#### COMMONWEALTH OF KENTUCKY

# BEFORE THE KENTUCKY STATE BOARD ON ELECTRIC GENERATION AND TRANSMISSION SITING

In t	he	Matter	of:
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Electronic Application of Unbridled Solar, LLC for Certificates of Construction for an approximately 160 Megawatt Merchant Electric Solar Generating Facility and	) ) )	Case No. 2020-00242
Nonregulated Electric Transmission Line in Henderson and Webster Counties, Kentucky	)	

# **Response to Siting Board Staff's First Request for Information**

Applicant, Unbridled Solar, LLC, herewith submits responses to the Siting Board Staff's First Request for Information, including the 15 requests of the Appendix thereto. A signed certification of this Response on behalf of Unbridled Solar, LLC appears on the following page.

Respectfully submitted,

/s/ Katherine K. Yunker

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Nonregulated Electric Transmission Line in	)	
Henderson and Webster Counties, Kentucky	)	

# **Certification of Response to Information Requests**

This is to certify that I have supervised the preparation of the response to the Siting Board Staff's First Request for Information to Unbridled Solar, LLC on behalf of the corporate respondent and that the responses are true and accurate to the best of my knowledge, information, and belief after reasonable inquiry.

DATE: February 2, 2021

Courtney Pelissero

Courtney Pelissero, Permitting Associate

- 1. Reference to Application, Exhibit F, page 1, under the heading "Compliance"
  - a. Provide detailed explanation of the transfer study on the injection of the Unbridled Solar output at the Reid Substation, and what is meant as a favorable interconnection.
  - b. Explain if the Feasibility and System Impact studies are the same Phase 1 study results projected to be completed in August 2021.

#### Response

- a. A third-party engineering consultant conducted a transfer study which included a contingency analysis to assess potential network upgrades that could be allocated to Unbridled Solar. The transfer study assumed the injection of 100 MW of generation at the Reid 161 kV Substation. "The results of the contingency analysis showed that there were some new overloads in the study cases caused by all the projects in the DPP-2018-APR study cycle, however, none of the new overloads showed a distribution factor from the Henderson project above 5%, which is the MISO criteria for network upgrade cost allocation." Additionally, results from the transfer analysis indicated the injection of 160 MW at the Reid 161 kV Substation would not trigger an overload during contingency.
- b. Correct. MISO completes the initial model building and review, as well as a preliminary System Impact Study during Phase 1 which is currently scheduled to be completed in August 2021.

Witness: Courtney Pelissero

- 2. Identify where the entrances and exits to the construction site will be located.
  - a. State whether signage or traffic signals, or both, will be present near those entrances and exits, and if so, provide a description.
  - b. State how often traffic signaling is expected to be necessary to prevent any potential traffic issues.

# Response

Reference Amended Exhibit K, Sheet UNB-E-500-03, part of the separately-filed Amended Application Exhibit K, accompanying this response.

- a. Traffic stop signage during construction will be used near the entrances and exits. Refer to Figure ESB 02 Unbridled Traffic Signage Plan, attached to this response.
- b. General signage will be used to warn the public about project locations where typical traffic patterns will change. Deliveries will be required to not post or sit on busy roadways instances where deliveries are slowed to come off a roadway, temporary flagging will be used for safety. Unbridled anticipates 2-3 overweight permitted loads which will require specialized trailers and escorts that will be handled through the Department of Transportation permitting process.

# Figure ESB 02 Unbridled Traffic Signage Plan



- 3. Refer to the Application, Exhibit G, page 5.
  - a. Provide a detailed explanation of National Renewable Energy Laboratory's Jobs and Economic Development Impacts (JEDI) modeling methodology.
  - b. Explain why the JEDI methodology is particularly well suited for determining the economic impacts of various utility scale solar projects.
  - c. Explain how the model was calibrated to measure the impacts on Webster and Henderson counties.

#### Response

a. "In order to quantify economic impacts within the SAOIs, The Applicant conducted an analysis using the solar-power specific version of the Jobs and Economic Development Impact (JEDI) tool (Version ID: PV12.23.16). The JEDI tool, developed by National Renewable Energy Laboratory (NREL), is a widely used and recognized input-output model for determining economic impacts of various utility scale power generation projects. The results below are based on a 160-MWAC (208-MWDC) facility."
Input-output models are constructed on the concept that all industries within an economy are linked together; the output of one industry becomes the input of another industry until all final goods and services are produced. Input-output models rely on vast proprietary databases that operationalize relevant market and geographic factors to identify how various industries and sub-industries are dispersed and interconnected across the country and within each state. These databases also operationalize empirical data on the specific combinations of inputs (various raw materials, machinery, labor, land and capital) required by each industry.

A meaningful proportion of total project spending and employment hires will occur within the state and the SAOI. These direct investments will in turn result in additional indirect and induced impacts over a diverse suite of economic activities in SAOIs and beyond. Project-related spending on materials and wages suffuses new money into the local and statewide economies. Each dollar invested will lead to a more than one-for-one impact as money circulates throughout different sectors of the economy. This "multiplier effect" magnifies the positive economic impacts of facility construction and operation. Through detailed databases and derived multiplier factors developed specifically for large scale solar projects, JEDI observes tracks and reports this flow of money, materials and services as they flow through a hypothetical economy within the JEDI software.

Further explanations of JEDI methodology are provided in responses 1b and 1c, below.

b. JEDI is a preeminent and widely used tool for estimating impacts from utility scale solar projects. It relies on state specific databases from the IMPLAN Group, a market leader in the field, that have been assembled specifically for the purposes of economic impact analysis. Researchers at NREL curated these databases by isolating and refining linkages that best reflect economic activity associated with large scale PV projects, as estimated by published papers, reports and best professional judgement. This curated database provides the foundation for identifying and quantifying the strength of linkages throughout the economy from different solar projects along major project differentiators like solar module type (i.e. thin film or crystalline) tracking systems, geography, timing and project scale, among others.

Witness: Elle DeBlieck

c. The JEDI model is pre-populated with a variety of default input values for a generic

project. the per kW However, accuracy for specific projects with known attributes can be

improved greatly by updating default input values to project-specific inputs. Among the

most important project specific inputs is the geography of interest, the overall size of the

facility in electrical capacity, and project specific costs during construction and

operational phases. The results below are based on a 208-MW (DC) facility in KY with

construction primarily in 2021. As estimated by the Applicant, the base installed system

cost is approximately \$1,220/kWDC and the annual operational cost is estimated as

\$10/kWDC. Table A presents select project specific input values compared to JEDI

default values.

A recent publication from Lawrence Berkley National Laboratory estimates that capacity-

weighted average installed costs for large solar projects in 2018 averaged roughly

\$1,640/kWAC in the US (Bolinger et al., 2019). Assuming a DC derating factor of 0.7,

this equates to approximately \$1,148/kWDC. This value is within 10% of the capital cost

estimated for the present facility.

Table A: Select numerical inputs of Facility compared to JEDI default values.

Facility Expenditure	JEDI	Adjusted Value	Change	
Categories	Default Value <sup>a</sup>	_	_	
Construction Materials & Equipment Costs (\$/kW)	870	870	0	
Construction Labor Total Costs (\$/kW)	185	60	-125	
Construction - Other Costs (\$/kW)	211	73	-138	
Operating/Maintenance Materials and Services (\$/kW)	9.09	2.50	-6.59	
Operating/Maintenance Labor Costs (\$/kW)	13.63	7.50	-6.13	
Payroll Parameters Construction Worker Hourly Wage (\$/hr)	24.38	21.39	-2.88	
Payroll Parameters O&M Technician Hourly Wage (\$/hr)	24.38	21.39	-2.99	
Payroll Parameters Construction Worker Employer Overhead (%)	45.6	45.6	0.0	
Payroll Parameters O&M Technician Employer Overhead (%)	45.6	45.6	0.0	

<sup>&</sup>lt;sup>a</sup> Default values in this version of JEDI are denominated in 2012 USD. To increase comparability to those values chosen for this Facility, default JEDI values presented here have been inflated to 2021 USD by multiplying by 1.14, as determined by the BLS Inflation calculator < https://www.bls.gov/data/inflation\_calculator.htm>

As described in Section 3 and footnote 2 in the original submission, JEDI reported only statewide economic impacts. To estimate impacts at the SOAI (i.e. for Henderson and Webster counties) a scaling approach was utilized based on relative gross domestic products (GDPs) of the respective jurisdictions.

- 4. Refer to the Application, Exhibit G, page 6.
  - a. Explain whether the Total Economic Output from the construction phase of the project is the long-term value derived over the life of the project.
  - b. Explain why the results in the operational phase can be construed to represent annual benefits while the construction phase results are not representative of annual benefits.

#### Response

a. In the strict technical sense, economic value is defined as the quantified benefit (in this case, as accrued to society in the SAOI) derived from some good or service above and beyond the associated opportunity cost. As neither social opportunity costs nor social benefits are evaluated in economic impact analyses, results from such analyses, including estimates of Total Economic Output, are not measures of economic value in the strict technical sense.

Of course, this does not imply the project provides no value nor does this imply Total Economic Output is not a meaningful metric. Total Economic Output is defined by IMPLAN Group, a leader in the field of economic impact analyses as the summation of five sub-parts: Intermediate outputs, employee compensation, proprietor income, taxes on production and imports, and other property income[1]. Especially in the case where intermediate outputs represent a modest fraction of the whole, Total Economic Output is a close proxy to a change in gross domestic product (GDP) for the area of interest. In other words, GDP in the region of analysis can be expected to grow by an amount equal to or greater than the estimated Total Economic Output, relative to a scenario without the project.

Page 2 of 2

[1] See for example, https://implanhelp.zendesk.com/hc/en-us/articles/360017144753-

Understanding-Value-Added-VA-

b. Reporting operational phase results as annual impacts and construction phase results as

one-time (lump sum) impacts is a typical convention for this analysis type. For

construction phase, the lump sum result is a useful and intuitive presentation format as

construction typical occurs over a short period (typically less than 2 years). However, the

expenditures and resulting economic impacts during operational phase recur annually

over a decade or more. Presenting results from operational phase in an annual format

offers the benefit of greater comparability across projects with different durations. In

additional, in light of the time-value of money, presenting the annual benefits avoids the

need to specify a discount rate to assess the net present value (NPV) of economic

impacts. Especially for projects with durations of 20 years or more, this NPV is heavily

influenced by the chosen discount rate. However, the appropriate discount rate can vary

greatly across jurisdictions depending on local circumstances and attitudes, and may

obscure rather than reveal the true magnitude of a project's impacts.

Reference:

Bolinger, M., Seel, J., & Robson, D. (2019, December). Utility Scale Solar: Empirical

Trends in Project Technology, Cost, Performance, and PPA Pricing in the United States -

2019 Edition. Retrieved Dec 2020, from Berkeley Lab: https://eta-

publications.lbl.gov/sites/default/files/lbnl utility scale solar 2019 edition final.pdf

- 5. Refer to the Application, Exhibit G, page 6.
  - a. Explain whether Unbridled Solar knows of any particular large industrial or commercial customer that will serve as a buyer of its solar energy output.
  - b. Explain whether Unbridled Solar and its developers partners with utilities to market its energy output or is involved in economic development recruiting activities in the locations where it locates solar facilities.

#### Response

- Unbridled entered into a Power Purchase Agreement with Big Rivers Electric
   Corporation as the Buyer for the full output of the facility.
- b. Unbridled has partnered with Big Rivers Electric Corporation for the full output of the facility. This partnership allows the local communities to benefit from the significant economic development impact that utility scale solar projects provide.

Ky. PSC No. 2020-00242 Response to ESB 06 Witness: Courtney Pelissero Page 1 of 1

# Request

6. Refer to the Application, Exhibit I, page 3, Table 1. State whether the 2016 land cover data obtained from the National Land Cover Database is the most current data.

# Response

Yes, the 2016 land cover data obtained from the National Land Cover Database is the most current data.

7. Refer to the Application, Exhibit I, page 5, Section 2.2.1. – Facility Compatibility. Identify those property owners who expressed concerns with the viewshed; provide copies of the visual renderings as mentioned in this section; and provide copies of the screening plan agreements referenced in this section.

