

CASE NO. 2020-00040

TURKEY CREEK SOLAR, LLC

RESPONSES TO BBC RESEARCH AND CONSULTING'S FIRST REQUEST FOR INFORMATION

1. In the table provided on page 4 of Attachment A to the Site Assessment Report (SAR), nine of the twenty-three residential parcels identified among the surrounding uses do not have an identified distance between the home and the nearest solar panel. **Please explain why that information is not available or provide the information for those parcels.**

Response: We believe that all of the parcels listed as residential, and missing a distance to house from solar panels, do not have an identifiable housing unit on the parcel. These parcels are either undeveloped, in use as additional yard area, or are development properties.

Witness: Carson Harkrader

2. There appears to be some conflicting information in the SAR in regards to the size of the property and the proposed facility. **Please help us to reconcile this information and identify the correct numbers for the overall property assemblage and the number of acres within that assemblage that would contain the proposed project.**

a. Based on the legal boundaries of the proposed site described in Attachment B to the SAR, the overall assemblage of parcels and tracts on which the facility would be constructed totals 762.1 acres.

b. In the Description of Proposed Site (Section 1 of the SAR), it is stated that "The project will be situated on up to 520 acres..."

c. The Property Value Impact Report (Exhibit A of the SAR) states under the heading of "Proposed Use Description" (Page 2 of the exhibit) that "The proposed solar farm is to be constructed on approximately 297.05 acres out of a parent tract assemblage of 752.80 acres.

Response:

- a. Yes, 762.1 acres is the correct surveyed acreage of the Curry Farms parcels.
- b. The correct description of the acres used for construction of the Project is "up to 540 acres." Please see Exhibit D for a corrected page in the application which referred to 520 acres.
- c. For a correction on the number of acres used for construction of the Project, please refer to item number 1 in the letter from Rich Kirkland dated May 27, 2020 attached as Exhibit B, which updates his report to refer to 540 acres.

Regarding the parent tract, the Kirkland report refers to a parent tract assemblage of 752.80 acres, which is slightly different than our surveyed 762.1 acres. The original Kirkland report was written before the ALTA survey was complete and relied on the county tax records. It is typical for these numbers to be slightly different than the surveyed number once an ALTA survey is completed.

Witnesses: Carson Harkrader (a, b, c); Richard C. Kirkland, Jr., MAI (c)

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3. Exhibit C "Noise and Traffic Study" notes that "driveway access on SR 39 and US 27 would provide two points of entry to the project site." (Page 6 of Exhibit C "Noise and Traffic Study"). Apparently the second entrance is from US 27, and Exhibit C further notes that both entrances are existing paved driveways near the northernmost portion of the property, but there is no further information in the SAR regarding where the second entrance is located. **Please revise the aerial simulation provided in Exhibit E to depict this second entrance.**

Response: Please see Exhibit C for an updated layout showing the second entrance on Stanford Street (HWY 27). Additionally, a third entrance on Crab Orchard Road will be used only infrequently for maintenance vehicles, and not as a construction entrance.

Witness: Carson Harkrader

4. Section 1 of the SAR states "At this time, it is not anticipated that the Project will need to receive external utility services during typical plant operation." [underline emphases added by BBC]. There are a number of qualifiers in this sentence. **Please identify if there are any reasonably foreseeable circumstances that would require utility services to the site and what those service requirements could be.**

Response: The Project will not consume sewer services. Water will be used for ongoing vegetation management needs, including: for screening landscape installation and during prolonged times of drought; and for effective integrated vegetation management. Regarding electricity use, the plant will consume service power whenever the site is offline and will be a customer of the local electric utility. This will occur when the sun has set or when there is an event that forces the plant offline unexpectedly. When the plant is producing electricity, it does not consume service power from the utility.

Witness: Carson Harkrader

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5. Section 2 of Site Assessment Report notes that “... *representatives from Carolina Solar Energy have met personally on various occasions with two adjoining landowners to address their concerns ...These neighbors have had input in the placement of some of the visual buffers associated with the facility.*” **Please identify which neighbors have been involved in these discussions (in reference to the table provided on page 4 of Attachment A) and the nature of their concerns.**

Response: Please refer to answer 2b from the Siting Board questions.

