the Project Area; distance will also reduce the potential for visual impact.

The potential for visibility is expected to be greatest along KY-335, Johns Lane, and Rowletts Cave Springs Road proximate to the Project Area, as reflected in conservative visibility screening shown on Figure 14. An analysis to determine the potential for glare in those locations indicates that some glare is possible from various solar panels along the roadways and at certain residential homes. Although the model indicated the potential for glare, upon further review it was determined that factors such as topography, vegetation, and distance would eliminate the majority of the modeled findings. The glare analysis is provided in Attachment H.

With the exception of the chain link fencing surrounding the Project Substation and Utility Switchyard, all other Project fencing will be a woven-wire agricultural-style for consistency with the surrounding area. Substantial vegetation exists that will be retained; Figure 15 illustrates the locations where existing screening exists and will be maintained. In addition, as shown on Figure 15, landscaping will be added to provide additional screening that will be intended to screen and soften the views. Native grasses and

pollinator-friendly plantings will be components of the landscaping plan. General plans for the planting module are also reflected in Figure 15, illustrating the mix of tree and shrub species intended to blend with native species and provide interest and color to the landscape. Additional information regarding the landscaping and lighting plan is provided in Attachment I.

4. Property Value and Land Use Impacts

The potential changes in property values and land use resulting from the siting, construction, and operation of the proposed Project for property owners adjacent to the Project will not be negatively impacted, as stated in the Property Value Report prepared by Cohn Resnick (Attachment J). The following information is summarized directly from that report.

The Property Value Report reviewed and analyzed various studies that analyze the impact of solar facilities on nearby property values, evaluated property value trends in a paired sales analysis for 11 solar energy facilities that were comparable in terms of setting and size, and consulted with entities such as real estate brokers and County and Township Assessors where solar projects are located for additional insight.

The review of studies prepared by other real estate valuation experts and academics included:

- Mapleton Solar Impact Study, Kirkland Appraisals, LLC (evaluating 13 solar projects in North Carolina);
- North Star Solar Study, Chisago County (Minnesota) Assessor's Office;
- Duke Energy Solar Project near Crittenden, in Grant County, Kentucky, Grant County Property Value Administrator;
- A 2018 study by University of Texas at Austin; and
- A 2020 study by University of Rhode Island researchers.

These studies found little to no measurable or consistent difference in value between the test areas (near the solar projects) and the control areas in terms of sales price that could be attributed to the proximity of solar projects.

The paired sales analysis involved comparing sales prices both near each given solar project and in control areas to determine whether the presence of the solar projects appears to influence property value. The selected projects were in primarily rural areas, similar to the Project location, and ranged in size from 8.6 to 120 MW of generating capacity on sites ranging from 120 to 1,000 acres. For each of these projects, adjoining property sales were analyzed and paired with comparable sales in control areas over the past seven years. A total of 47 adjoining property sales were assessed, along with over 304 comparable sales. It was found that proximity to the solar projects had not deterred sales of nearby agricultural land and residential single-family homes, nor has it deterred the development of new single-family homes on adjacent land.

Additionally, local assessors were interviewed as part of the report. It is noted that in Clark County, Kentucky, the property valuation administrator has not received any complaints regarding a recent solar facility installed in November 2017, nor has any evidence of lowered property values in the area been recognized.

With regard to their impact on nearby property values, the Cohn Resnick studies of facilities of various sizes demonstrate that there is no measurable and consistent difference in property values for properties adjacent to solar facilities when compared to similar properties locationally removed from their influence. This is supported by Cohn Resnick's interviews with local real estate brokers who have stated that there is no difference in price, marketing periods, or demand for the homes directly adjacent to solar facilities. Cohn Resnick has also interviewed market participants, including County and Township

Assessors (with solar facilities in their districts), to provide additional insight as to how the market evaluates farmland and single-family homes located adjacent to solar facilities. Local assessors interviewed have directly noted that there is no evidence of negative property value impacts due to proximity to a solar facility, and local brokers interviewed have noted that there has been no effect on pricing, marketing time, nor conditions of sale.

Cohn Resnick performed four Before and After Analyses, in which sales were compared that occurred prior to the announcement and subsequent development of a solar project with sales that occurred after completion of the solar project for one solar facility in Florida, one solar facility in Indiana, and one in Minnesota, for both adjoining and non-adjoining properties. No measurable impact on property values was demonstrated in these analyses. Cohn Resnick also reviewed studies prepared by other real estate valuation experts that specifically analyzed the impact of solar facilities on nearby property values. These studies found little to no measurable or consistent difference in value between the Test Area Sales and the Control Area Sales attributed to the proximity to solar facilities. Considering all of this information, Cohn Resnick concludes that since the property values of the Adjoining Property Sales (Test Area Sales) for the existing solar facilities analyzed were not adversely affected by their proximity to solar facilities, and that properties surrounding other solar facilities operating in compliance with all regulatory standards will similarly not be adversely affected, in either the short or long term.

5. Anticipated Noise Levels at Property Boundary

A noise assessment was completed for the Project (Attachment G). The noise assessment evaluated potential noise impacts resulting from construction and operation of the Project. The Project is located near the I-65 interstate and CSXT railroad, both of which influence existing sound levels in the area surrounding the Project. Project operation is not expected to appreciably change sound level in the vicinity of the Project Area.

Construction of the Project will be loud at times, but loud activities (such as drilling and/or pile driving for pile placement) will be restricted to daytime hours only. No applicable community standards exist regarding construction sound levels. Construction will be completed in approximately 12 months. The temporary sounds associated with construction will end once the Project is operational. The Applicant will provide notification to abutting landowners prior to the start of construction, and a complaint process will be publicized to allow for community feedback and response to specific issues of concern as they may arise.

During operation, equipment anticipated to contribute sound to the local environment includes the transformer in the Project Substation, the 15 inverters, and the tracker motors used for tilting the panels to capture the sun throughout the day. The tracker motors will not operate when the sun is not causing the panels to move; therefore, they will produce daytime sound only. The potential effect of the Project, assuming maximum operation of all equipment during the day (although not all panels would necessarily operate at once, and the tracker motors will be operated intermittently) is modeled for representative nearby residences. The results as conservatively modeled are shown in Figures 16 and 17 (daytime and nighttime, respectively) for locations surrounding the Project modeled to experience up to 30 A-weighted decibels (dBA).

It can be seen from that graphic that sound levels reduce dramatically with distance; sound levels would be even lower at greater distances. As reflected, the maximum contribution of sound from the Project outside a residence is 41 dBA. The closest receptor to the substation is modeled to have a daytime sound level of 36 dBA and a nighttime sound level of 33 dBA. Note that those located inside a given residence would experience even quieter contributions of sound from the Project, as residential structures commonly reduce outdoor sound levels by approximately 15 dBA with windows partially open, and an additional 10 dBA quieter with the windows fully closed. Even without the additional sound reduction that those indoors would experience, the level of sound is consistent with guidance considered protective of sleeping conditions.

The modeling analysis does not reflect mitigation measures beyond the standard vendor sound levels. Adequate space will be available in the Project design to allow for incorporation of small barriers to further reduce sound levels in the event that additional measures are warranted once the facility is operational. However, the sound-producing elements of the Project have been deliberately situated such that distance is expected to adequately reduce Project sound at the closest residences.

6. Effect on Roads, Railways, and Fugitive Dust

A traffic study for the Project was completed (Attachment K). The study evaluated the potential impacts to road traffic. Although existing rail infrastructure is located proximate to the Project Area, there are no plans to use rail for delivery of equipment or other construction activities. In addition to the traffic analysis, the potential for fugitive dust associated with construction has been considered and planned measures described. Confirmation that no impact will occur to air transportation has been received through review of Project features with the Federal Aviation Administration (Attachment L).