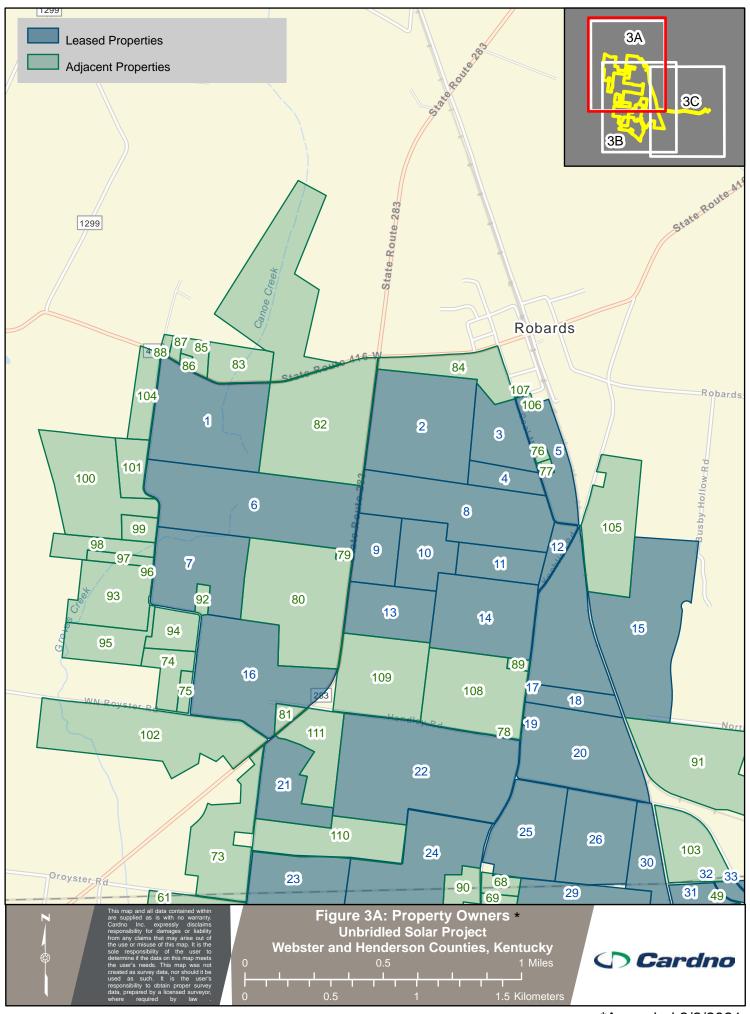
There are two property owners who expressed concerns with their viewshed during the

#### Response

public information meeting open hours in August 2020. The owners of neighboring property PID #71-47 (keyed as #85 in Amended Exhibit J, Figure 3A, attached hereto) had raised a viewshed concern, but after reviewing visual renderings of the screening plan from their property, they agreed in writing to the plan. The written approval is subject to redaction requirements and Unbridled requests confidential treatment for this non-party's written communication in the accompanying Petition for Confidential Treatment. The written approval is attached to this response as Figure ESB 07-A- PID #71-47 Written Approval. The visual renderings from this property facing south towards the Project site is attached to this response as Figure ESB 07-B- PID #71-47 Visual Renderings. The owner of neighboring property PID #72-2 (keyed as #92 Amended Exhibit J, Figure 3A, attached hereto) had raised a viewshed concern and has since reviewed visual renderings of the viewshed from their property and a diagram of the screening plan. The landowner is still in discussion with Unbridled representatives regarding the screening plan. A screening plan will be agreed to prior to construction. In the event a screening plan is not agreed to prior to construction, Applicant will default to the Henderson County Zoning Ordinance Section 30.2(d) screening requirement at this property. A copy of the visual renderings from this

property facing east towards the Project site, as well as the screening plan diagram, is attached to this response as Figure ESB 07-C- PID #72-2 Visual Renderings.

AMENDED EXHIBIT J FIGURES



\*Amended 2/2/2021

**Figure 3 Leased Property Owner Key** 

Property Owner	Map Reference	Parcel ID	Address
	1	71-46	
	2	71-39	
	3	71-35	
	4	71-35.1	
	5	71-40	
	6	71-44	
	7	72-1	
	8	71-40	
	9	71-41	
	10	71-42	
	11	71-34	
	12	72-20	
	13	72-27	
	14	72-22	
	15	72-20.1	
	16	72-3	
	17	72-19	
	18	72-18	
	19	72-17	

1 Case No. 2020-00242

**Figure 3 Leased Property Owner Key** 

Property Owner	Map Reference	Parcel ID	Address
	20	72-24.1	
	21	72-9.1	
	22	72-10	
	23	077-001- 000	
	24	077-002- 003	
	25	72-14	
	26	72-15	
	27	077-002- 006	
	28	077-002- 004	
	29	077-004- 000	
	30	083-001- 000	
	31	083-005- 000	
	32	083-005- 000	
	33	083-005- 000	
	34	083-006- 000	
	35	083-006- 000	
	36	083-010- 000	
	37	083-012- 000	
	38	083-012- 000	
	39	083-013- 000	

2 Case No. 2020-00242

**Figure 3 Leased Property Owner Key** 

Property Owner	Map Reference	Parcel ID	Address
	40	083-014- 000	
	41	077-006- 003-001	
	42	077-006- 001	
	43	077-005- 000	
	44	077-005- 001	
	45	077-009- 000	
	46	077-010- 005	
	47	077-010- 005	
	48	077-010- 005	

3 Case No. 2020-00242

# Figure ESB 07-B PID #71-47 Visual Renderings

Image 1. Visual Rendering of Panels and Fence at PID #71-47 (Year 1)

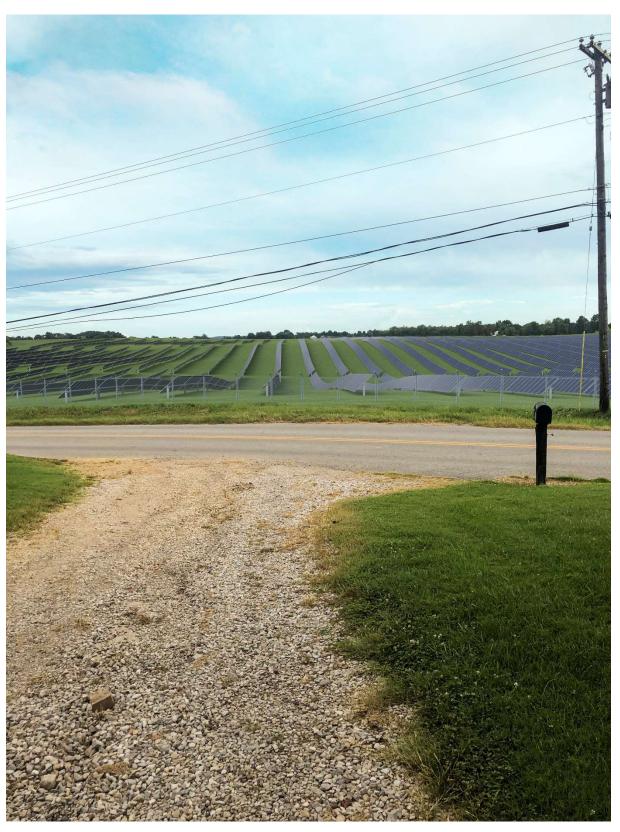


Image 2. Visual Rendering of Screening Plan at PID #71-47 at Time of Installation (Year 1)

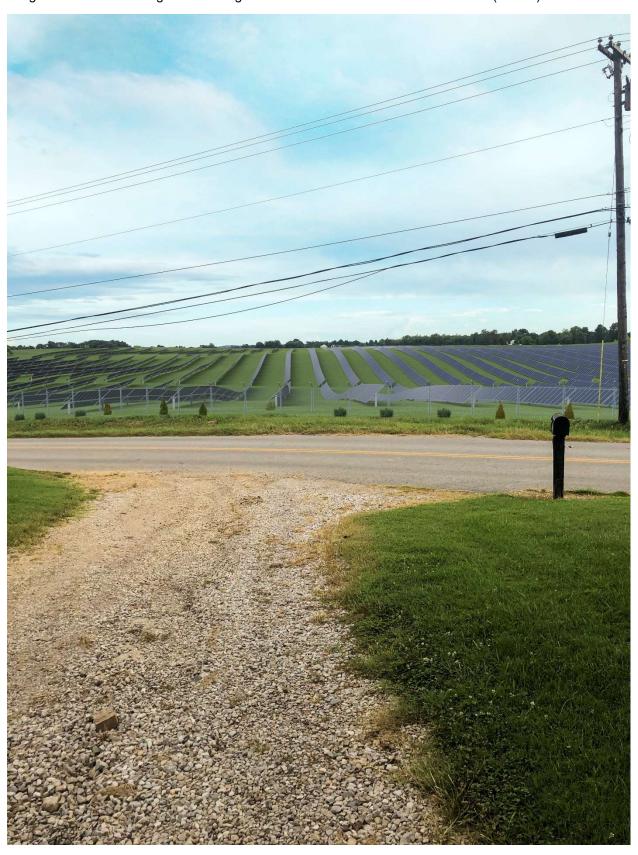
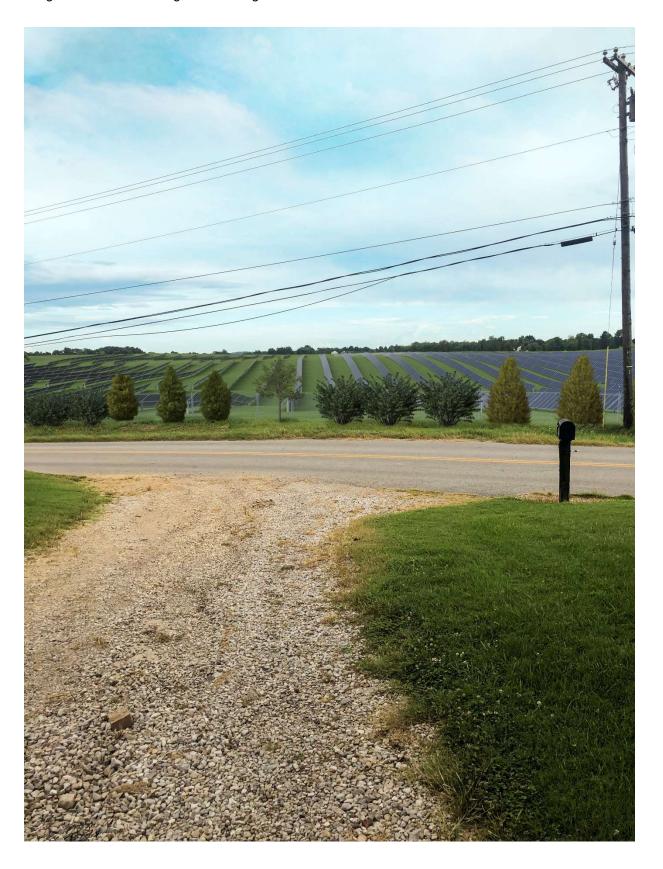


Image 3. Visual Rendering of Screening Plan at PID #71-47 at Year 7  $\,$ 



# Figure ESB 07-C PID #72-2 Visual Renderings

Image 1. Visual Rendering of Panels and Fence at PID #72-2 (Year 1)



Image 2. Visual Rendering of Screening Plan at PID #72-2 at Time of Installation (Year 1)



Image 3. Visual Rendering of Screening Plan at PID #72-2 at Year 7



#### Vegetation Screening Planting Plan

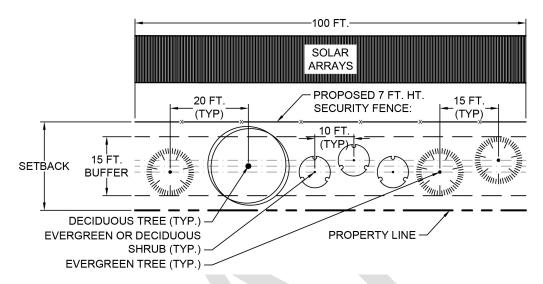
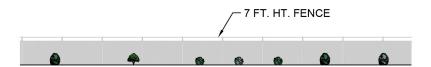
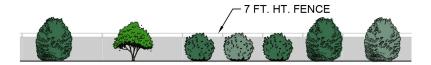


Figure 1. Planting Template Plan (not to scale)

#### **AT PLANTING**



#### 5 YEARS AFTER PLANTING



#### **AT MATURITY**

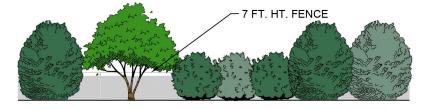


Figure 2. Typical Elevations (not scale)



8. Refer to the Application, Exhibit I, page 10, Section 6.2, regarding proposed mitigation measures. With respect to the viewshed protection, state when Unbridled Solar expects to submit the request for approval of the vegetative buffer from the Henderson County Planning Commission and when a decision is anticipated to be received. Provide a copy of the submittal.

#### Response

Unbridled representatives have been in contact with Henderson County planning and zoning staff about the Project over the last year and half. Henderson County has requested that final project design be submitted as part of the site plan approval process, which includes the vegetative buffer review. Unbridled Solar anticipates submitting a site plan approval request to Henderson County after the construction certificate is approved by the Siting Board to assure no substantial design changes occur during the Siting Board review. Unbridled expects the county level permitting process to take place during Summer 2021. Unbridled can provide a copy of the Henderson County approval to the Siting Board once issued.

9. Refer to Application, Exhibit I, Attachment B, Section 3.1, Table 6. Provide any information available on the current traffic volume data by vehicle category (i.e., cars, trucks by weight class, etc.) for the roadways in the vicinity of the project area.

# Response

The Kentucky Transportation Cabinet does not have data for the types of vehicles for the stations pertaining to the Unbridled Project Area. The available data only provides the peak hour volume and the peak hour volume percentage direction.

- 10. Refer to Application, Exhibit I, Attachment B, Section 6.2, Table 2 where it is stated that, as needed, commuting construction workers will be shuttled.
  - a. Identify the average number of worker commuter vehicles that are expected to drive to the project site each day during construction.
  - b. Identify the peak number of worker commuter vehicles that are expected to drive to the project site during construction.

# Response

- a. Worker commuting needs have changed due to current Covid safety protocols. Unbridled expects this to create an uptick in single drivers vs carpooling. The average daily number of worker commuter vehicles is estimated to be 75-100 vehicles.
- b. Unbridled anticipates the peak number of vehicles to be roughly 200.

11. Refer to Application, Exhibit I, Attachment B, Section 3.1, Table 6. Provide any information available on the current traffic volume data by vehicle category (i.e., cars, trucks by weight class, etc.) for the roadways in the vicinity of the project area.

# Response

The majority of the workers will arrive 30-45 minutes prior to work starting and will leave within 30 minutes of works ceasing for the day. If working hours are 7 am to 7 pm, Unbridled expects workers to be on site in between the hours of 6 am and 8 pm.

12. Please provide an approximate percentage breakdown of where the construction workers will commute from each day, if known.

Response

Where construction workers commute from is driven by housing options throughout the area at the time of construction. It is too early to provide a percentage estimate of where workers will be living, but the construction workers will be distributed throughout the local area and beyond, up to an hour away.