Witness: Carson Harkrader

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6. While none of the previous merchant power plant siting applications in Kentucky have involved commercial solar facilities, previous applicants have typically provided a visual simulation of the proposed project from sensitive receptors or key observation points. **Please provide a simulation of the future view of the proposed facility from the nearest residences or other key observation points.**

Response: Please see Exhibit E for a simulation from two neighboring properties.

Witness: Carson Harkrader

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7. The SAR provides an estimate of the sound of the inverters "The 67.0 dBA estimate for the inverters is measured at a distance of 10 meters (Exhibit C, page 5, pdf page 146)." While it also provides an estimate of the sound from the tracking motors it does not indicate the distance from which this sound is measured. "The sound typically produced by panel tracking motors ... is approximately 78 dB." (Exhibit C, page 5, pdf page 146). **Please provide this information.**

Response: The sound was recorded at a distance of 10 meters similar to the inverters.

Witness: Carson Harkrader

8. Exhibit C notes that construction will take eight to twelve months and will produce an increase in traffic from construction workers and delivery of equipment and material. The SAR does not provide any information regarding the number of anticipated workers (average or peak) or the number of expected truck deliveries during construction. **Please provide this information.**

Response: From mobilization until start of construction, deliveries will be limited to a few trucks delivering heavy machinery. After mobilization deliveries will be via semi container truckers from 5-10 daily delivering materials. This heavy traffic will only occur for the first few weeks after mobilization and will taper off toward the end of the Project. To manage impacts the EPC contractor will develop a traffic management plan to minimize the impacts of this traffic increase and keep traffic safe. Part of this plan will be to maintain all traffic/staging onsite. The project anticipates hiring 150-300 construction workers depending on weather and schedule impacts.

Witness: Carson Harkrader

Exhibits Included:

B, C, D, E

Exhibit B



Kirkland Appraisals

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www.kirklandappraisals.com

May 27, 2020

Carson Harkrader
Carolina Solar Energy
400 West Main Street, Suite 503
Durham, NC 27701

RE: Turkey Creek Solar Impact Study, Garrard County, KY

Ms. Harkrader

The purpose of this letter is to address question from the Kentucky Siting Board related to the market impact analysis that I completed on this project on March 4, 2020.

For simplicity, I have the following responses to the questions forwarded to me and this letter should be attached to the original impact analysis.

1 - The first issue to address is the acreage involved in the project. The impact analysis identifies 297.05 acres to be impacted. The updated siteplan identifies up to 540 acres could be impacted. According to Carson Harkrader, the updated acreage impact is related to providing a more conservative estimate of the total area impacted including buffer areas. I reviewed the updated map and find no basis for changing the opinion of the original impact analysis. The layout is essentially the same with a minimum setback of 200 feet from the property lines and 300 feet from the nearest neighborhood. The distance between panels to adjoining homes remain unchanged. The comparable solar farms identified in the original report include numerous projects in a similar size showing no impact which supports this conclusion.

2 - I was asked why I did not include Louisville Gas and Electric Company and Kentucky Utilities Company in Shelby and Mercer counties in the Kentucky research. The short answer is that I looked at projects identified by Solar Energy Industries Association (SEIA) major projects, which does not identify those two projects. The only projects indicated by that map not included are related to the roof mounted L'oreal solar plant in Florence, Kentucky.

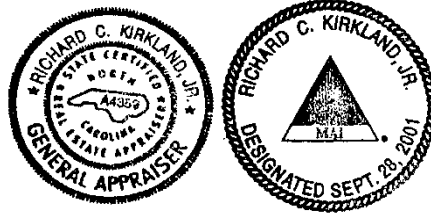
But I have since pulled data on both of the solar farms asked about. The E. W. Brown 10 MW solar farm was built in 2014 and adjoins three coal-fired units. Given that research studies that I have previously read regarding fossil fuel power plants including "The Effect of Power Plants on Local Housing Values and Rents" by Lucas W. Davis and published May 2010, it would not be appropriate to use any data from this solar farm due to the influence of the coal fired power plant that could have an impact on up to a one-mile radius. I note that the closest home to a solar panel at this site is 565 feet and the average distance is 1,026 feet. The homes are primarily clustered at the Herrington Lake frontage. Again, no usable data can be derived from this solar farm due to the adjoining coal fired plant.