6.1 EFFECT ON LOCAL TRAFFIC

6.1.1 Anticipated Traffic

The Project Area is located near the I-65 interstate to the west, with two interchanges available for use in delivering major equipment to the Project for construction. The Route 31 interchange is located north of the Project Area and would route travelers through Munfordville to reach the Project Area. The Route 335 interchange is located to the south and would bring travelers along L and N Turnpike Road to the Project Area. Following the public information meeting and community feedback, additional construction entrances were added to reduce traffic at each construction entrance.

During the approximately 12-month construction period, a temporary increase in traffic associated with travel of construction workers, delivery of construction equipment and material, and delivery of solar panel components and other structures would occur between 7:00 a.m. and 7:00 p.m. from Monday through Friday. At peak construction times, a total of approximately 120 construction workers is anticipated. Temporary parking areas will be provided within the Project Area. The workers will commute to the Project Area, using personal vehicles, in the morning and depart in the evening. While lunchtime travel may also occur, this would not coincide with peak commuting periods already occurring on local and regional roads.

Delivery of equipment for construction will be on trailers, flatbeds, or other large vehicles. The number of worker vehicles and delivery trucks anticipated on site per day during Project construction are reflected in Table 3.

Table 3. Anticipated Construction Vehicles

Time Period	Daily AM Trips	Daily PM Trips	Monthly Trips
	Worker Vehicles	Worker Vehicles	Heavy Vehicles
Month 1	15	15	21
Month 2	40	40	74
Month 3	52	52	76
Month 4	58	58	80
Month 5	103	103	71
Month 6	120	120	57
Month 7	106	106	48
Month 8	96	96	41
Month 9	58	58	27
Month 10	20	20	5
Month 11	16	16	4
Month 12	10	10	2

The estimated weight of the transformer associated with the Project Substation is approximately 120 tons. Other larger trucks associated with the limited grading, pile-drilling equipment, and foundation pours will also be utilized relatively early in the construction process.

6.1.2 Construction Impacts and Mitigation Measures

Based upon the construction-related traffic, a maximum impact case was developed that reflected a peak construction worker and delivery period. Existing traffic use and conditions were evaluated at key intersections surrounding the Project Area to determine existing operations, to extrapolate to future conditions without the Project construction traffic, and then to add Project traffic. The results of the analysis indicate that no change in operational level to the surrounding roadways is anticipated.

During deliveries of larger equipment, special signage, flaggers, or temporary lane closures may be necessary for short periods of time. The Project contractors will coordinate closely with local safety officials to maintain communication channels and adjust delivery schedules if warranted.

Although road damage is not anticipated, Project representatives will review road conditions with local officials prior to construction and will make any necessary repairs prior to finalizing the construction effort.

6.1.3 Operational Impacts

Each of the access/egress points for the Project has been evaluated to confirm that adequate sight distances exist, and the design has incorporated appropriate turning radius angles for equipment access in case of repairs. During operation, even for maintenance, site traffic would consist of lighter-duty service trucks and automobiles. Little routine travel to the Project Area would occur, as most operations are automated. Therefore, no meaningful impact to local traffic is expected in association with the operations and maintenance of the Project.

6.2 FUGITIVE DUST POTENTIAL AND CONTROL MEASURES

Once the Project has been constructed, the Project Area will be stabilized, and significant dust would not be generated. During construction, while activities with bare ground may be ongoing, care will be taken to control fugitive dust and the potential for tracking dust off site. Construction work will be undertaken in accordance with the Kentucky Stormwater Construction general permit (KYR100000; effective date 1 December 2019). This permit reflects requirements for Best Management Practices for any project disturbing one acre or more. The associated Stormwater Pollution Prevention Plan (SWPPP) will be prepared prior to construction to document planned controls as well as to provide a framework for inspections and documentation throughout the construction effort. A preliminary Stormwater Management Plan is provided as Attachment M.

Measures to be implemented include appropriate revegetation measures, covering of spoil piles, and application of water, as necessary. Stabilization and control measures will be implemented early in the construction process, and gravel access roads will be established to limit travel on non-stabilized ground. The Project design minimizes the amount of land disturbance and grading required. When work is completed in a given area, it will be stabilized before starting work on other areas of the site. The following measures will be used to minimize impacts to the surrounding area:

- natural wind breaks and barriers;
- water application will reduce the potential for fugitive dust;

- reduced speed will be required on site and will control vehicle access;
- washing equipment will be required prior to leaving the site (as necessary);
- open trucks will be covered with tarps; and
- using gravel-compacted roads for construction and maintenance.

7. Mitigation Measures

Mitigation measures have been incorporated into the Project design to avoid or minimize adverse effects. In addition, as required by Section 224.10-280 of the KRS, which states that an electrical facility may not be constructed until the developing party submits a Cumulative Environmental Assessment (CEA) to the Kentucky Energy and Environmental Cabinet as part of its application documents, the Applicant has prepared and will submit the CEA provided in Attachment N to the Kentucky Energy and Environmental Cabinet. Other applicable approvals will also be obtained prior to construction and operation of the Project, as applicable. A listing of potential air, water, and waste permitting requirements for the Project is provided in Attachment O.

Measures anticipated to be implemented to avoid or minimize adverse effects are outlined in the following sections.

7.1 DESIGN MEASURES

- A setback of 275 feet from residences the Project panels has been established to reduce impacts to nearby residences.
- Inverters will be located at least approximately 490 feet from the closest residence.
- Delineated wetlands/streams, mapped 100-year floodplains, and identified deep sinkholes will be avoided.
- Anticipated karst conditions have been investigated and accounted for in the Project layout.
- Stormwater management design, as outlined in Attachment M, will be carefully undertaken to avoid impacts to off-site properties and to karst conditions within the Project Area.
- The final design will continue to avoid the tree grove surrounding the private family cemetery located within the Project Area.
- The trees in the cemetery grove and in the 23-acre forested area will not be removed by the Project.
- Existing trees surrounding the Project Area will be retained and new landscaping added, as shown in Figure 15, to provide screening of the Project.
- Agricultural-style fencing will be used for consistency with local character, and lighting will be minimized.

7.2 CONSTRUCTION MEASURES

- Additional geotechnical investigations and more detailed design will be developed prior to construction. Careful monitoring of subsurface conditions will continue throughout construction to make adjustments to foundation supports and/or location of equipment, as appropriate.
- Local officials and abutters will be notified regarding the start of the construction schedule. Updated status will be maintained on the Project's website and Facebook page.
- An emergency response plan will be developed prior to the start of construction. Meetings will be held with local emergency management representatives for familiarity with plans and procedures.
- Contact information will be posted on a sign at the construction site.

- A complaint resolution process will be publicized to allow for feedback from the community and investigation and response to concerns as they may arise.
- Construction activities will be limited to daylight hours between 7:00 a.m. to 7:00 p.m. to mitigate evening noise impacts to nearby residences.
- The clearing of mature trees required for the Project will be limited seasonally to between 15 November and 31 March to avoid potential impacts to listed summer-roosting bat species.
- Delineated wetlands/streams and mapped 100-year floodplains to be avoided will be marked in the field, and appropriate erosion and sedimentation controls will be established to prevent indirect effects during construction.
- An Unanticipated Discoveries Plan (Attachment P) will be implemented to ensure that, in the unlikely event that any potential artifacts or materials are observed during construction, appropriate steps will be taken to identify the finds and take appropriate action in consultation with appropriate agencies, including continuing the Project's strong relationship with the Hart County Historical Society.
- During construction, erosion and sediment control barriers and best management practices will be used to control potential fugitive dust.
- Stormwater monitoring will occur, and corrective measures be implemented, consistent with the Project's SWPPP and the construction general permit.