- 13. a. Identify the types of trucks and other equipment by weight class that will access the site daily during construction.
  - b. Provide a breakdown of the traffic volume by truck category above on an average day and on a peak day.

# Response

- a. Unbridled expects about 99% of traffic to be made up of personal vehicles and legal delivery loads, such as box trucks and over-the-road flat beds. The make up of delivery vehicles is anticipated to be 20% rated Light Duty Class 1-2, 30% rated Medium class 3-6, and 50% rated Heavy Duty class 7-8.
- b. A typical day can expect roughly 12-14 deliveries and a peak day can expect roughly 30-40 deliveries. See 13a for a percentage breakdown of typical traffic volume by vehicle category.

Ky. PSC No. 2020-00242 Response to ESB 14 Witness: Courtney Pelissero Page 1 of 1

# Request

14. Identify the expected maximum weight of the largest vehicles (including any materials or equipment that the truck is hauling).

## Response

The largest delivery will be of the Main Power Transformers. There will be (2) units that come in via rail to a spur year and off-load on to a specialized trailer for safe transport site. The typical unit that is planned for this site weighs between 400,000-600,000 lbs.

15. Provide an approximate breakdown by point of origin for the construction truck traffic.

# Response

Construction truck traffic will most likely be coming to the site from multiple regions via I-69. It is too early to provide a breakdown of origin for the construction truck traffic. When possible, Unbridled sources materials from the local region. Major materials from outside the US will come into the east coast and be transported to the site via state highways and federal interstates.

Ky. PSC No. 2020-00242 Response to ESB 16 Witness: Courtney Pelissero Page 1 of 1

# Request

16. Identify where the construction crew, supervisors and others will park on-site.

# Response

Construction crew, supervisors, and others will park at the main laydown yard and staging area.

Ky. PSC No. 2020-00242 Response to ESB 17 Witness: Courtney Pelissero Page 1 of 1

# Request

17. Identify the protocol or frequency of spraying down compacted gravel roads associated with the project.

## Response

During construction, compacted gravel roads will be managed daily and sprayed down depending on weather conditions. During operation, spraying down compacted gravel roads will typically occur once a year, but will be completed on an as needed basis.

Page 1 of 1

18. State whether Unbridled Solar has conducted any studies to indicate how much dust will be created during the construction phase or operational phase. If so, provide a copy of that study and characterize the level of dust impacts expected during construction and operation.

#### Response

Unbridled has not conducted any studies to indicate how much dust will be created during the construction phase or operational phase. In a similar fashion to farming activities during planting or harvest, activities that disturb land during the construction of the Project may temporarily add airborne materials. To reduce the contribution of airborne materials, application of water and covering of spoils may occur. Vegetative buffer and revegetation measures along fencerows and property boundaries will help mitigate fugitive dust impacts to adjacent areas. Water used for dust control is authorized under the Kentucky Pollutant Discharge Elimination System as a non-stormwater discharge activity that is required for the Project.

Ky. PSC No. 2020-00242 Response to ESB 19 Witness: Courtney Pelissero Page 1 of 1

# Request

19. Refer to the Application, Exhibit J, part 1, Figure 1: Project Buffers Map. There does not appear to be any parks on the map. Confirm whether there are any public or private parks within two miles of the boundaries of the solar project site and the proposed transmission line. If this cannot be confirmed, provide a revised map which would include any public or private parks.

# Response

There are no public or private parks within two miles of the Project Area.

- 20. Refer to the Application, Exhibit K, Sheet Number UNB-L-900-01, Vegetative Screening Concept Plan.
  - a. Under General Notes, Pre-Construction, explain what is meant by "ALL PLANT MATERIALS AND INSTALLATION SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 'AMERICAN STANDARD FOR NURSERY STOCK'."
  - b. Provide the average height of the typical deciduous tree, evergreen tree, shrub, and multistem tree that will be planted five years after planting, at maturity, and provide when each of the typical deciduous tree, evergreen tree, shrub, and multistem tree will reach maturity.

#### Response

- a. ANSI Z60.1 is the industry standard for quality in nursery stock. It is published
  by AmericanHort and accredited by American National Standards Institute
  (ANSI). Unbridled will utilize plant materials and installation practices that meet these
  standards.
- b. Please see the following table for the projected growth of each species. Maturity for these species will typically occur by 20 years after planting. Maturity for these species will typically occur by 20 years after planting.

Vegetation Type	Height at Installation	Height at Year 5	Height at Maturity
Evergreen Tree	3 ft	8-11 ft	15-20 ft
Deciduous/Multistem Tree	3 ft	10 ft	25 ft
Evergreen/ Deciduous	2ft	7 ft	10-12 ft
Shrub			

- 21. The property for the proposed solar project is served by two electric distribution utilities: Kentucky Utilities Company (KU) in the northern part of the site and Kenergy for the majority of the acreage. See the boundary on the web by following these instructions: Go to <a href="https://kygeonet.ky.gov/govmaps/">https://kygeonet.ky.gov/govmaps/</a> and scroll down to "Featured Web Maps" and click on "Electric Service Areas"; fill in the address "Handley Road, Robards, KY" in the space labeled "Find address or place" and click on the search button; use the button to zoom out to cover most of the project site; change the base map to "Imagery Hybrid". Under "Contents":
  - a. State whether Unbridled Solar has been in contact with any of these electric distribution utilities about supplying electric power to the site during the construction or operation phase. If so, please describe the interaction.
  - b. State whether the proposed solar facility will need to have electricity supplied to both electric territories during the construction or operation phase. State whether the electricity will be provided by both, KU and Kenergy to serve the proposed solar features that are located in their respective service territory.
  - c. State whether Unbridled Solar intends to use one electric supplier and have the chosen utility file an electric territory boundary change with the Public Service Commission.

#### Response

- a. Unbridled has not been in contact with any electric distribution utilities about supplying electric power to the site during construction or operation. Unbridled anticipates contacting utilities prior to construction in 2022.
- b. The majority of the Project is within Kenergy's service territory (approximately 90%).

  Therefore, Unbridled anticipates Kenergy will be the main electric supplier once operational. During construction, Unbridled will utilize electricity from whichever supplier's service territory the Project construction needs arise. During operation, the Unbridled facilities requiring electricity, such as operations and maintenance building and substation, will be located in Kenergy territory.
- c. Unbridled does not anticipate using only one electric supplier and therefore, no boundary changes will be necessary.

- 22. There is an interstate gas transmission pipeline that crosses the northern part of the project site. It is marked appropriately on the maps in Exhibit K, pages 2–4, as "EX-GAS". This appears to be a high pressure gas transmission right of way owned by Texas Gas Transmission with two parallel 12- and 16-inch diameter pipelines as part of the Dixie Line. This information is available at the National Pipeline Mapping System at <a href="https://www.npms.phmsa.dot.gov/">https://www.npms.phmsa.dot.gov/</a>, along with the general contact, Thomas Porter, DOT Compliance Specialist, (713) 569-5730, Thomas.Porter@bwpipelines.com, 9 Greenway Plaza Suite 2800, Houston, TX 77046.
  - a. State whether Unbridled Solar has contacted Texas Gas Transmission regarding this pipeline. Describe all contacts with this company.
  - b. State whether Unbridled Solar has a copy of the right-of-way easement for the pipeline. If so, provide a copy of the easement.
  - c. The pipeline is close to the location of some of the solar panels. State how close to the pipelines heavy construction equipment, particularly pile drivers used to bore steel piers for the solar panels, can be used safely.
  - d. State whether Texas Gas Transmission has any stipulations about the two proposed site roads that will cross the pipeline. Also, state whether there is a vehicular weight or frequency limit recommended from Texas Gas Transmission or the U.S. Department of Transportation's Pipeline and Hazardous Materials Administration regarding the use of those site roads that will cross the pipeline.

## Response

- a. Unbridled has contacted Texas Gas Transmission regarding the pipeline via email and voicemail. Unbridled is awaiting a response from Texas Gas Transmission.
- Unbridled does not have a copy of the right-of-way easement for the pipeline at this time.
   Title work on the associated properties has been ordered.
- c. All infrastructure will be closely coordinated with the Texas Gas Transmission and meet or exceed their published requirements for crossing above ground or below ground their infrastructure, as well their established rules for impacts within their legal easements.

  Standard requirements for protecting legacy pipeline infrastructure would be to locate line, confirm depth of line and amount of ground cover at crossing. Unbridled will meet

Ky. PSC No. 2020-00242 Response to ESB 22 Witness: Courtney Pelissero

Page 2 of 2

or exceed established protective coverage rules or provide protective plating/matting. All work through easement area will be done with Texas Gas Transmission supervision.

d. Unbridled has informed Texas Gas Transmission about the two proposed road crossings. Unbridled will discuss vehicular weight and frequency limit recommendations with Texas Gas Transmission prior to construction. Protective cover requirements will be met or, where depth of pipe and grade will not allow, protective plating/matting will be used with approval from the Texas Gas Transmission. In the case of overweight loads or multiple heavy loads, temporary matting will be placed over crossing area for further protection. Unbridled will be in compliance with all relevant laws regarding pipeline safety.

Ky. PSC No. 2020-00242 Response to ESB 23 Witness: Courtney Pelissero Page 1 of 1

#### Request

23. Refer to the Application, Exhibit J, Figure 3: Property and Site Boundaries Map. State whether the parcel IDs listed in this figure are the same as the Parcel IDs used by the Henderson and Webster Property Valuation Administrators (PVA). If not, provide a revised map using the parcel IDs and parcel boundaries used by the Henderson and Webster PVAs.

## Response

Yes, the parcel IDs listed in this figure are the same as the parcel IDs used by the Henderson and Webster Property Valuation Administrators (PVA).

- 24. Refer to the Application, Exhibit D, which is the attachment that contains a redacted listing of the 63 landowners whose property borders the Unbridled Solar Facility site.
  - a. Confirm that the 63 landowners are the only landowners who own property that are adjacent the proposed solar facility site.
  - b. Provide a map and property owner key that identifies all neighboring parcels that is similar to the map and property owner key in Exhibit J, Figure 3: Property Owners and Property Owner Key.
  - c. Page 1 of Exhibit D states that the 63 landowners were notified by registered mail on November 10, 2020. Identify which of these landowners along with the Map Reference number and Parcel ID, if any, did not receive the registered mail that was sent on November 10, 2020. Also provide what efforts were subsequently made to notify any landowners that did not receive the November 10, 2020 letter.

#### Response

- a. Yes, according to publicly available data, the 63 landowners identified are the only landowners who own properties that are adjacent to the proposed solar facility site.
- b. A map and property owner key that identifies all neighboring parcels is attached to this response as Amended Exhibit J, Figure 3.
- c. One letter from the November 10, 2020 notice of application mailing was returned to our office. The letter was sent to the owner of parcel #083-005-000 in Webster County. The map reference number is 31 in Amended Exhibit J, Figure 3. Public data had incomplete and inaccurate address information for this parcel, so the letter was not addressed correctly. The parcel is owned by West Kentucky Industrial Development Authority and Unbridled has a transmission line easement for this property. The November 10, 2020 notice of application letter was delivered to the company's mailing address.

Four letters from the November 10, 2020 notice of application mailing are still "in transit" according to USPS. One letter was sent to the owner of parcels #61-65, #71-44, #72-1 in

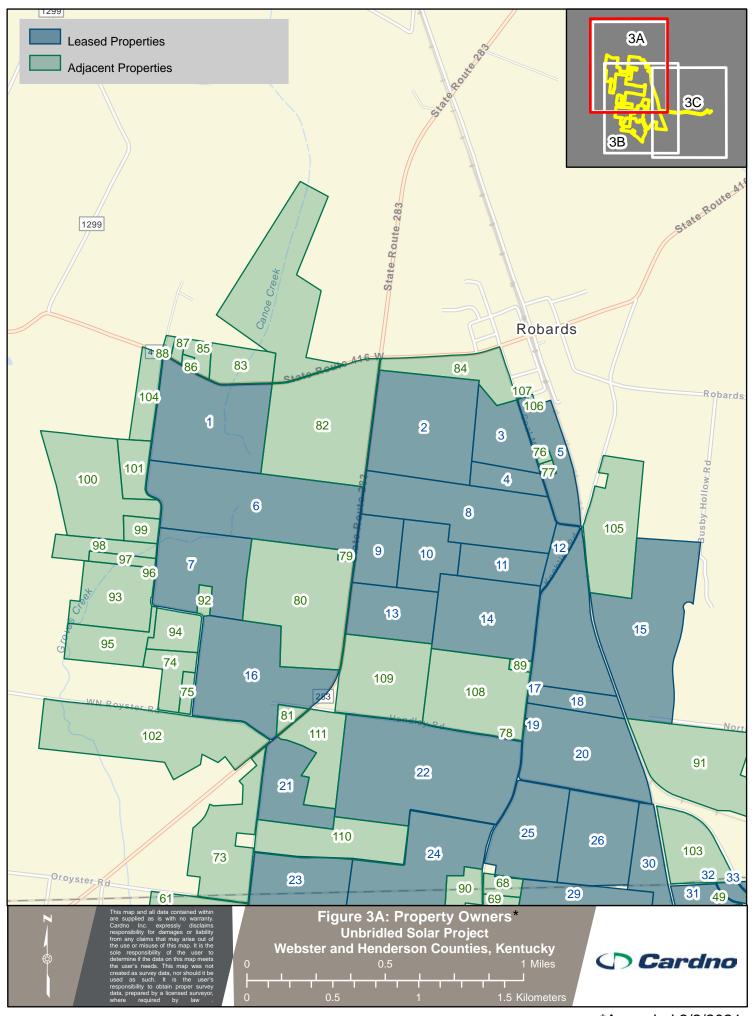
Henderson County and #077-002-003 in Webster County. The map reference numbers are 6, 7, 24, and 102 in Amended Exhibit J, Figure 3. The landowner is both an adjacent and participating landowner of the Project and Unbridled representatives have been in contact regarding the Project development. A subsequent letter providing notice of application was mailed to this landowner in January 2021.