The Cooperative solar farm in Shelby County is a 0.5 MW facility on 35 acres built in 2020 that is proposed to eventually be 4 MW. This project is too new and there have been no home sales adjoining this facility. The research on Kentucky was completed in November 2019 with an update in March 2020 and no data was pulled on this facility as it was still in

construction. Until there are sales of property next to this project, I cannot pull any usable data from this solar farm.

If you have any further questions please call me any time.

Sincerely,



Richard C. Kirkland, Jr., MAI
Kirkland Appraisals, LLC

Exhibit C

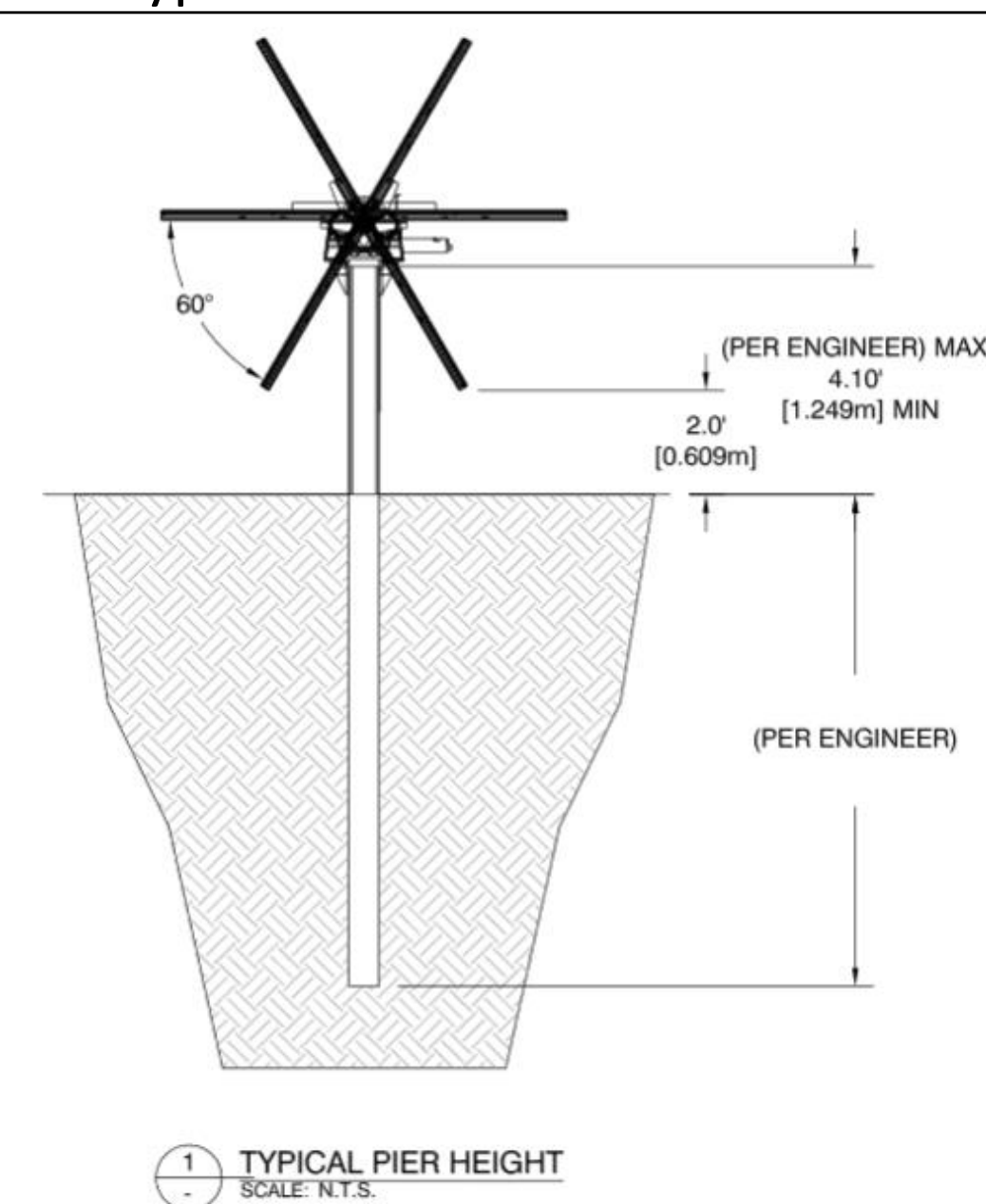


Solar panel, equipment and road locations are indicative and may be adjusted within the shaded areas shown within the Project Footprint

Drawing Legend

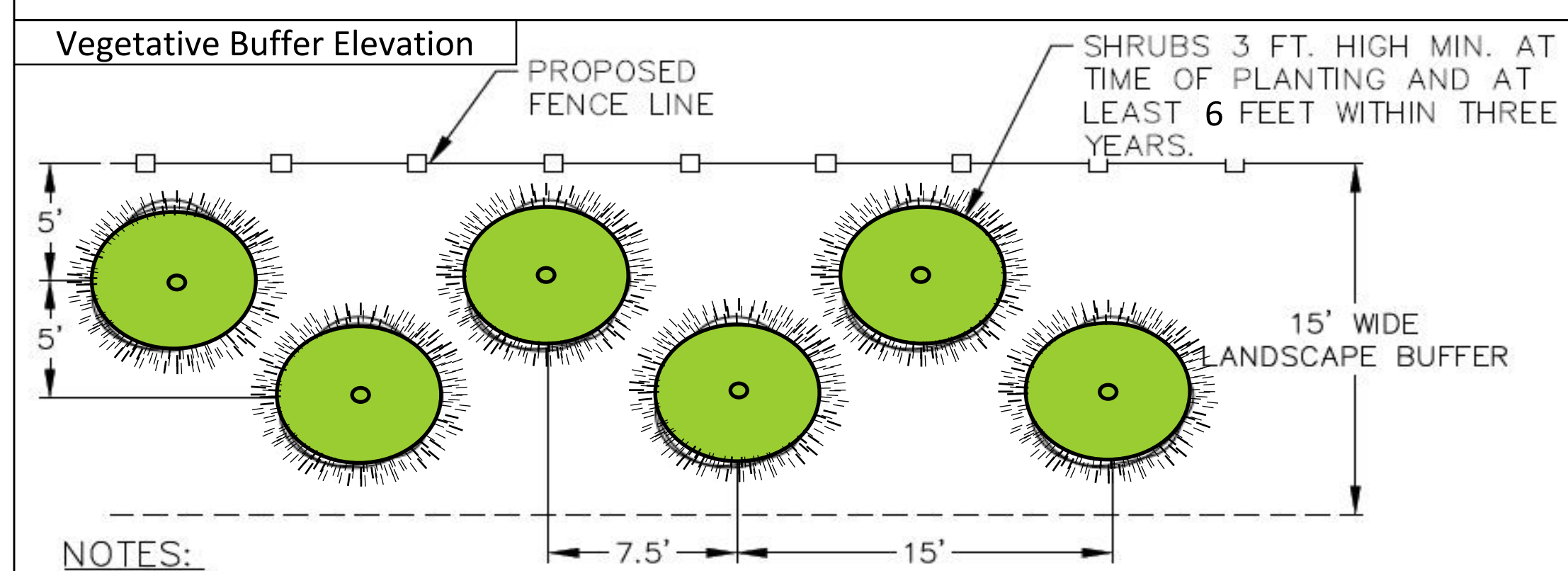
- Potential Project Footprint
- Wetland Features
- Utility Easement
- Water Features
- Array Area
- Parcel Boundary
- Fence Boundary
- Access Roads
- Vegetative Buffer
- Pollinator Plantings