7.3 OPERATIONAL MEASURES

- The emergency response plan will be revised following completion of construction to reflect operational measures, and a meeting will be held with local emergency response representatives for an updated review.
- Native herbaceous plants and pollinator-friendly species will be planted post-construction within the Project area.
- Final landscaping will be installed and maintained to foster strong growth and to meet the objectives of the landscaping plan.
- Consideration of the need for potential additional landscaping, if warranted, will be factored into the landscaping plan.
- The existing vegetative buffer will be left in-place around the cemetery, and a 50-foot setback from the grove will be used to mitigate impacts to the on-site cemetery.
- During operation of the Project, the site will be fenced, gated, and locked for security purposes.
- Ongoing stormwater monitoring and maintenance of appropriate stormwater controls will continue.
- Ongoing monitoring of ground surface conditions and performance will occur to pre-emptively address any settling that could indicate karst issues for the Project. Drone or other survey measures are proposed to occur annually for the first three years, shifting to surveys every other year through operating year 35, unless information indicates such measures are no longer warranted.
- The Decommissioning Plan prepared for the Project (Attachment Q) will be updated to reflect as-built conditions and will be regularly reviewed to determine the need for further updates.

FIGURES

LEGEND

- USGS 7.5 Minute Quadrangle
- Project Area

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. TOPOGRAPHIC MAP SOURCE:USGS

N

0 2,400 4,800

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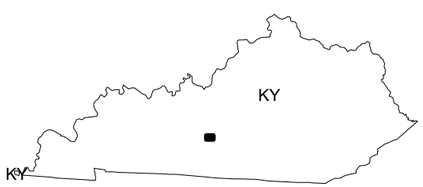

HALEY ALDRICH

Figure 1
Project Location on Topographic Map

Thoroughbred Solar
Hart County, Kentucky

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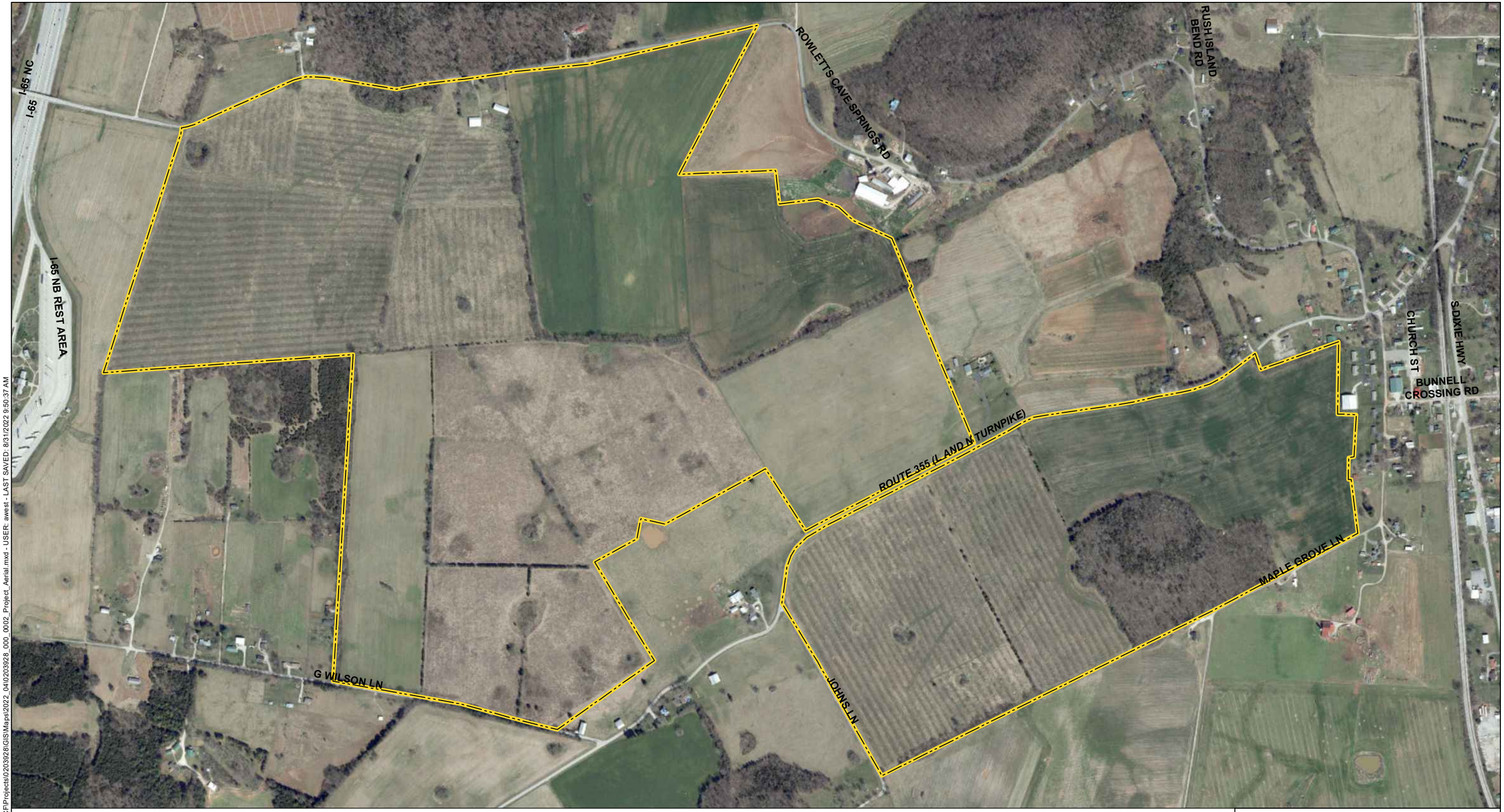

LEGEND

Project Area

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. AERIAL IMAGERY SOURCE: KENTUCKY GEOGRAPHY NETWORK DATE 2021

N

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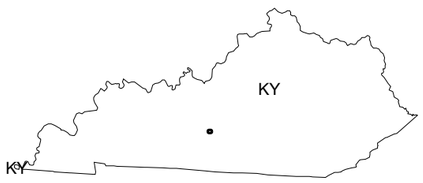

HALEY ALDRICH

Figure 2
Project Location on Aerial Photography

Thoroughbred Solar
Hart County, Kentucky

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LEGEND

- Project Area
- Two Mile Buffer
- Woody Wetlands
- Shrub/Scrub
- Open Water
- Mixed Forest
- Herbaceuous
- Hay/Pasture
- Evergreen Forest
- Emergent Herbaceuous Wetlands
- Developed, Open Space
- Developed, Medium Intensity
- Developed, Low Intensity
- Developed, High Intensity
- Deciduous Forest
- Cultivated Crops
- Barren Land

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. LANDUSE SOURCE: NATIONAL LAND COVER DATASET 2019

N

0 3,500 7,000

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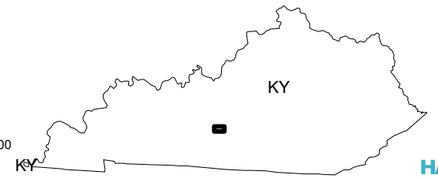

HALEY ALDRICH

Figure 3
Land Use Cover Types within 2 Miles of the Project Area

Thoroughbred Solar
Hart County, Kentucky

Recreational Uses

1, Hart County Fairgrounds

2, Battle of the Bridge Historic Preserve

3, Caveland Country Club

Churches

4, Kingdom Hall of Jehovah's Witness

5, Rowletts Baptist Church

6, Munfordville First United Methodist Church

7, Munfordville Church of God

8, Morning Star Baptist Church

9, River Pointe Church

10, Munfordville Church of Christ

11, Munfordville Baptist Church

12, Munfordvile Separate Baptist Church

13, Mount Olivet Church

14, Cave Spring Church

15, Cedar Cliff Church

16, Lonoke Church

Parks

17, Dutch Country Safari Park

18, Kentucky Down Under

Public Schools

19, Munfordville Elementary School

20, Hart County High School

Green River State Natural Area (Rush Island Bottoms)

LEGEND

Project Area
Two Mile Buffer
Public Schools
State Natural
Small Boat
Local Trails
Recreational Uses
Churches
Parks
Cemeteries

Land-Use

Agricultural
Forested
Old Field
Golf Course
Residential/Maintained
School
Shrub/Scrub

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. RECREATIONAL DATA SOURCE: KENTUCKY GEOGRAPHY NETWORK AND GOOGLE EARTH
3. AERIAL IMAGERY SOURCE: KENTUCKY GEOGRAPHY NETWORK DATE 2021