The second letter still in transit was sent to the owner of parcel #72-14 in Henderson County. The map reference number is 25 in Amended Exhibit J, Figure 3. The landowner is a participating landowner of the Project and Unbridled representatives have been in contact with this landowner about the development of the Project. A subsequent letter providing notice of application was mailed to this landowner in January 2021.

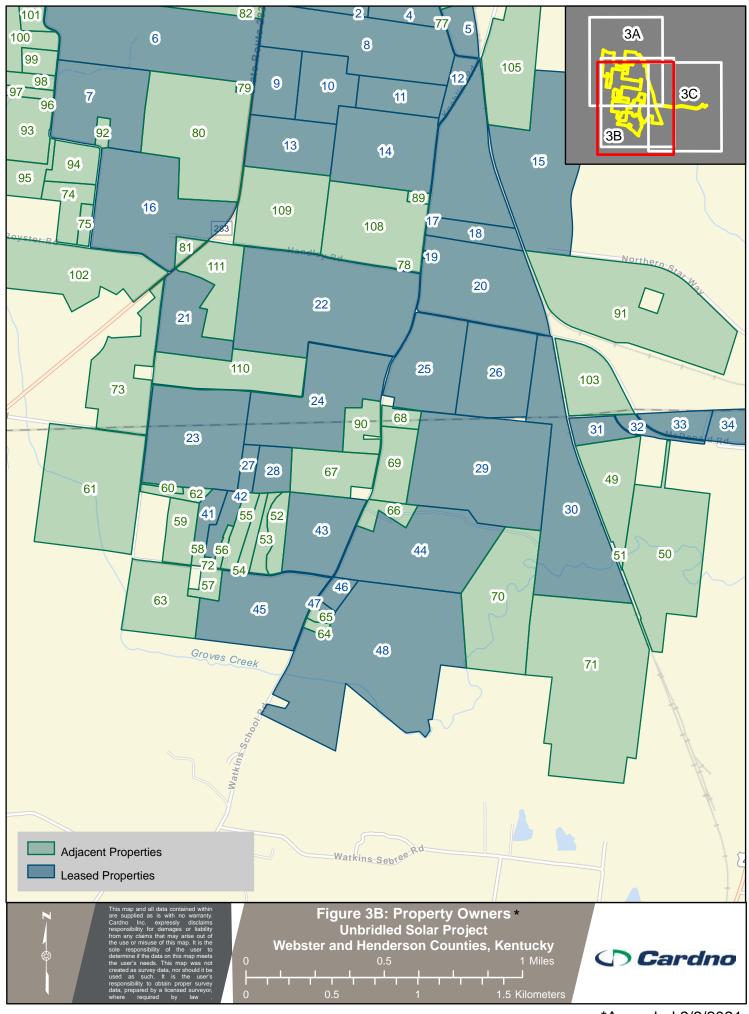
The third letter still in transit was sent to the owner of parcel #71-33 in Henderson County. The map reference number is 77 in Amended Exhibit J, Figure 3. A subsequent letter providing notice of application was mailed to this landowner in January 2021.

The fourth letter still in transit was sent to the owner of parcel #083-003-001 in Webster County. The map reference number is 51 in Amended Exhibit J, Figure 3. A subsequent letter providing notice of application was mailed to this landowner in January 2021.

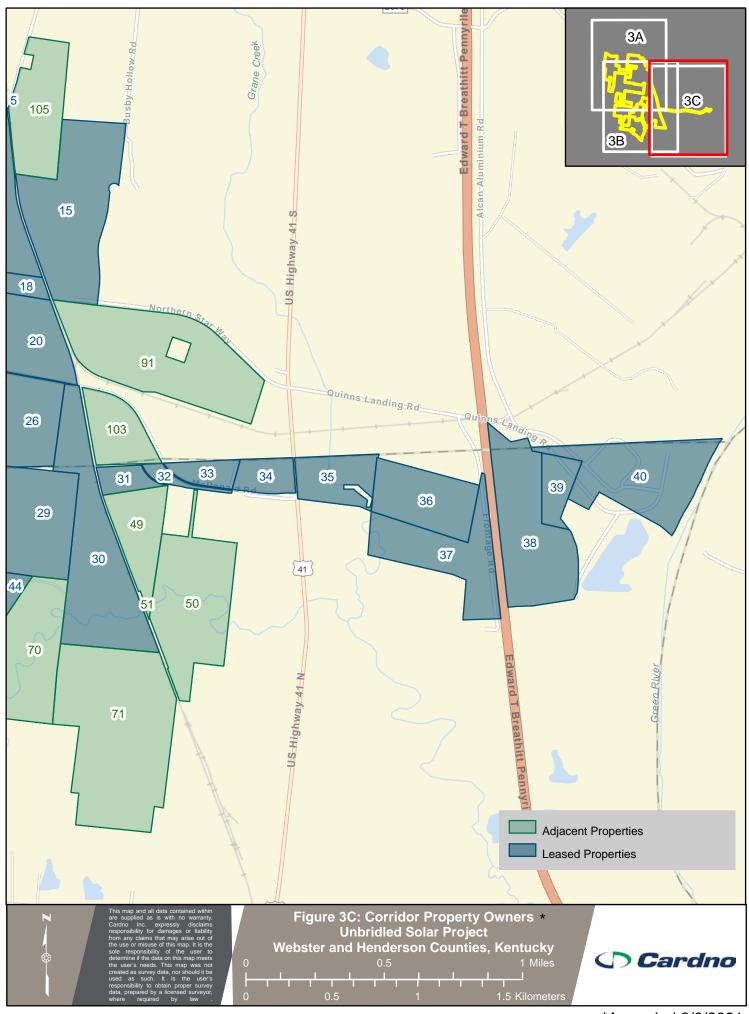
AMENDED EXHIBIT J FIGURES



\*Amended 2/2/2021



\*Amended 2/2/2021



\*Amended 2/2/2021

Figure 3 Leased Property Owner Key \*

Property Owner	Map Reference	Parcel ID	Address
	1	71-46	
	2	71-39	
	3	71-35	
	4	71-35.1	
	5	71-40	
	6	71-44	
	7	72-1	
	8	71-40	
	9 **	71-41	
	10	71-42	
	11	71-34	
	12	72-20	
	13	72-27	
	14	72-22	
	15	72-20.1	
	16	72-3	
	17	72-19	
	18	72-18	
	19	72-17	

Figure 3 Leased Property Owner Key \*

Property Owner	Map Reference	Parcel ID	Address
	20	72-24.1	
	21	72-9.1	
	22	72-10	
	23	077-001- 000	
	24	72-11 ***	
	25	72-14	
	26	72-15	
	27	077-002- 006	
	28	077-002- 004	
	29	077-004- 000	
	30	083-001- 000	
	31	083-005- 000	
	32	083-005- 000	
	33	083-005- 000	
	34	083-006- 000	
	35	083-006- 000	
	36	083-010- 000	
	37	083-012- 000	
	38	083-012- 000	
	39	083-013- 000	

**Figure 3 Leased Property Owner Key** 

Property Owner	Map Reference	Parcel ID	Address
	40	083-014- 000	
	41	077-006- 003-001	
	42	077-006- 001	
	43	077-005- 000	
	44	077-005- 001	
	45	077-009- 000	
	46	077-010- 005	
	47	077-010- 005	
	48	077-010- 005	

3 Case No. 2020-00242

Figure 3 Adjacent Property Owner Key\*

Property Owner	Map Reference	Parcel Id	Address
	49	083-003-000	
	50	083-004-017	
	51	083-003-001	
	52	077-006-004	
	53	077-006-002	
	54	077-006-005	
	55	077-006-000	
	56	077-006-001-002	
	57	077-008-001	
	58	077-006-003	
	59	077-007-002	
	60	077-007-001	
	61	071-012-000	
	62	077-007-000	
	63	077-008-000	
	64	077-010-001	
	65	077-010-001-001	
	66	077-005-000	
	67	077-002-001	
	68	077-004-001	

Figure 3 Adjacent Property Owner Key \*

Property Owner	Map Reference	Parcel Id	Address
	69	077-003-000	
	70	077-005-002	
	71	083-021-000	
	72	077-006-001-001	
	73	72-5	
	74	61-44.1	
	75	61-44	
	76	71-32	
	77	71-33	
	78	72-25	
	79	71-43	
	80	72-28	
	81	72-3	
	82	71-45	
	83	71-46.2	
	84	71-36	
	85	71-47	
	86	71-46.1	
	87	71-46.4	
	88	71-46.3	

Figure 3 Adjacent Property Owner Key \*

Property Owner	Map Reference	Parcel Id	Address
	89	72-23	
	90	077-002-000	
	91	81-13	
	92	72-2	
	93	61-41	
	94	61-42.1	
	95	61-42.3	
	96	61-41.1	
	97	61-42	
	98	61-39	
	99	61-38	
	100	61-37	
	101	61-36	
	102	61-65	
	103	81-14	
	104	61-35	
	105	71-21	
	106	71-40	
	107	71a-37	
	108	72-24	

Figure 3 Adjacent Property Owner Key \*

Property Owner	Map Reference	Parcel Id	Address
	109	72-26.1	
	110	72-7	
	111	72-9	

4 Case No. 2020-00242

Ky. PSC No. 2020-00242 Response to ESB 25 Witness: Courtney Pelissero Page 1 of 1

# Request

25. Refer to the questions propounded by BBC consulting, which are attached as an Appendix to this information request, and provide responses to those questions.

# Response

Please see the responses that follow to the referenced requests in the Appendix, propounded by Doug Jeavons of BBC Research & Consulting (BBC 01-15).

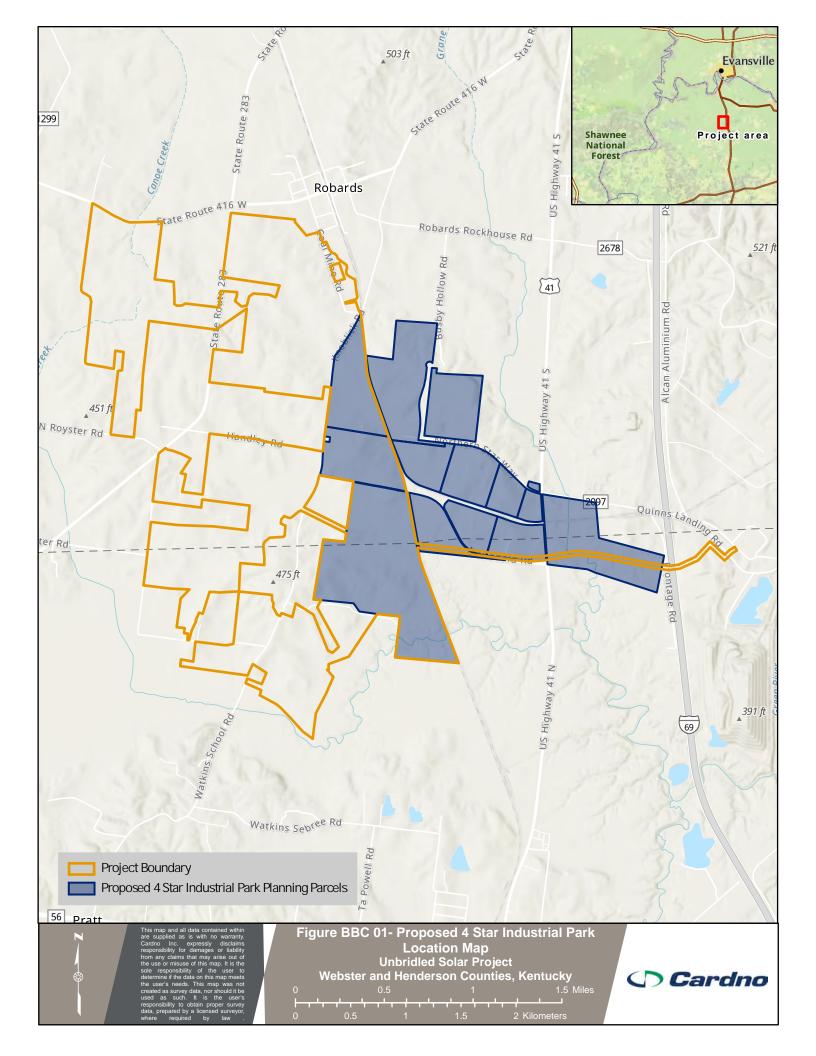
Ky. PSC No. 2020-00242 Response to BBC 01 Witness: Courtney Pelissero Page 1 of 1

# Request

1. Please provide a figure, similar to the figures in Exhibit J, which shows the boundaries of the 4 Star Industrial Park in relation to the boundaries of the proposed solar facility.

## Response

A figure showing the boundaries of the 4 Star Industrial Park in relation to the boundaries of the proposed solar facility is attached to this response as Figure BBC 01- Proposed 4 Star Industrial Park Location Map.



2. Section III. Solar Generating. 18 and 19. (pages 6 and 7 of the Application) states that Unbridled's site will be in compliance with the recently adopted Henderson County Zoning Ordinance Art. XXX related to solar facilities. It then notes that there are "two clusters of residences – one in Henderson County and one in Webster County" that could meet the definition of a residential neighborhood. Section 19 concludes with the statement that Unbridled will "file a separate request for any deviation needed from the 2000-feet setback requirement as to those two clusters of residences." Please clarify that Unbridled would only be filing a request for a deviation from the Kentucky statutory setback requirements in Webster County, since the other "cluster" of residences is in Henderson County and falls under the relevant Henderson County Zoning Ordinance.