Typical Rack Elevations



Standard Notes

- (1) The Purpose of this plan is for a Power Generation Permit for review and approval by the Kentucky State Siting Board to construct a solar energy system. All information shown is for planning purposes only.
- (2) The property lines, existing improvements, and topographic data shown hereon are not based on a field survey and have been completed from ArcGIS & Google Earth Imagry. No field evidence of property markers were located with this Exhibit.
- (3) Wetlands and Streams are shown representative of a delineation received by Carolina Solar Energy.
- (4) Project area will be cleared and grubbed as necessary, retaining pre-development drainage patterns as much as possible. Minor grading will occur around inverter areas to divert surface drainage. Areas subject to rutting during construction will be temporarily stabilized with gravel that will remain after construction. Soil conditions and equipment loads will determine final design.
- (5) Proposed construction and temporary laydown yard/construction staging area to be used during site construction. A portion of this area will be covered with gravel to allow delivery of construction materials. Prior to construction, this area will be compacted by a smooth drum or sheepsfoot roller to reduce/prevent rutting. Following construction gravel laydown yard will be removed.
- (6) Access aisles shown on this plan indicate construction and maintenance access points for ingress/egress. Prior to construction, these aisles are compacted by a smooth drum or sheepsfoot roller to reduce/prevent rutting. Gravel may be placed in high traffic or poorly draining areas during construction activities to improve access. Soil access aisle will be scarified, aerated, and re-seeded after construction. Access aisles to inverters may require gravel to support delivery equipment loads. Soil conditions and final equipment selection will determine if gravel access aisles will be required to inverter locations
- (7) All Right-Of-Ways are public unless noted otherwise.
- (8) Utility lines and services shown hereon are approximate per aerial photography or as reported by various responsible parties. Location of underground utilities are not shown. Call appropriate authorities before digging.
- (9) No lighting is proposed for the array area. The Interconnection Substation will have some lighting.
- (10) 6' tall chain link fence with three strands of barbed wire or similar to meet National Electric Code requirements. The proposed access gate will be will be locked with a standard keyed or combination lock. Emergency personnel will be provided a key or combination for access.



Carolina Solar Energy
400 W Main St
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Suite 503

Turkey Creek Farm
50 MWAC

ISSUE
5.28.20
5.26.20

PROJECT
Turkey Creek

DRAWN BY
CJ

DESCRIPTION
Array Layout

Exhibit D

Exhibit D

2. Description of Proposed Site

REQUIREMENT: per KRS 278.706 (2)(b); *A full description of the proposed site, including a map showing the distance of the proposed site from residential neighborhoods, the nearest residential structures, schools, and public and private parks that are located within a two (2) mile radius of the proposed facility*

COMPLIANCE: The proposed Turkey Creek Solar Facility (the Project) will be a 50 megawatt alternating current (MWac) photovoltaic electricity generation facility. The project is to be located in Garrard County, at approximately 1928 Crab Orchard Rd, Lancaster, KY 40444. The power generated by the project will be sold on the open market through the existing transmission line that crosses the property.

The project will cover up to 540 acres which has historically been used as pasture land. The equipment onsite will consist of crystalline solar panels, inverters, substation transformer, and an associated wiring and balance of system.