N

0 3,500 7,000
SCALE IN FEET

KY

KY

HALEY ALDRICH

Figure 4
Land Uses Within 2 Miles of the Project Area

Thoroughbred Solar
Hart County, Kentucky

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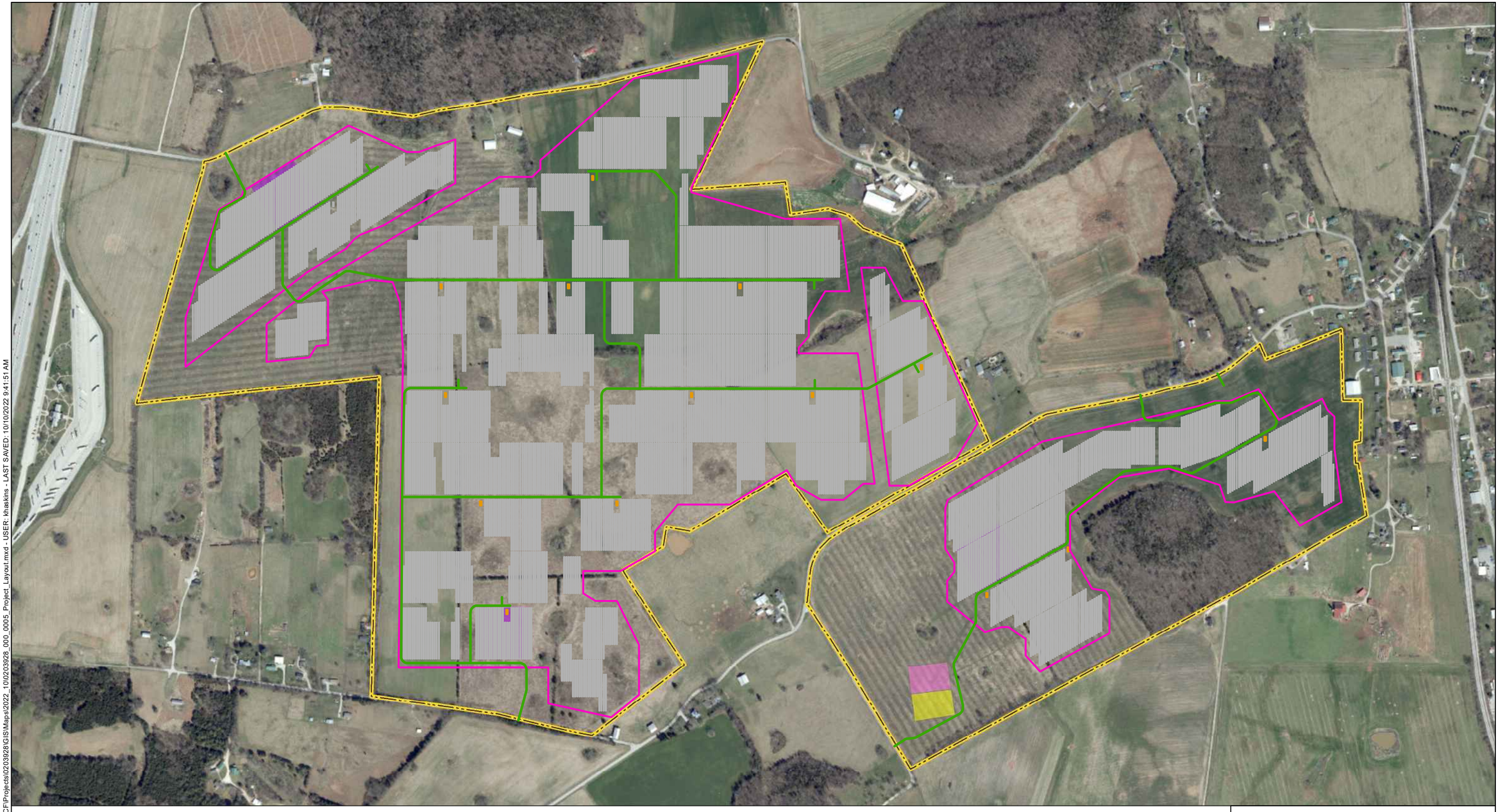

LEGEND

- Access Roads
- Array Trackers
- Proposed Fenceline
- Inverters
- Laydown Areas
- Proposed Substation
- Proposed Switchyard
- Project Area

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: KENTUCKY GEOGRAPHY NETWORK DATE 2021

N

0 675 1,350

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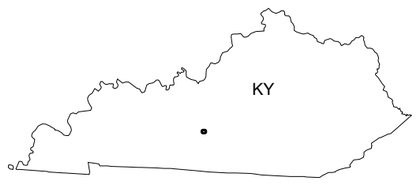

HALEY ALDRICH

Figure 5
Facility Layout

Thoroughbred Solar
Hart County, Kentucky

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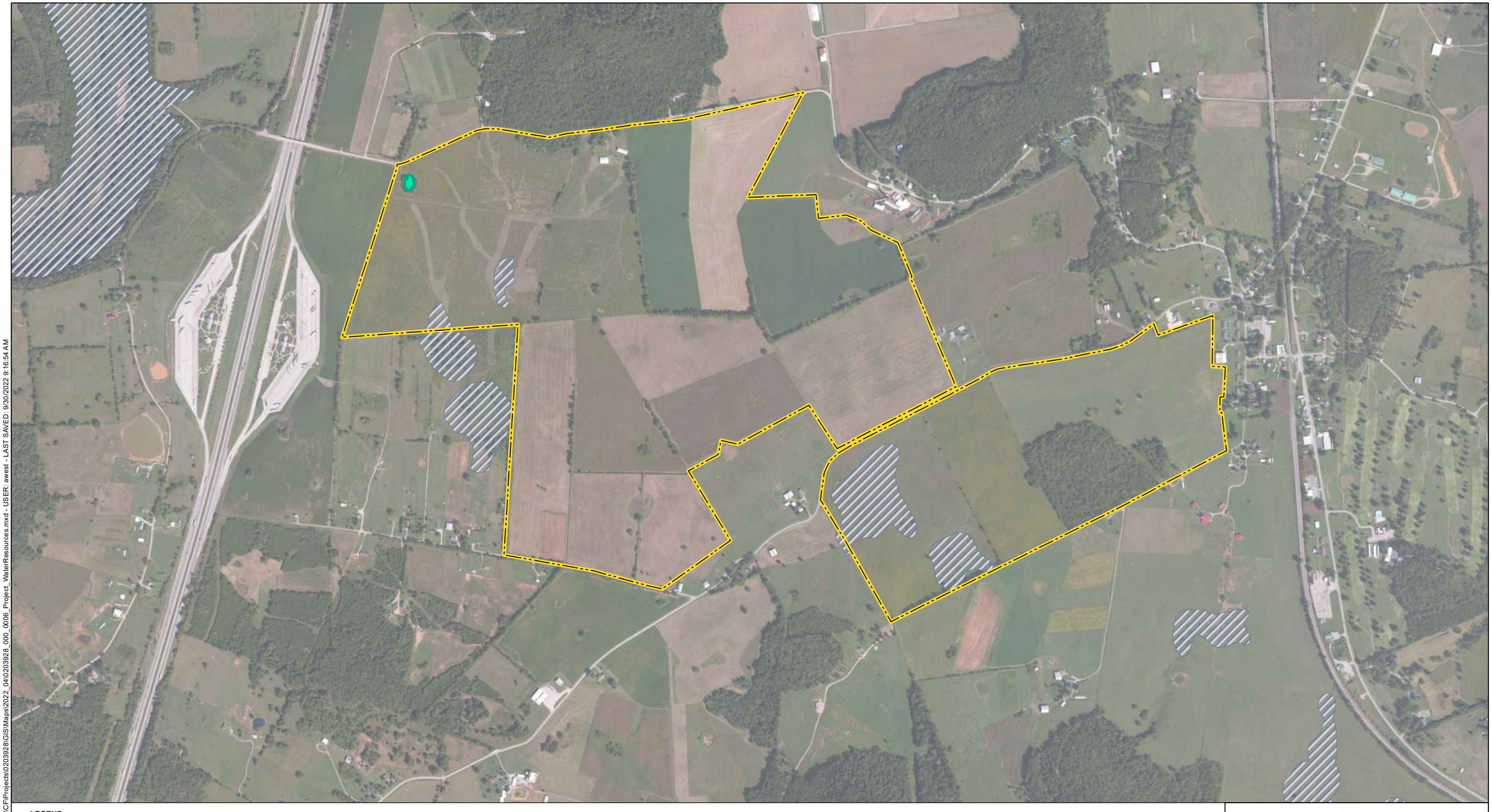