#### Response

In preparing the Application, and in an abundance of caution, Unbridled had identified the two clusters of residences which might meet the KRS 278.700(6) definition of a residential neighborhood and in which some part of the area encompassed would be within 2000 feet of "some generation facilities or structures in the Webster County portion of the Project" and anticipated that it would file a request for a deviation as to both clusters. Application ¶ 19. There was no clear authority that the statutory setback requirements would not apply to the one cluster because it was located in Henderson County or would apply because the "within 2000 feet" generation facilities or structures were located in Webster County. However, on further review, Unbridled determined that there were no residential neighborhoods in either county within 2000 feet of any of the proposed generating facilities or structures to be located in Webster County. It thus being evident that no deviation is needed from the statutory setback requirement, Unbridled filed a Notice to the Record on December 17, 2020, that it will not be filing a deviation request in this case.

3. Did Unbridled Solar or its related entities consult with or provide input to Henderson County in the development of the Henderson County Zoning Ordinance Article XXX, Solar Energy Systems (SES) adopted on 12/23/2019? If so, please describe Unbridled Solar's involvement.

## Response

Unbridled Solar representatives were involved in the Henderson County development of the Henderson County Zoning Ordinance Article XXX, Solar Energy Systems (SES). At the request of Henderson County staff, Project representatives reviewed the draft solar ordinance in October 2019, provided comment on the draft ordinance at the Henderson City-Council Planning Commission meeting on November 11, 2019, attended the Henderson City-Council Planning Commission meeting on December 3, 2019 during which the draft ordinance was passed to the Henderson County Fiscal Court, and attended the Henderson County Fiscal Court first reading of the draft ordinance on December 9, 2019.

4. Exhibit F of the Application (effect on Kentucky Electricity Transmission System) states that "a third-party consultant conducted a transfer study ... results of the transfer study indicated a favorable interconnection." Please provide a copy of the transfer study.

#### Response

A copy of the transfer study is attached to this response as Figure BBC 04- Unbridled Transfer Study. Due to commercially sensitive information, Unbridled requests confidential treatment for this figure in the accompanying Petition for Confidential Treatment. Please note, Unbridled is referred to as Henderson Solar Project in the transfer study, which was a previous name of the Project. Lastly, the transfer study assumed the injection of 100 MW of generation at the Reid 161 kV Substation, however, the analysis indicated the injection of 160 MW at the Reid 161 kV Substation would not trigger an overload during contingency.

# Figure BBC 04 Unbridled Transfer Study

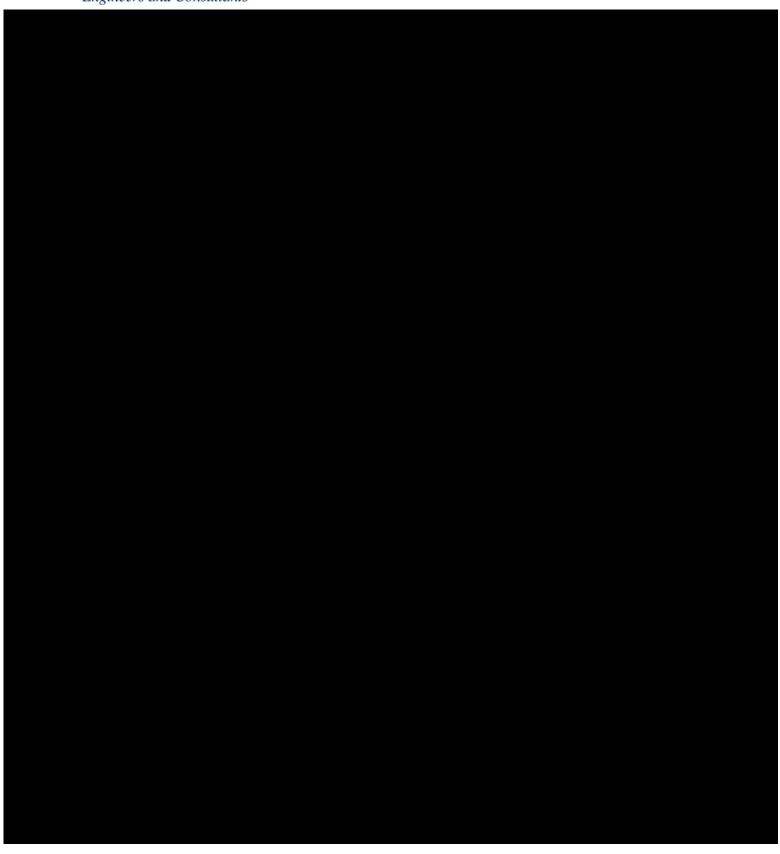


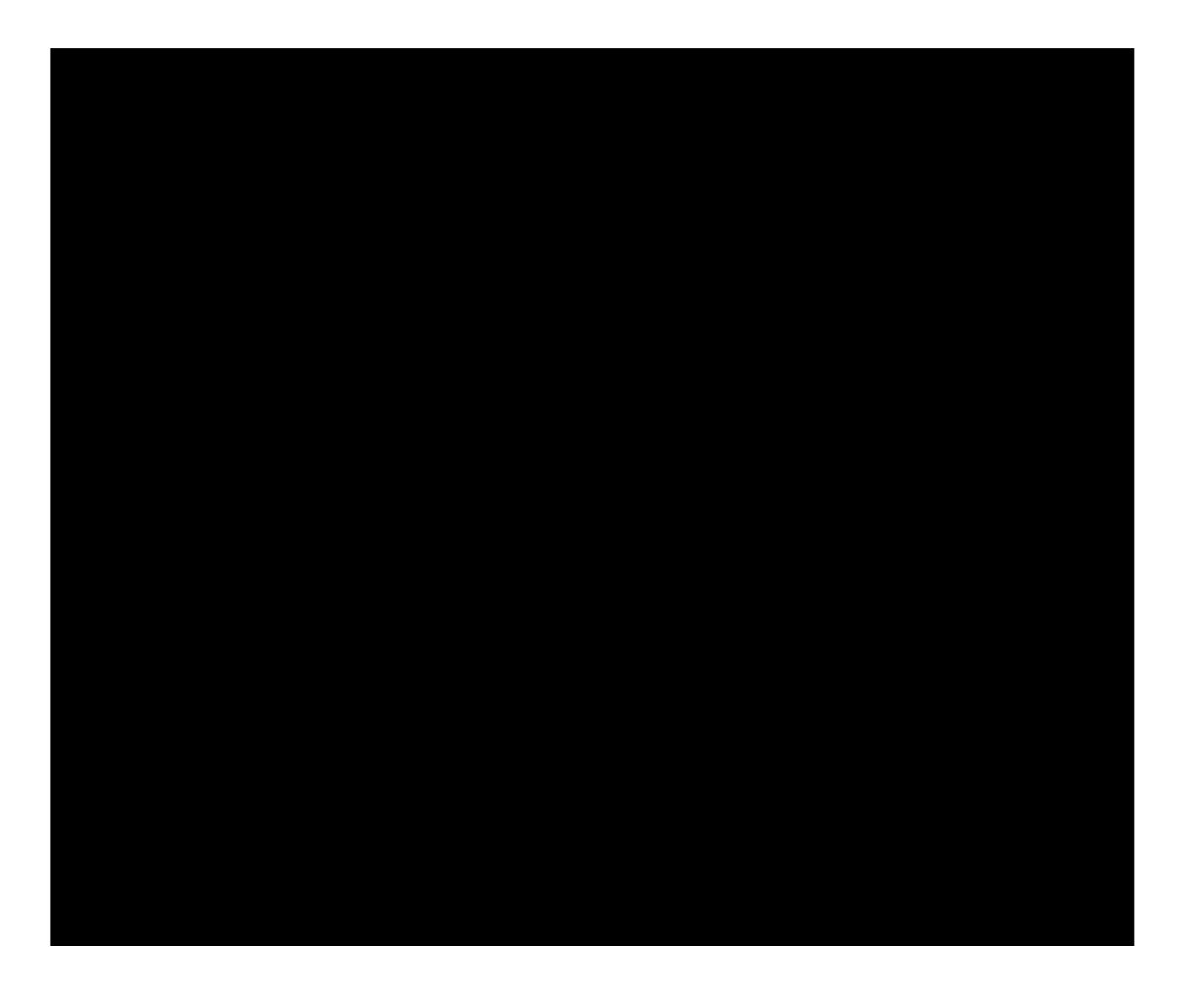
25-November-2019 Date:

To: Randy Porter, Geronimo Energy
From: Sean Hagen, Mesa Associates, Inc.
Subject: 100 MW Solar Power Project Network

Upgrades Assessment Project: Mesa Project No. 19606001







5. In Exhibit G of the Application (the Economic Impact Analysis), Overview and Context section, one of the stated benefits of Unbridled Solar is a "commitment to the regional economy through charitable giving to local schools ..." Please provide further detail regarding that commitment.

#### Response

After Unbridled Solar reaches commercial operation, a charitable fund will be initiated and will receive donations annually for an estimated 20 years to use for charitable and/or community projects and opportunities. Unbridled Solar anticipates that the amounts it donates would be up to \$32,000/year. Often times, the charitable fund takes the form of an education fund where the donations go towards the local school districts. The gifts donated through the charitable fund are above and beyond any tax revenue delivered by the Project. The goal of the charitable fund is to provide direct benefit and value to the community touched by the Unbridled Solar Project.

6. Section 6 of Exhibit G describes "Government Revenue Impacts." Please provide Unbridled's estimate of the change in taxable (assessed) property value that will occur from development of the proposed generating facility and transmission line.

## Response

The change in taxable (assessed) property value is anticipated to increase across the Project footprint. As the Project nears commercial operation, Unbridled will work closely with the local taxation authorities to properly assess the Project value. Overall, the initial estimate for Unbridled Solar is projected to contribute approximately \$160,000 annually over 25 years (or approximately \$4,000,000 total over 25 years) in state and local taxes.

Page 1 of 1

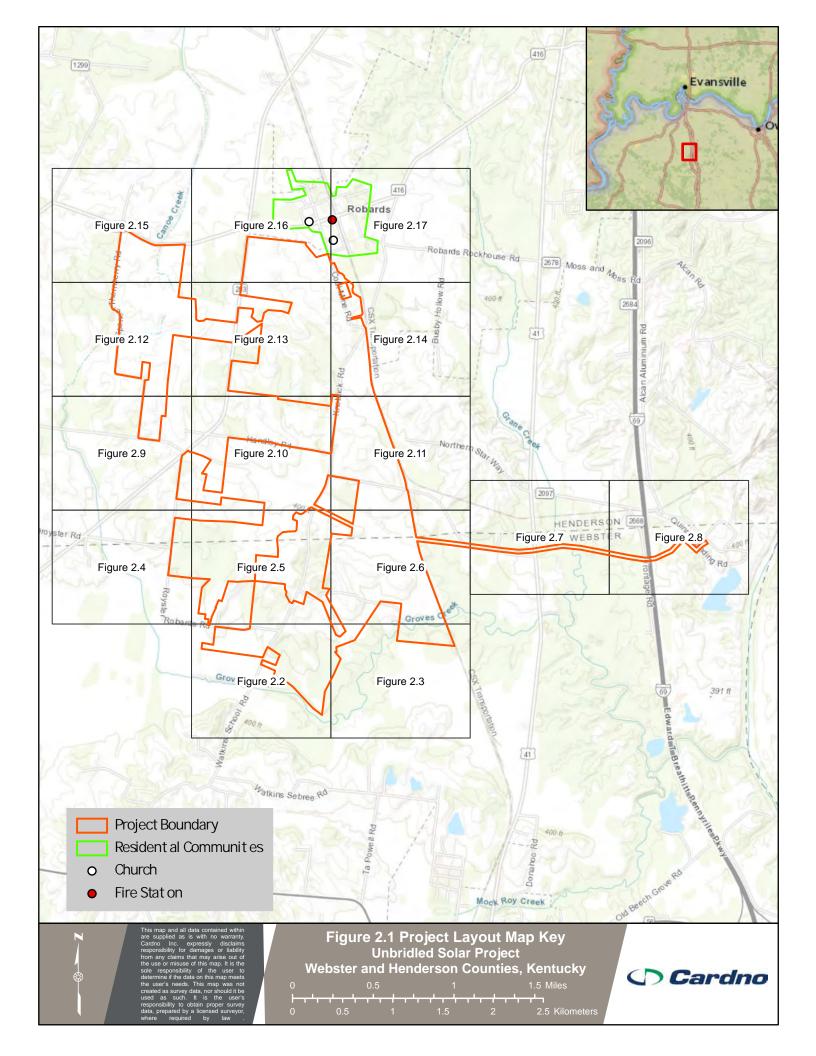
### Request

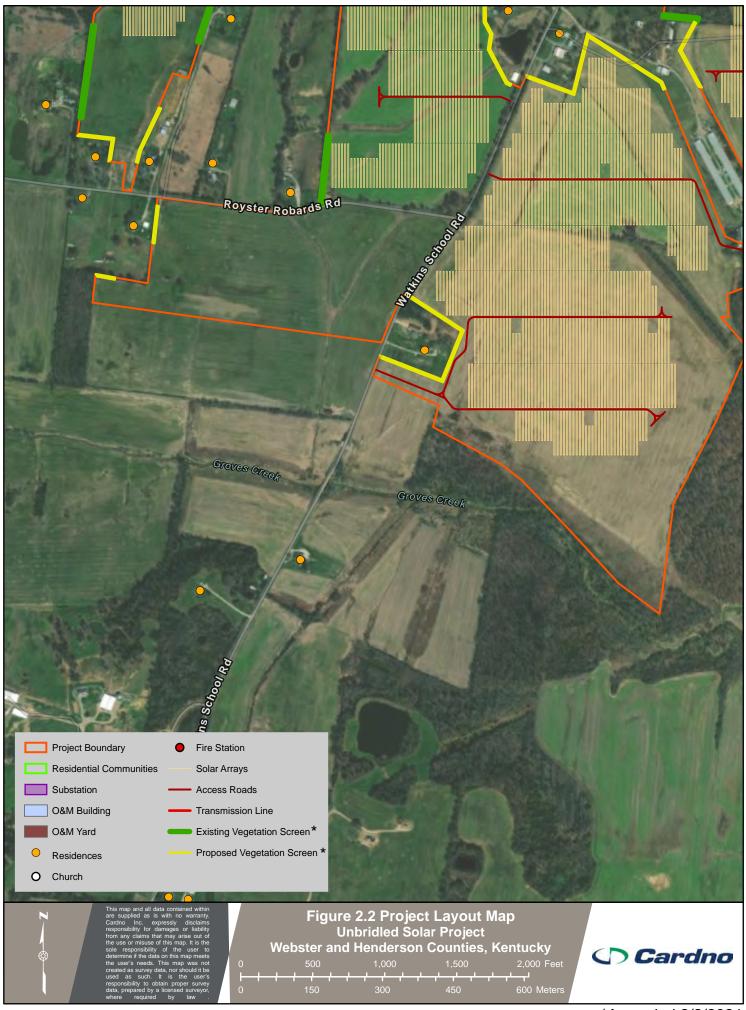
7. Do the "Vegetation Screen(s)" shown in Exhibit J (Application Figures) all indicate new vegetation screening that will be planted by Unbridled Solar, or do they include existing vegetation screens?