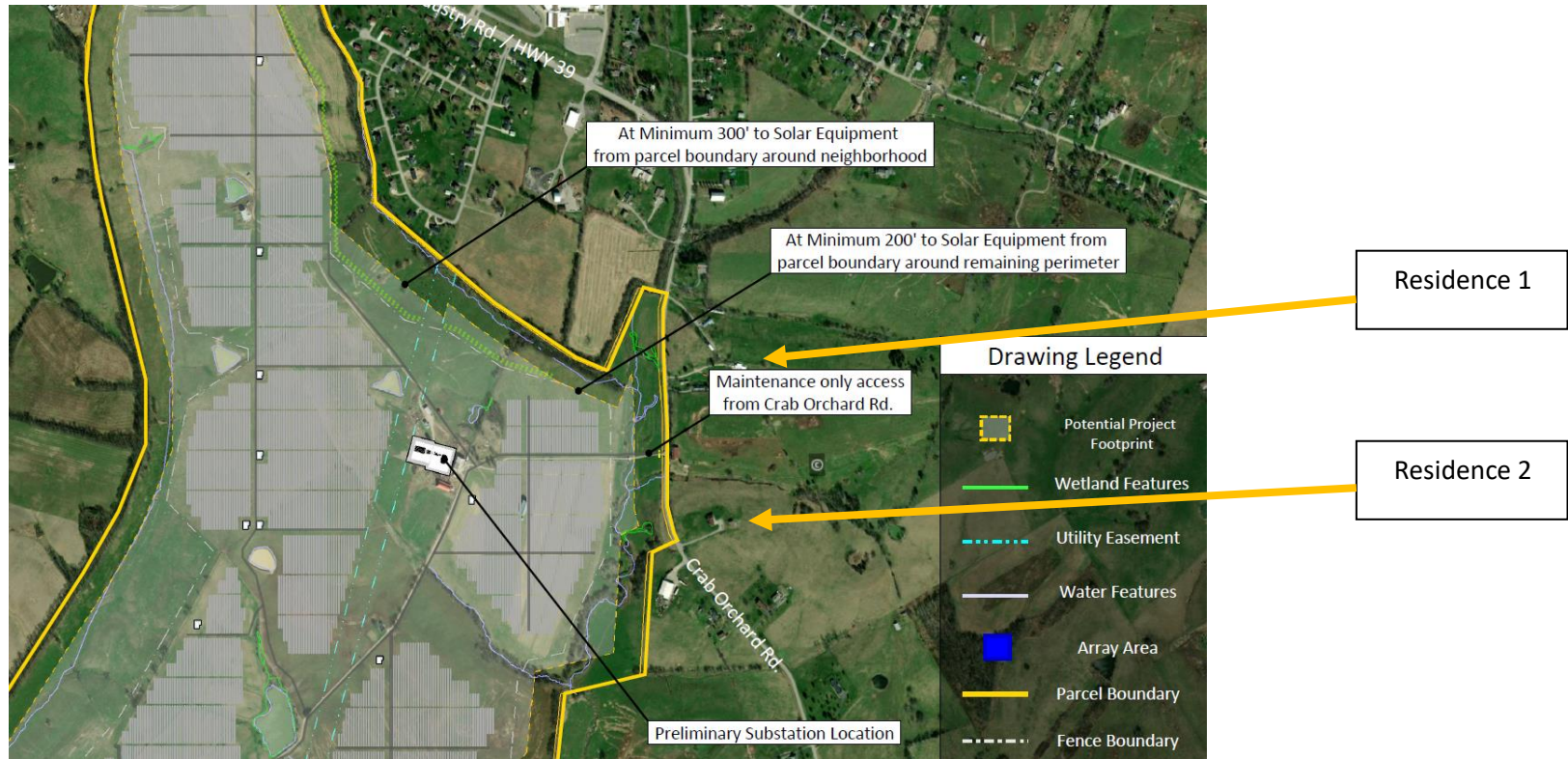
The racking system, which is used to fix the solar panels to the ground, has a small footprint that does not use any concrete, and the panels are not considered impervious as rainwater can travel over and around the panels, making this a low impact development. A fence meeting the national electrical code requirements, typically a six-foot fence with three strings of barbed wire at the top, will enclose the facility. Where there are potential visual impacts created by the facility, a 15' wide vegetative buffer will be planted as shown on the attached site plan map. The buffer will consist of two staggered rows of evergreen shrubs at least three feet in height at time of planting.

A map showing residential structures, schools, and public and private parks with regards to the proposed project are located in Attachment A.

Exhibit E

EXHIBIT E: Simulation from 2 neighboring properties

These two properties were chosen because of the topography of the area. Both properties sit up on a hillside, looking onto the Curry Farms property.





Solar Array

Viewshed toward Solar Farm



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ISSUE
5.28.20
3.9.20

PROJECT
Turkey Creek

DRAWN BY
CJ

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