LEGEND

- Project Area
- Delineated Wetland
- Mapped 100 Year Floodplain

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2.NATURAL RESOURCES DATA SOURCE: KENTUCKY GEOGRAPHY NETWORK

3. FLOODPLAIN DATA SOURCE: FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) NATIONAL FLOOD HAZARD LEVEL (NFHL) FLOODPLAIN

4. AERIAL IMAGERY SOURCE: ESRI

N

0 930 1,860

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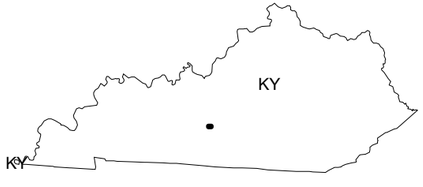

HALEY ALDRICH

Figure 6
Delineated Wetlands and Mapped Floodplains

Thoroughbred Solar
Hart County, Kentucky

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Agricultural Style Perimeter Fence

Tracking Panels Designed to Follow Terrain Contours

FIGURE 7

FENCING AND PANEL CHARACTERISTICS

HALEY ALDRICH

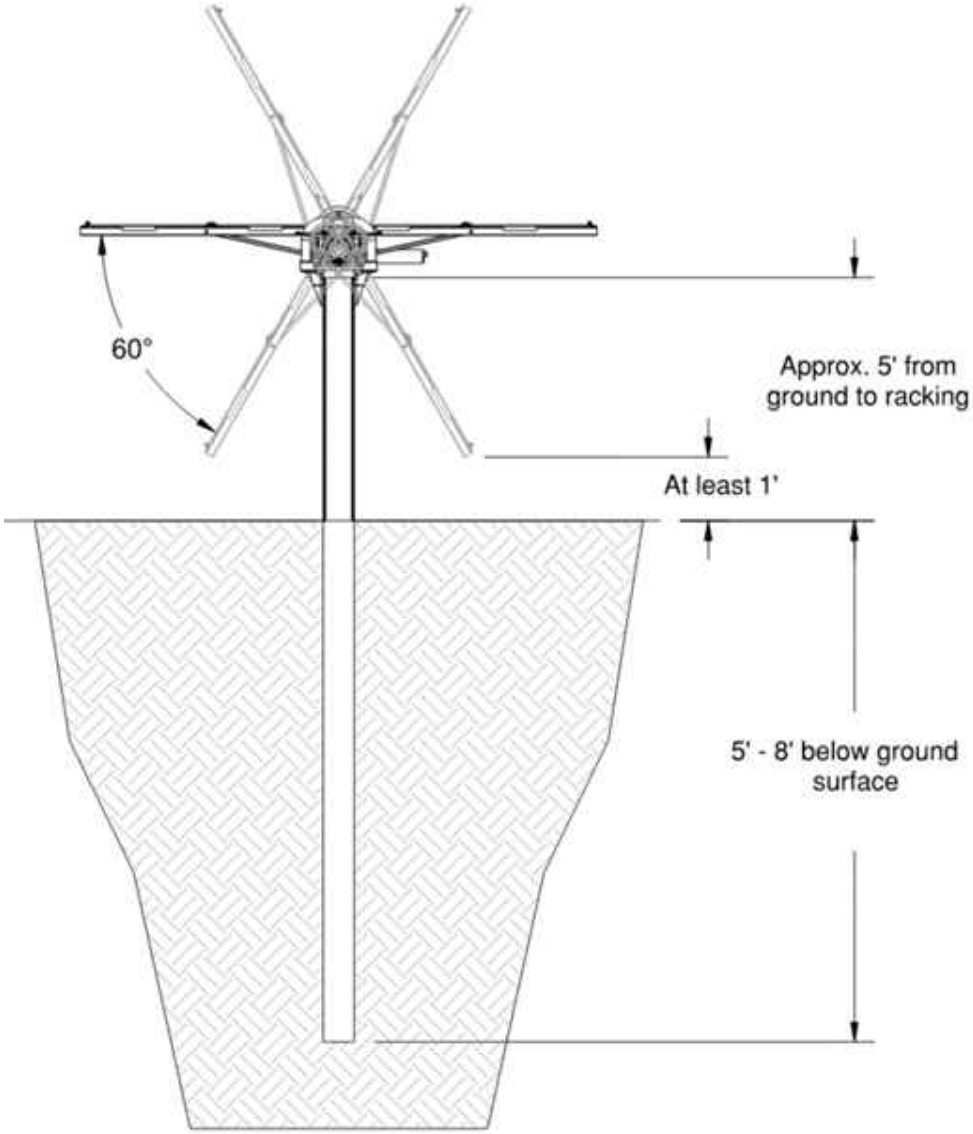
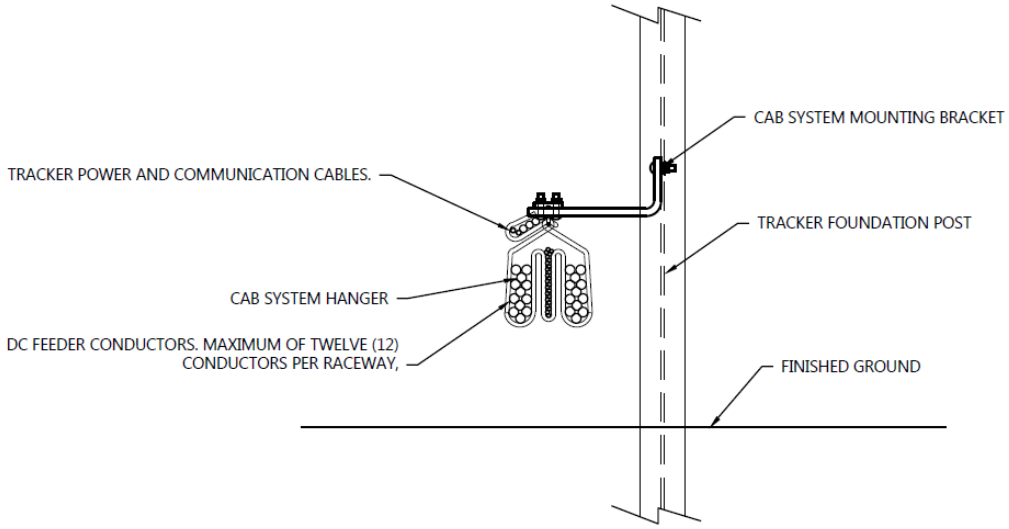