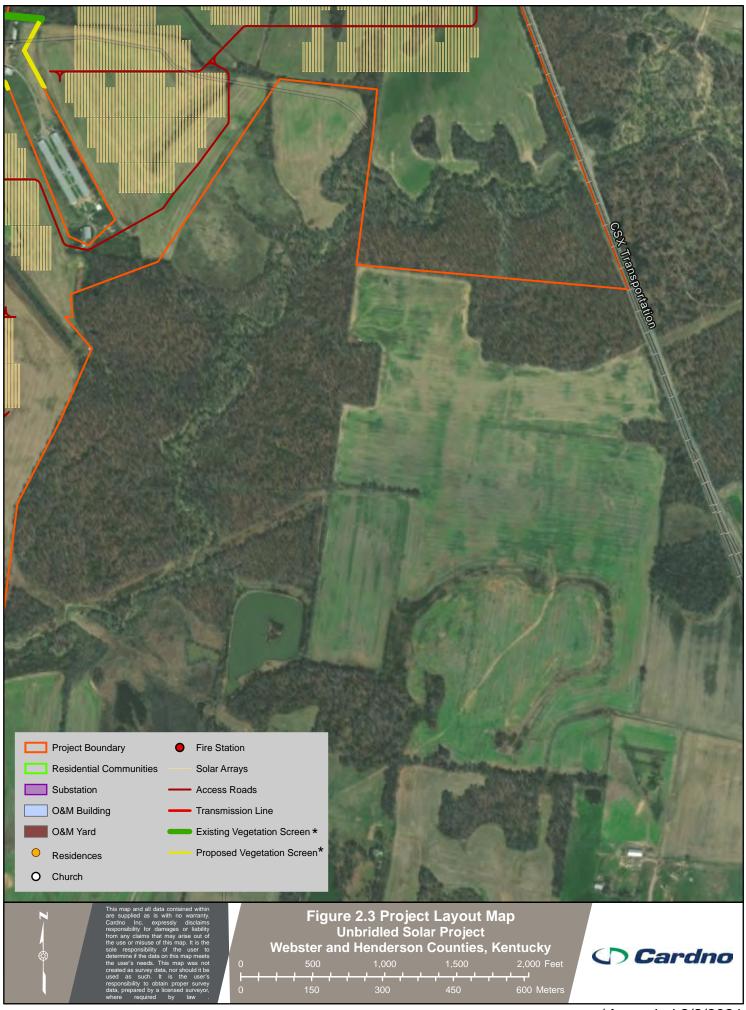
## Response

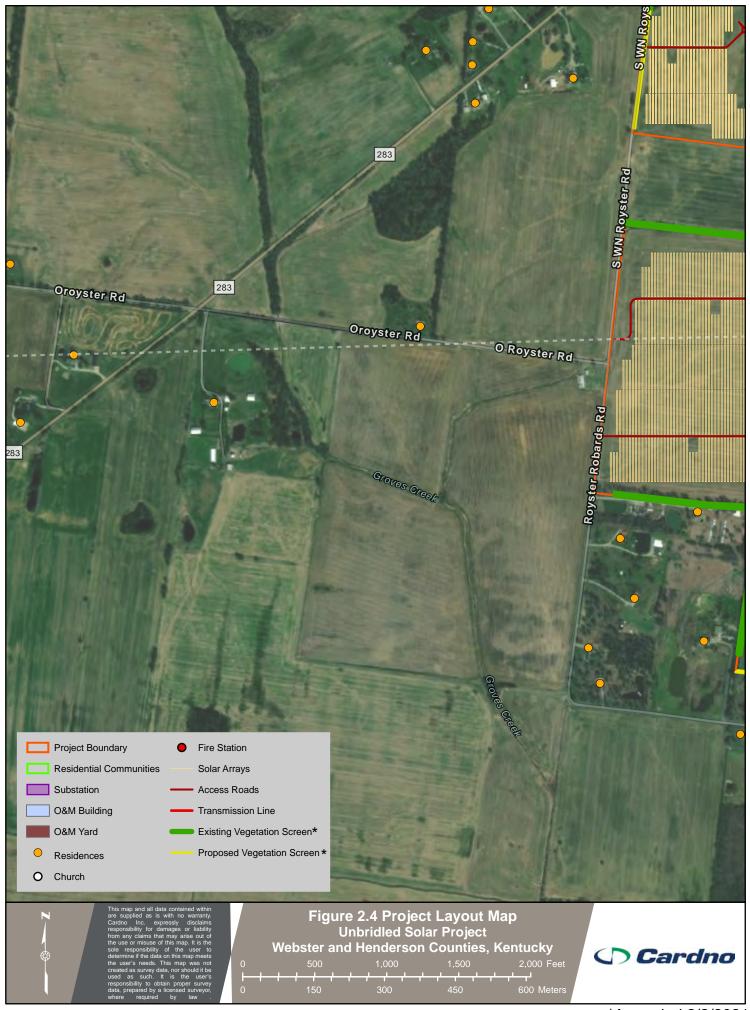
The Application figures have been updated in Exhibit J to accurately show both existing vegetation screens and proposed new vegetation screens. See Amended Exhibit J, Figures 2.2-2.17 attached to this response. See also Amended Exhibit K, Sheets UNB-T-100-01, UNB-E-500-03, UNB-E-502-01, UNB-E-502-02, UNB-E-502-03, attached to ESB 02 Response.

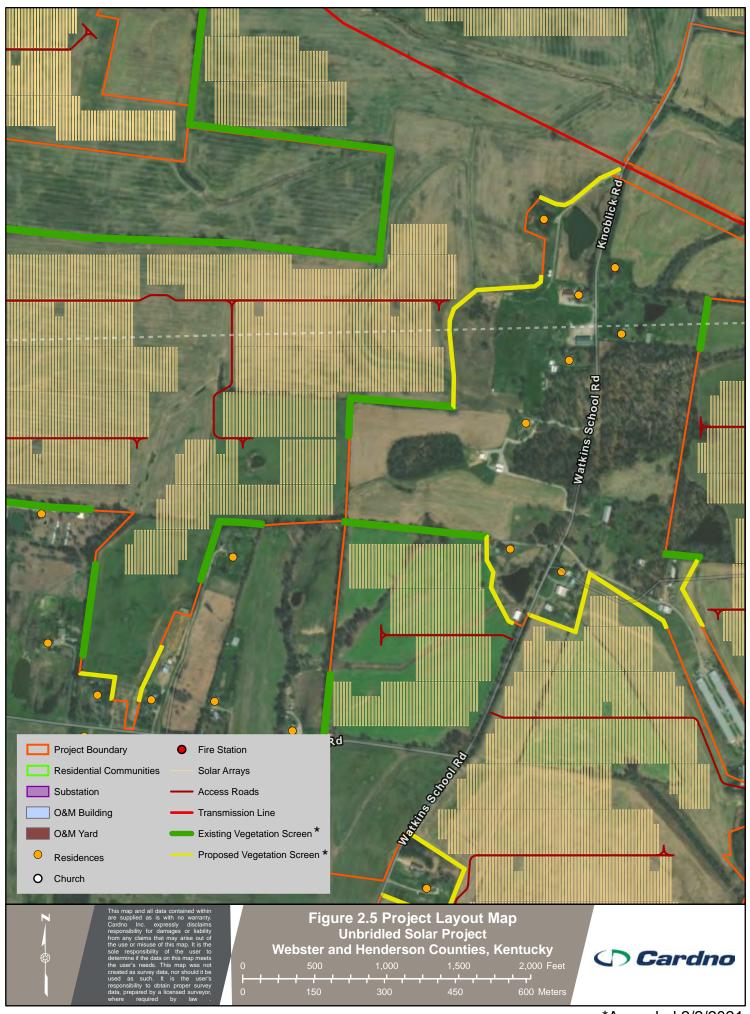
AMENDED EXHIBIT J FIGURES

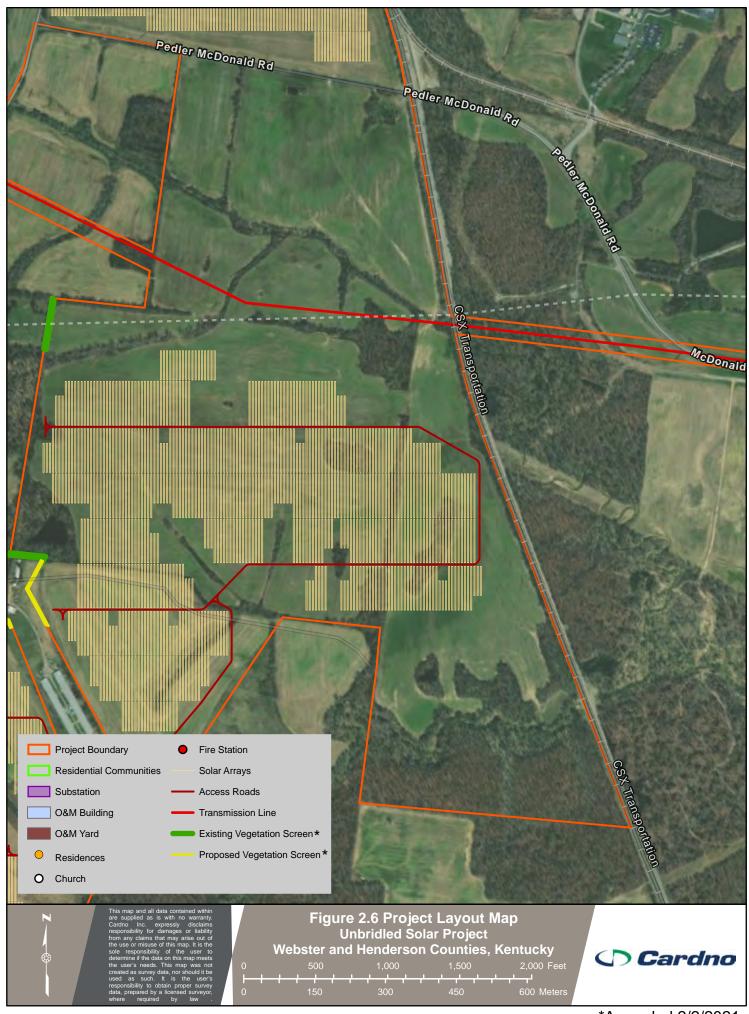


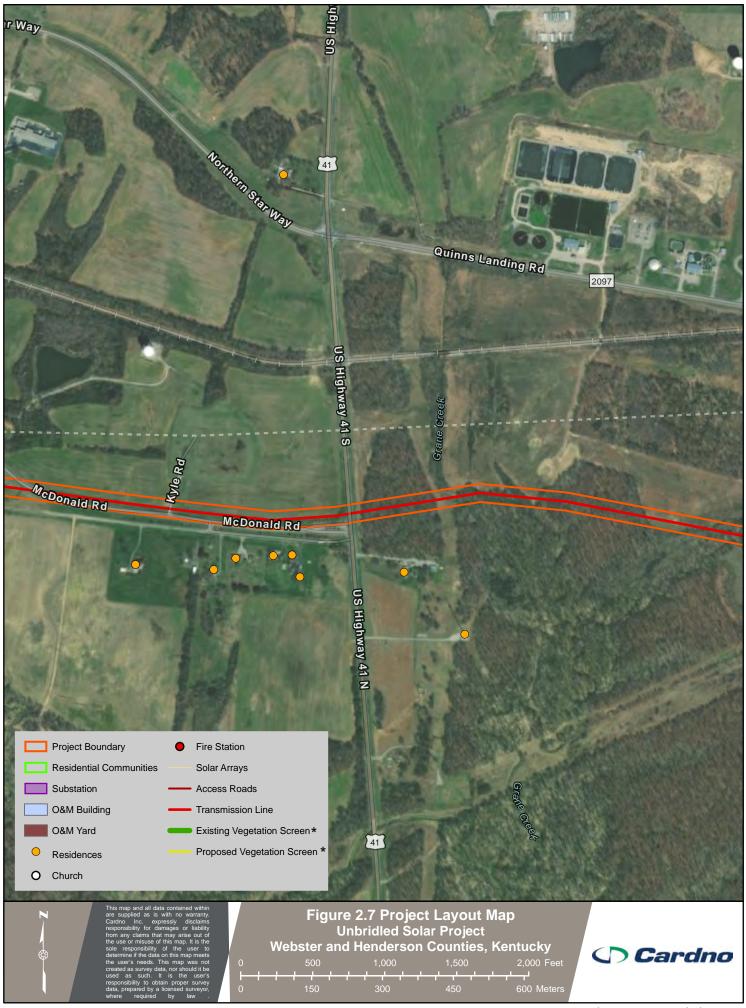




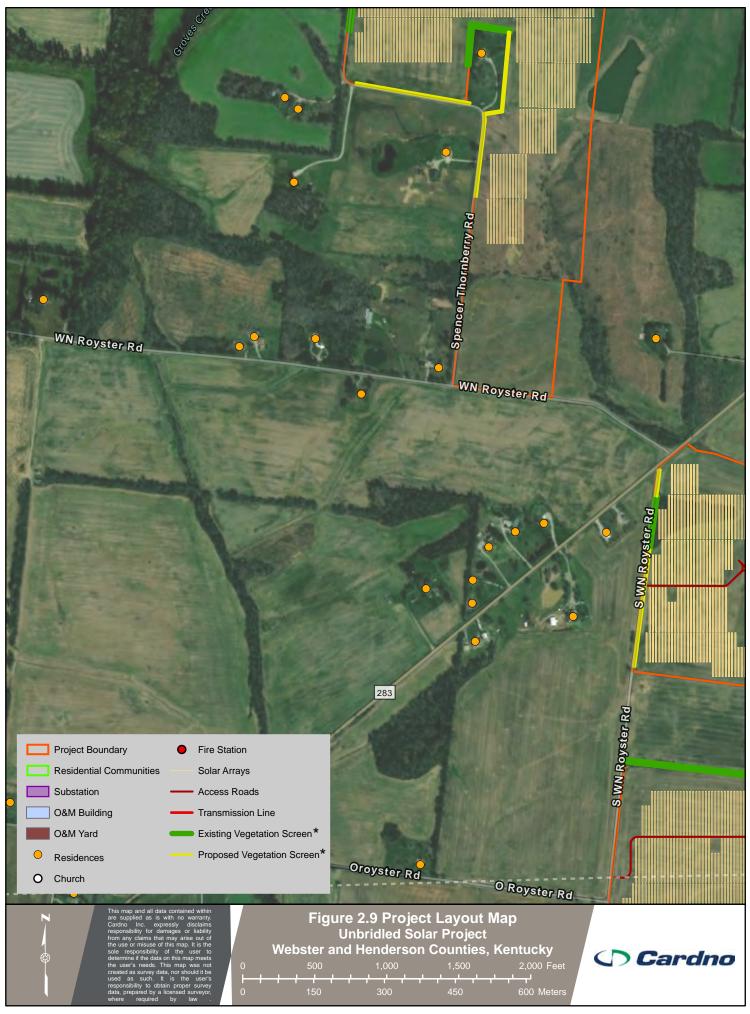


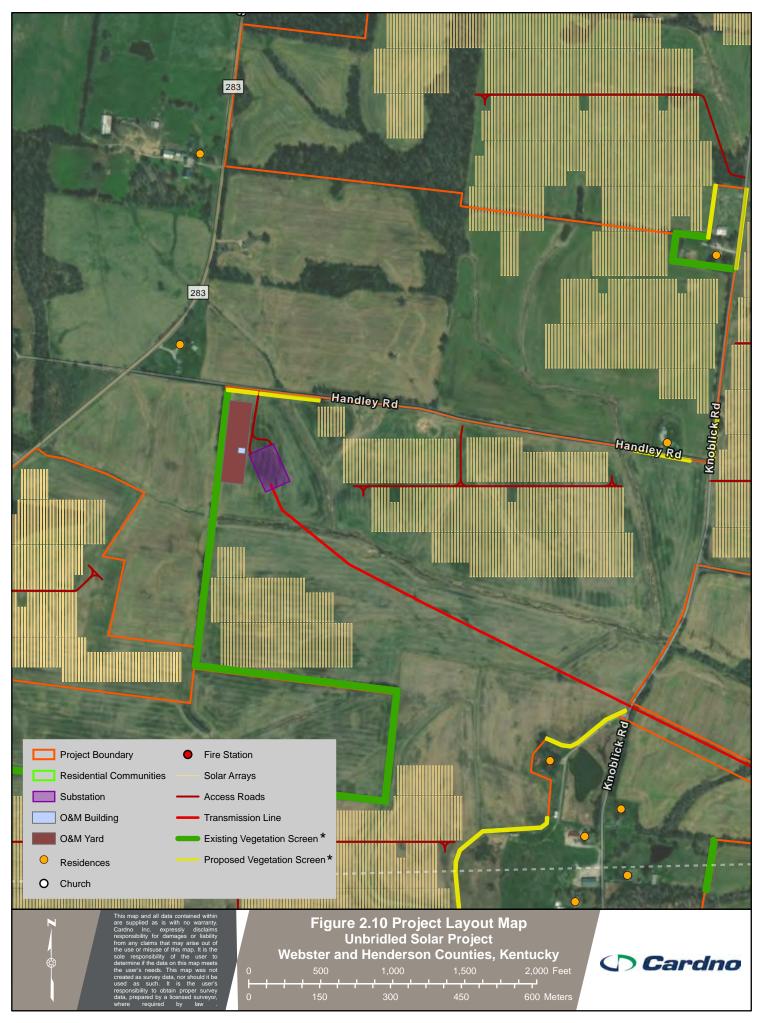


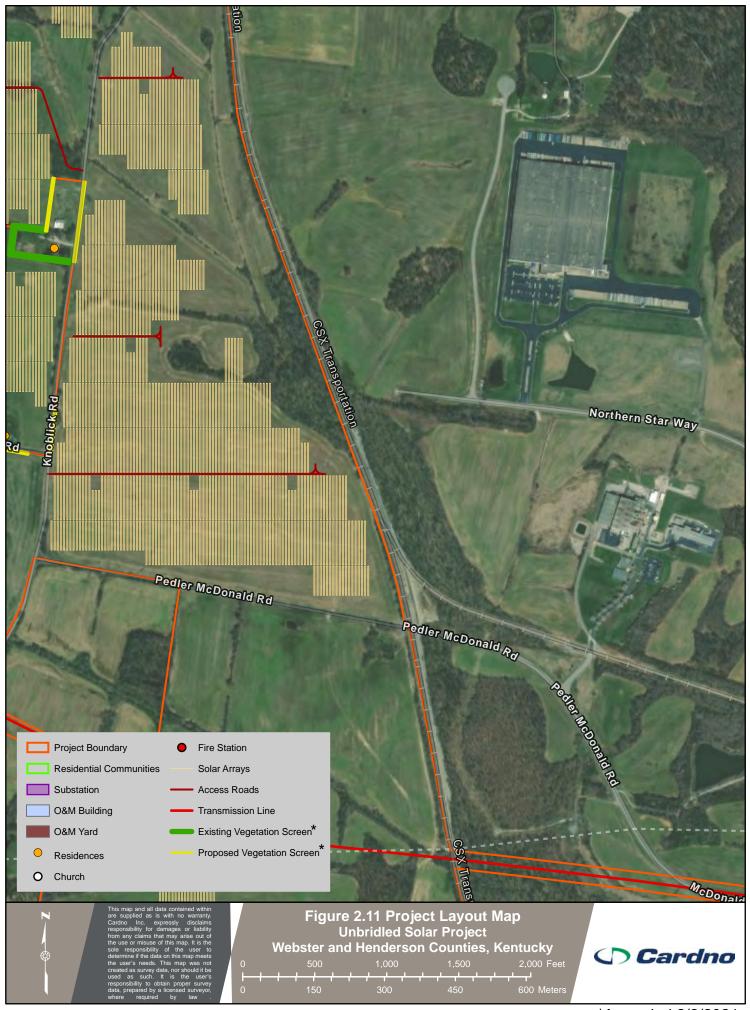


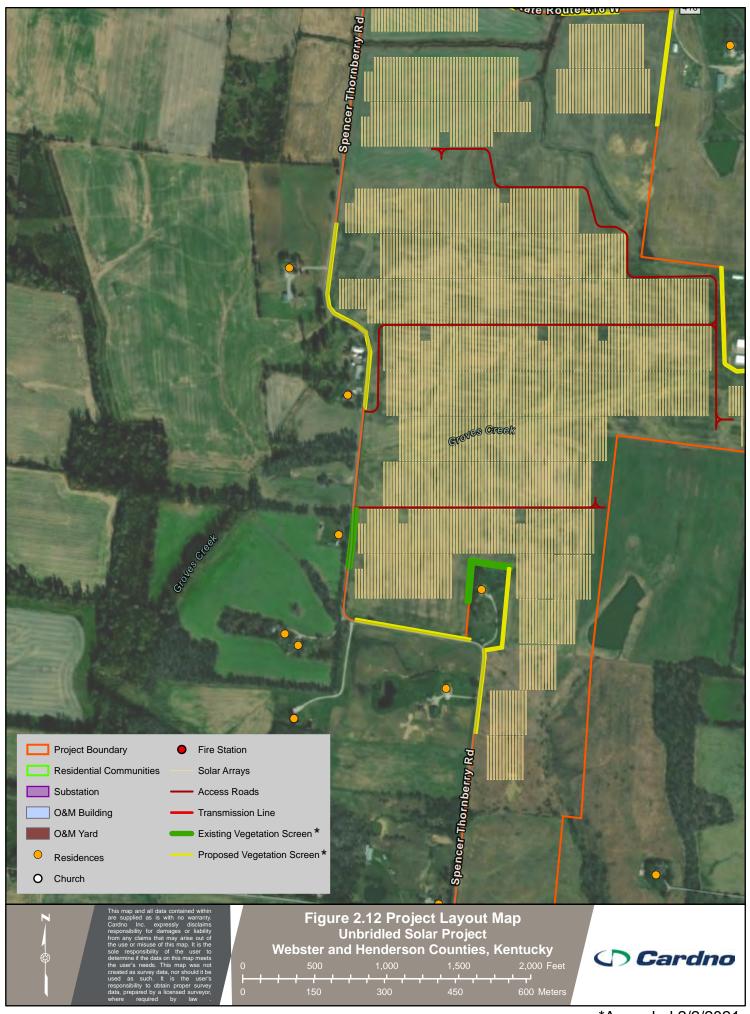


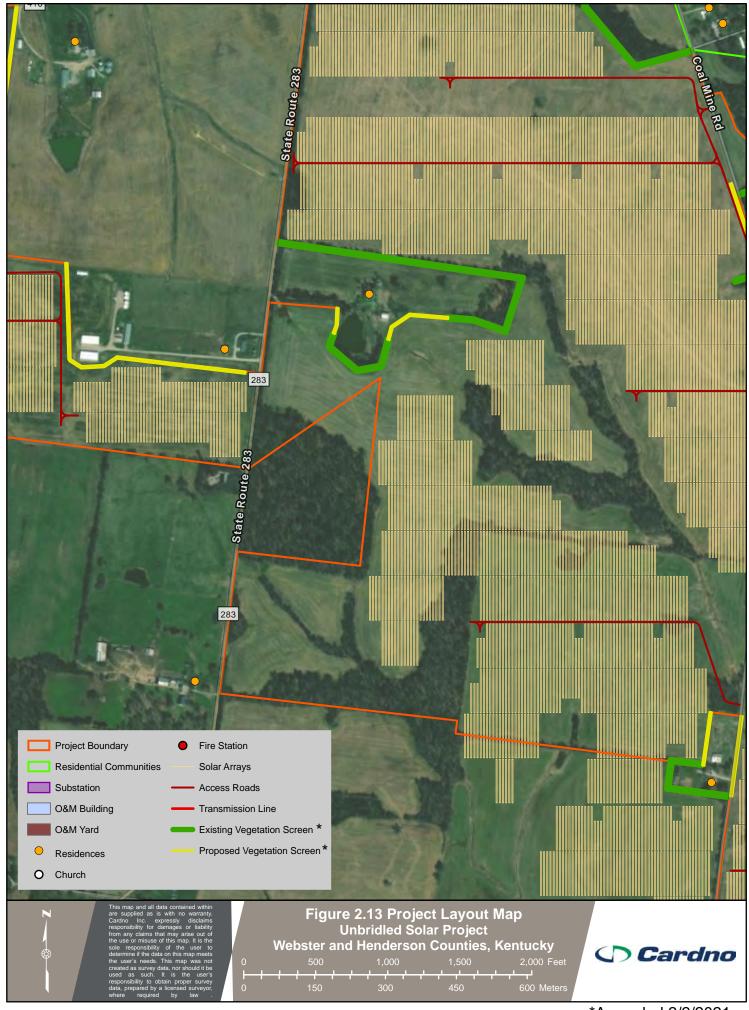




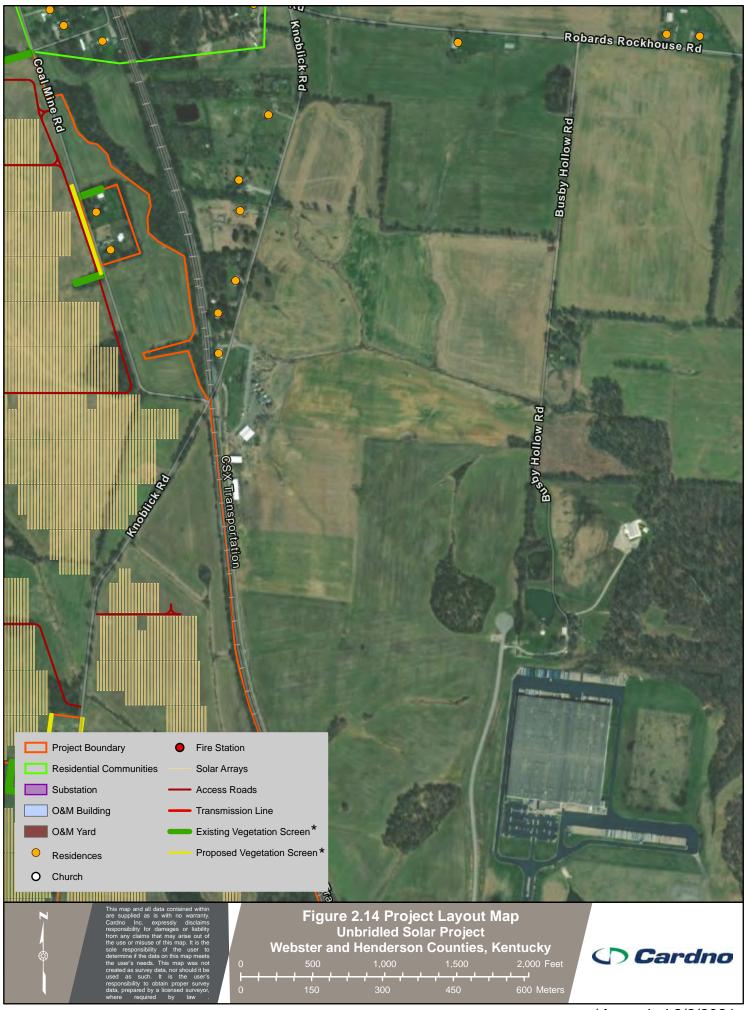


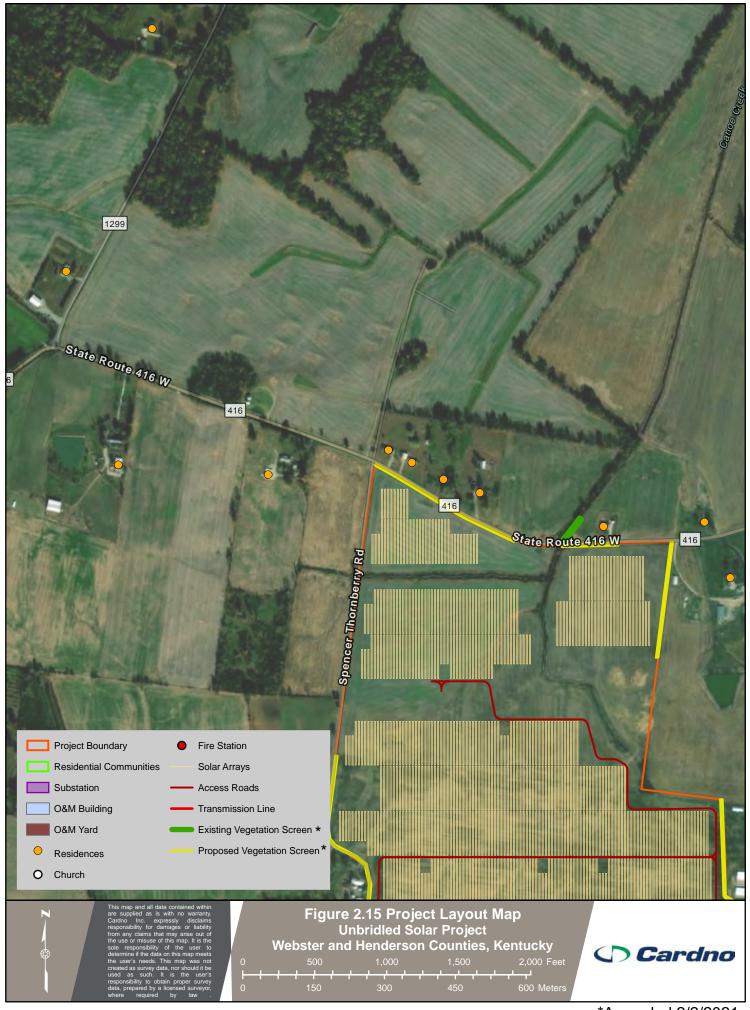




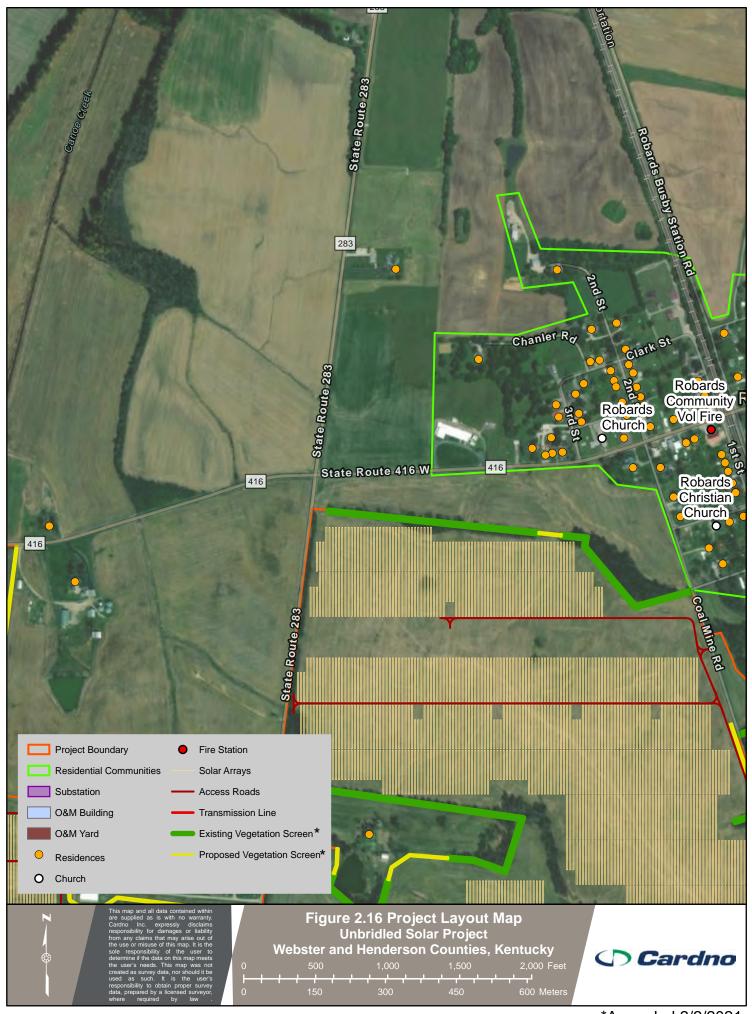


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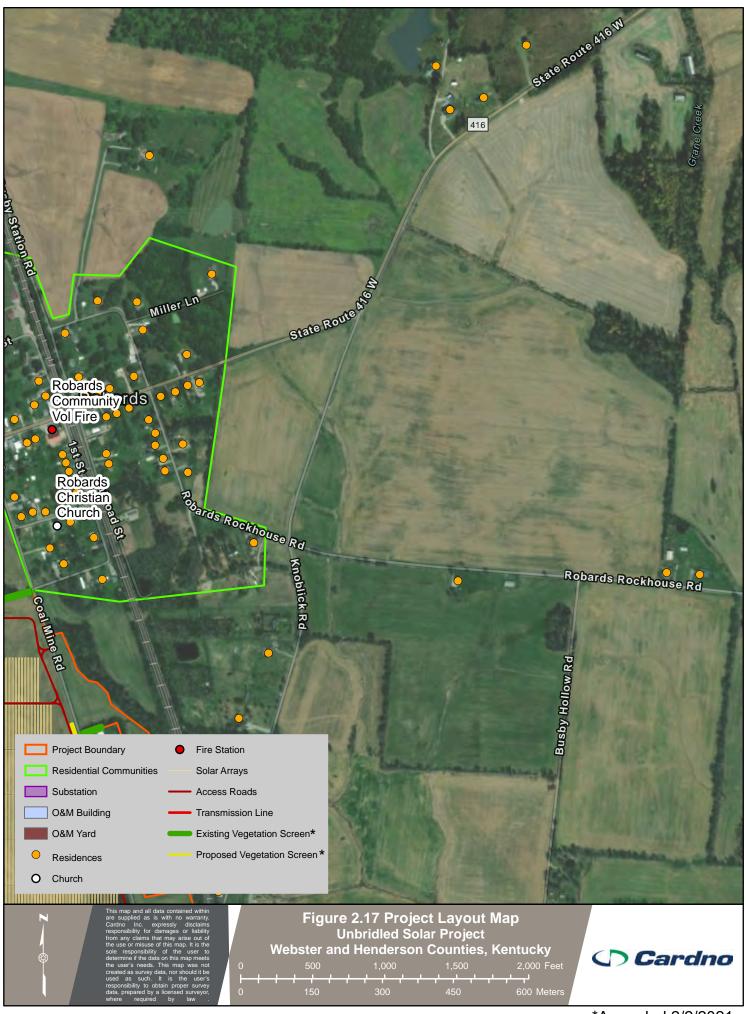




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Ky. PSC No. 2020-00242 Response to BBC 08 Witness: Courtney Pelissero Page 1 of 1

# Request

8. Page 2 of the Description of the Proposed Site (Section 1.2.1) refers to Attachment A, Figure 1 in regard to the location of residential structures, schools and public and private parks in relation to the generating facility. Please confirm there are no schools or public or private parks within one mile of the proposed project.

## Response

There are no schools nor public and private parks within one mile of the proposed project.

Ky. PSC No. 2020-00242 Response to BBC 09 Witness: Courtney Pelissero Page 1 of 1

# Request

9. Page 2 of the Description of the Proposed Site (Section 1.2.1) refers to Attachment A, Figure 2 in regard to the location of residential structures, schools and public and private parks in relation to the transmission line. Please confirm there are no schools or public or private parks within two miles of the proposed transmission line.

## Response

There are no schools nor public and private parks within two miles of the proposed project.

### Request

10. Page 3 of the Description of the Proposed Site (article 2) indicates the legal boundaries of the proposed site are shown in the Exhibit K Application Plan Set. Typically, generating facility applicants have provided legal descriptions of their proposed sites, but there are no legal descriptions in Exhibit K. Please provide.

### Response

Legal descriptions of the Project parcels are provided separately in a large PDF file compiled from recorded instruments, titled *Figure BBC 10 - Unbridled Legal Descriptions*, and are not publicly filed. Information to be redacted occurs throughout the PDF file and Unbridled requests confidential treatment for the PDF file in its entirety in the accompanying Motion for Confidential Treatment. For a map and key of participating landowners, please refer to Amended Exhibit J, Figure 3 attached to ESB 24 Response.

Ky. PSC No. 2020-00242 Response to BBC 11 Witness: Courtney Pelissero Page 1 of 1

# Request

11. Page 3 of the Description of the Proposed Site (article 3) indicates the proposed facility access control is displayed in Exhibit K, Sheet UNB-E-500-03. That sheet shows the project boundary, but does not clearly indicate the access points. Please provide a figure showing the proposed access points from public roadways.

### Response

Reference response to ESB 02.