FIGURE 8
TYPICAL PILE DIMENSIONS



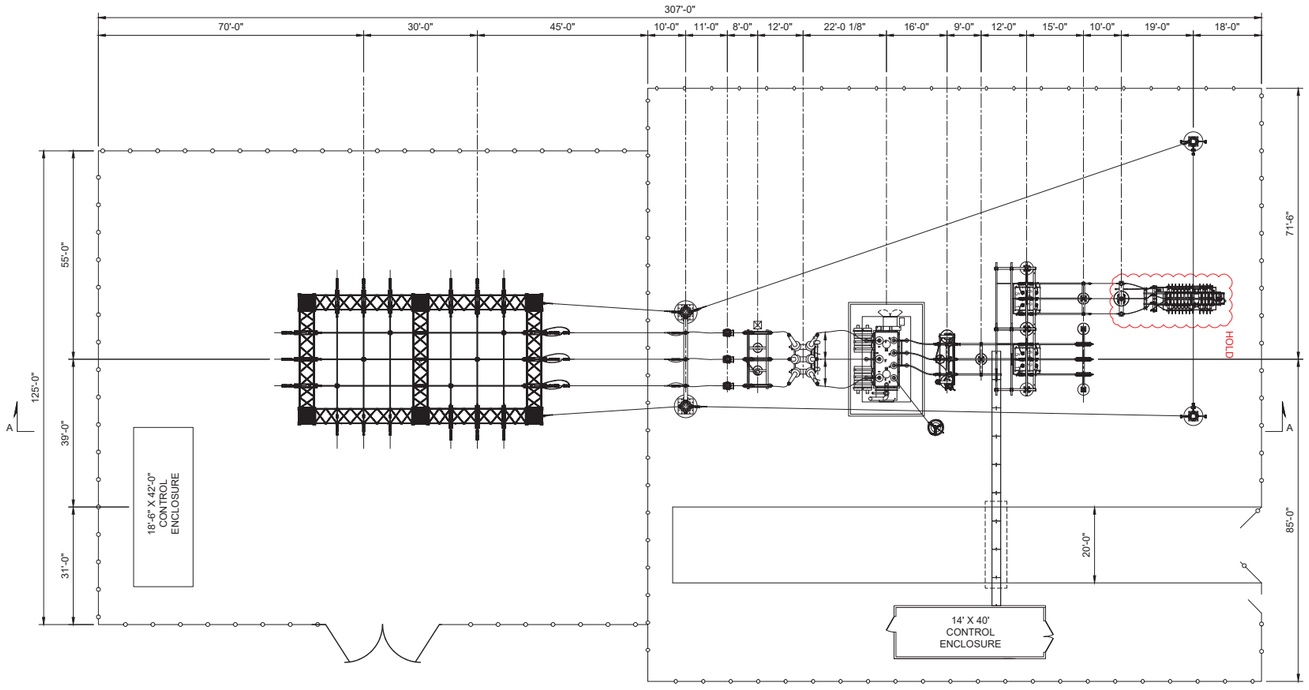
Typical Above Ground Collection Line Hanging Basket

Typical Collection Line Installation

FIGURE 9
COLLECTION LINE DETAILS

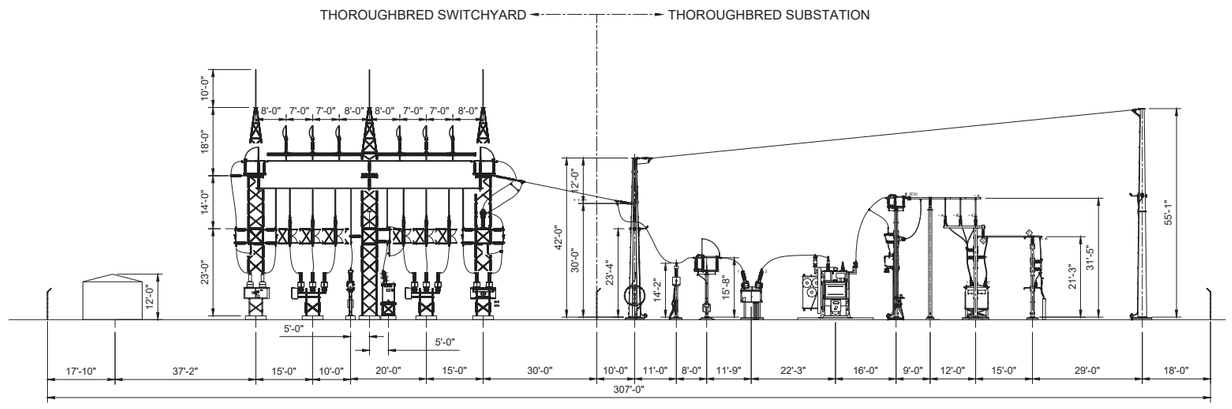
HALEY ALDRICH

FIGURE 10
REPRESENTATIVE IMAGE OF AN INVERTER



PLAN VIEW SWITCH YARD/SUBSTATION

SCALE: 1"=20'-0"



ELEVATION A-A SWITCH YARD/SUBSTATION

SCALE: 1"=20'-0"

MINIMUM CLEARANCE GUIDE			
STANDARD	KV	34.5	69
	BIL	200 KV	350 KV
IEEE	METAL TO METAL	1'-6"	2'-5"
IEEE	PHASE SPACING VERTICAL BREAK DISCONNECT SWITCHES	3'-0"	5'-0"
IEEE	PHASE TO GROUND SPACING	1'-1"	2'-1"
NESC	DISTANCE BETWEEN LIVE PARTS TO FENCE	10'-7"	11'-7"
NESC	VERTICAL CLEARANCE BETWEEN OVERHEAD CONDUCTORS TO GRADE	9'-6"	10'-5"
NESC	VERTICAL CLEARANCE BETWEEN OVERHEAD CONDUCTORS TO SUBSTATION ROADWAY GRADE	14'-9"	20'-0"
NESC	HORIZONTAL LIVE PART CLEARANCE	4'-0"	4'-11"

LEGEND:

- FENCE
- GROUND MAT
- TRENCH

NOTES:

1. MINIMUM CLEARANCES ARE FROM IEEE C37.30.1 TABLE 14. NESC TABLE AND FIGURE 110-1, NESC 124A3, AND NESC TABLE 124-1.

REFERENCE DRAWINGS	
GENERAL ARRANGEMENT	THBD-E-2101-01

RRC POWER & ENERGY, LLC
7591 SW MOHAWK ST,
TUALATIN, OR 97062
PHONE: (503) 342-4064
www.RRCcompanies.com

PREPARED FOR:

LEEWARD renewable energy

SCALE: 1" = 20'-0"

0' 10' 20' 40'

PRELIMINARY
NOT FOR CONSTRUCTION

REV	DATE	ISSUE DESCRIPTION
A	10/03/2022	ISSUED FOR REVIEW 10%

APPROVED BY: T. CHAIRET
CHECKED BY: T. CHAIRET
DESIGNED BY: S. HERMAN
DRAWN BY: S. HERMAN

PROJECT NUMBER: XXXXXXX

DRAWING NAME:

Figure 11

Conceptual Drawing of Project Substation/Utility Switchyard

DRAWING No. THBD-E-2201-01

SHEET: 1 OF 1

REVISION A

CADFILE: THBD-E-2201-01.DWG

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Pre-Development View: Rowletts Cave Spring Road

Simulation: Rowletts Cave Spring Road

FIGURE 12

BEFORE AND AFTER VIEWS
FROM ROWLETTS CAVE SPRING ROAD

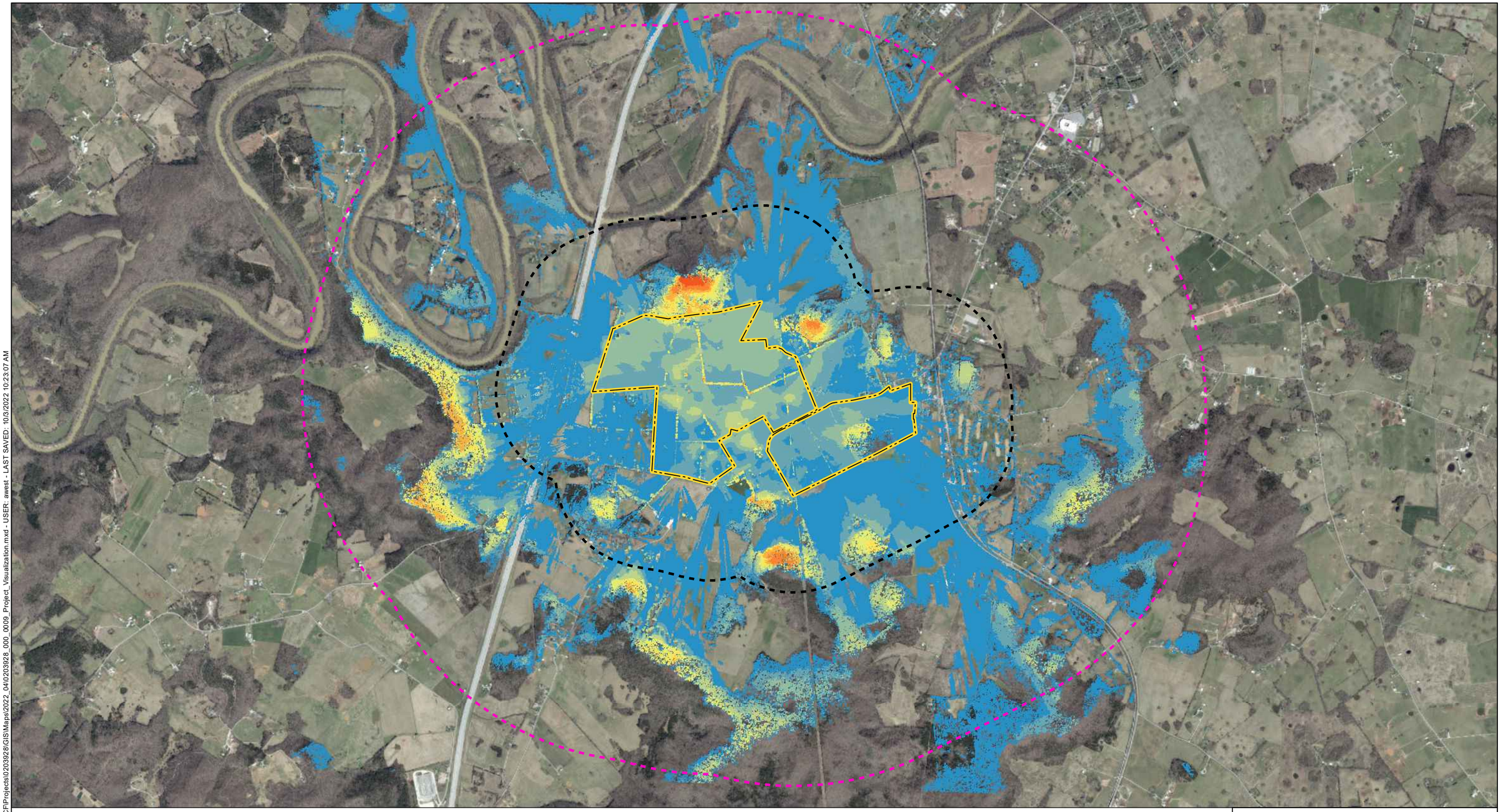
HALEY ALDRICH

Pre-Development View: Maple Grove Lane

Simulation: Maple Grove Lane

FIGURE 13
BEFORE AND AFTER VIEWS
FROM MAPLE GROVE LANE

HALEY ALDRICH



LEGEND

- Project Area
- 0.5-Mile Buffer
- Less Solar Panels Visible
- More Solar Panels Visible

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: KENTUCKY GEOGRAPHY NETWORK DATE 2021

N

0 2,500 5,000

SCALE IN FEET

KY

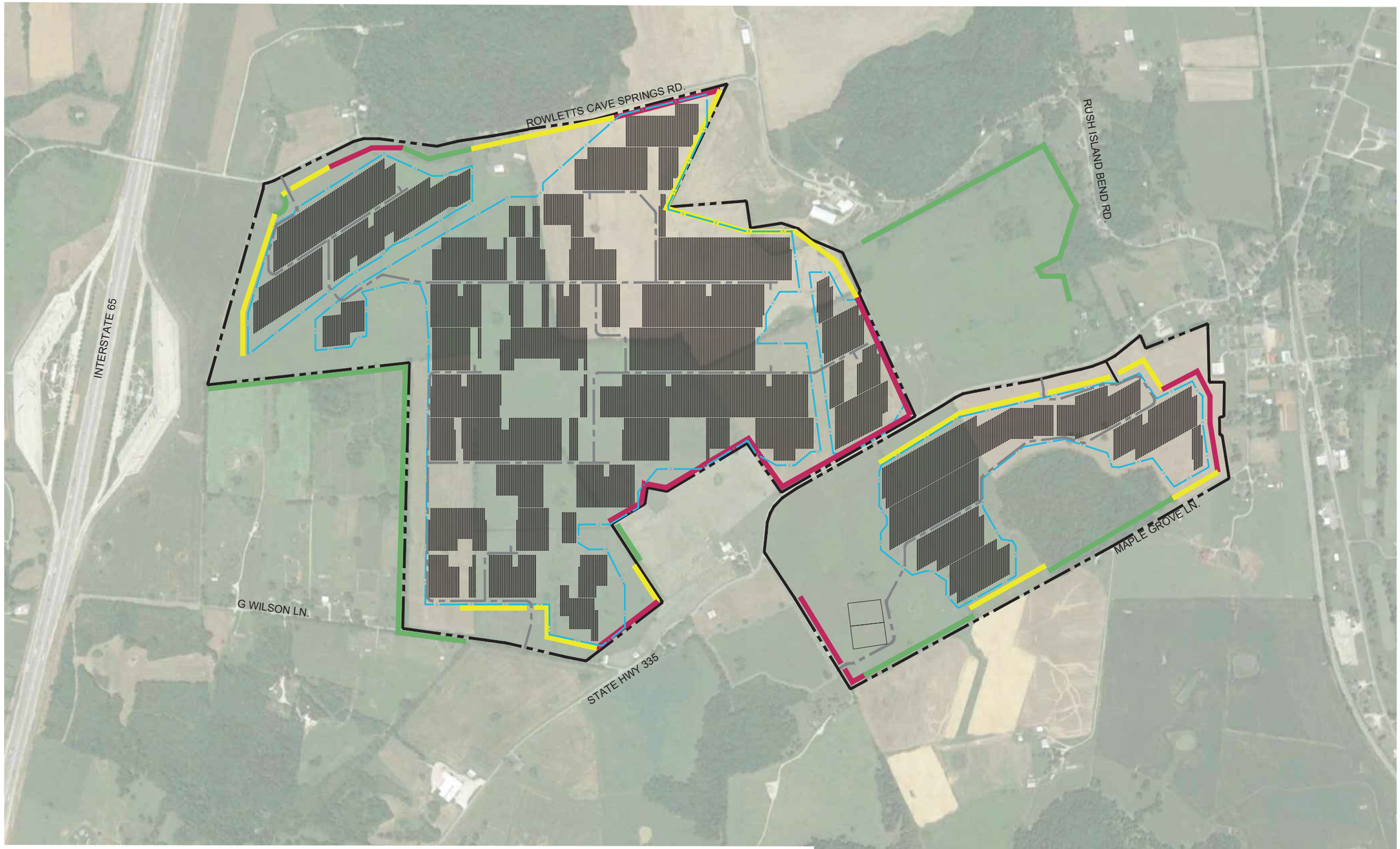
KY

HALEY ALDRICH

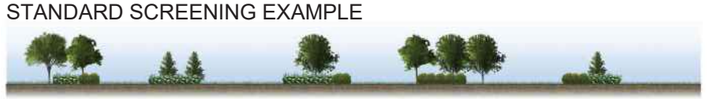
Figure 14
Visibility Model With Vegetation

Thoroughbred Solar
Hart County, Kentucky

GIS FILE PATH: \\haleyaldrich.com\share\CP\Projects\0203928\GIS\Maps\2022_0410203928_000_0009_Project_Visualization.mxd - USER: awest - LAST SAVED: 10/3/2022 10:23:07 AM



STANDARD SCREENING EXAMPLE



HEAVY SCREENING EXAMPLE

SCREENING KEY

- STANDARD SCREENING
- HEAVY SCREENING
- EXISTING NATURAL SCREENING
- SITE FENCE

PLANIT
www.planitstudios.com

THOROUGHBRED SOLAR
ROWLETTS, KY 42749

ISSUANCES

NO.	DESCRIPTION	DATE
A	SCREENING LEVELS	10.03.22

PROJECT NO.
000-000

NOT FOR CONSTRUCTION

DRAWN BY
S.P.H.

CHECKED BY
K.A.A.

LANDSCAPING PLAN

Figure 15

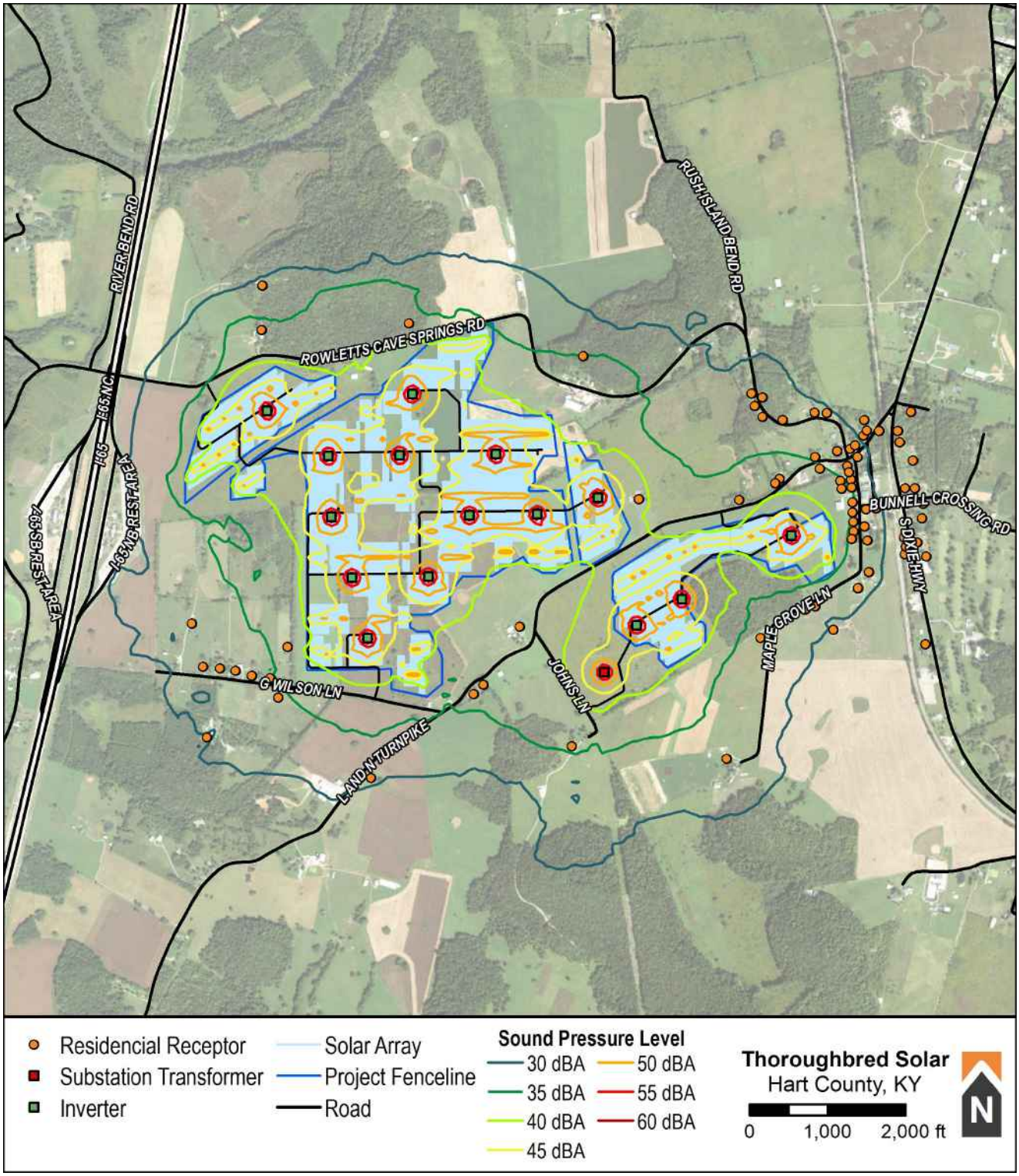


Figure 16
Sound Propagation Modeling Results
Daytime Scenario

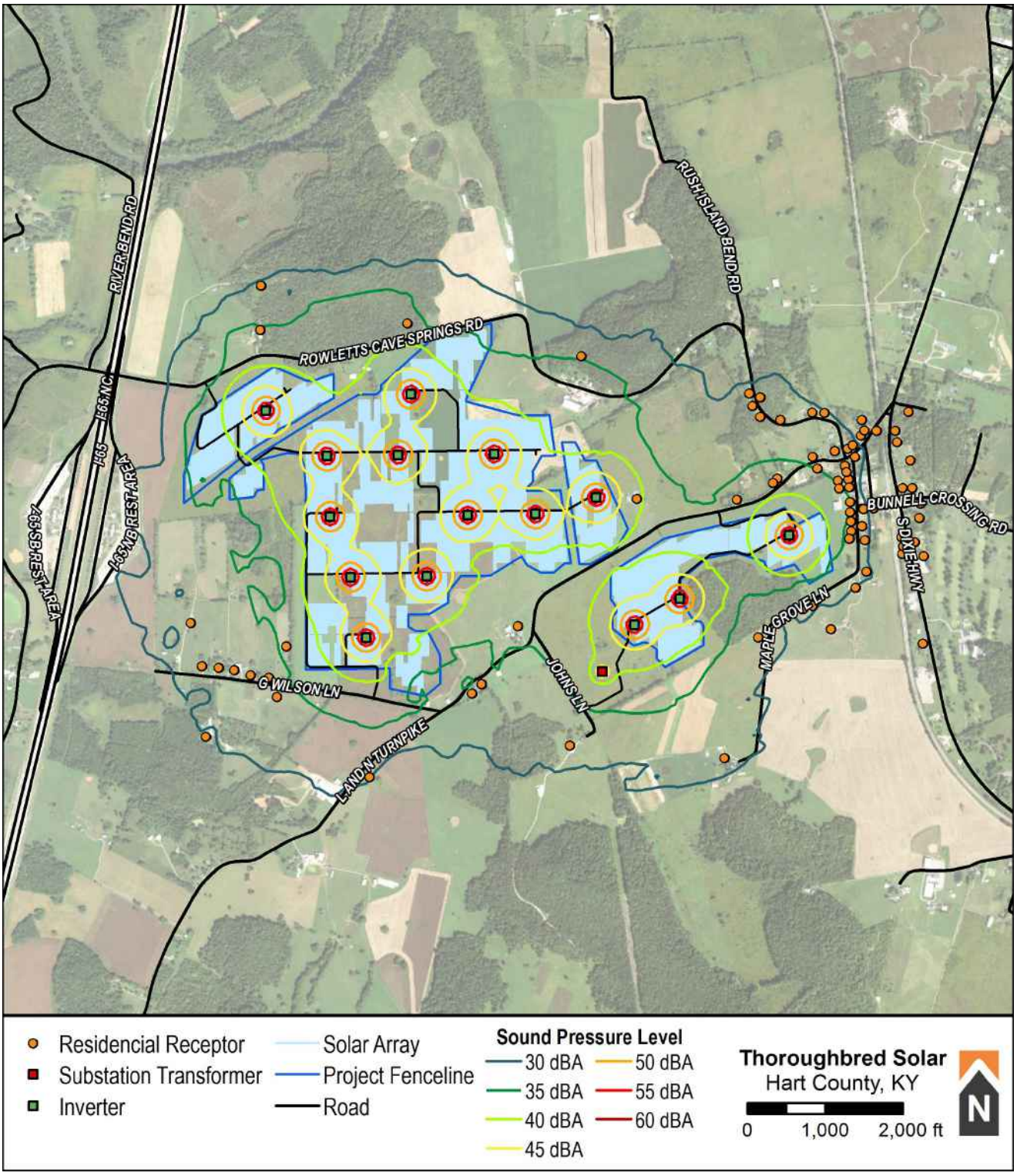


Figure 17
Sound Propagation Modeling Results
Nighttime Scenario