Ky. PSC No. 2020-00242 Response to BBC 12 Witness: Courtney Pelissero Page 1 of 1

# Request

12. Page 3 of the Description of the Proposed Site (article 6) states that electric and water/sewer services will likely be required for the O&M building. Please state which entities will provide these services.

# Response

Henderson County Water Department provides water services in the Project area. Sewer services are not available in the Project area, so Unbridled will install a septic system.

### Request

13. Page 3 of the Description of the Proposed Site (article 7) appears to be intended to respond to the setback requirements in Kentucky statute, but merely provides a map of surrounding residential structures. Please consider incorporating some of the information provided in section 18-19 from the Application (pages 6 and 7) in this part of the SAR.

### Response

The portion of the Project located in Henderson County will be subject to and comply with the Henderson County Solar Ordinance setbacks, per KRS 278.704(3). The portion of the Project located in Webster County is subject to and will comply with KRS 278.704(2), requiring solar facility equipment be setback at least 2,000 feet from a residential neighborhood, school, hospital or nursing home facility. The proposed generating facility does not include an exhaust stack or any wind turbine, making inapplicable the 1000-foot setback from the property boundary of any adjoining property owner per KRS 278.704(2).

Ky. PSC No. 2020-00242 Response to BBC 14 Witness: Courtney Pelissero Page 1 of 1

# Request

14. Page 5, Section 2 of the SAR (compatibility with scenic surroundings), subsection 2.2.1 Facility Compatibility indicates that Unbridled Solar prepared visual renderings of the Project with the proposed screening plan and reviewed them with interested landowners. Please provide these renderings.

## Response

Reference response to ESB 07.

### Request

15. Attachment D, the Property Value Impact Report, is largely based on pair sales comparisons between "qualifying properties" adjacent to solar facilities and comparable Page 3 properties (also referred to as control area sales) "locationally removed from their influence." (page 24). Please provide the criteria used to select the comparable properties for purposes of these comparisons, particularly in terms of their locations relative to the qualifying properties.

### Response

TEST SALE: A Test Area Sale (or Target) is physically located next to an existing solar farm (shares a parcel line or is located immediately across a right-of-way). For example, a home directly across the street from solar panels with a view from the front yard, could also be considered a Test Area Sale. Test Sales must have a transaction date after the construction of the adjacent solar array.

CONTROL SALE: Control Area Sales are not adjoining to any solar farm, nor do they have a view of a solar farm from the property. Generally, these sales are located in the same market area, defined in our analysis based on the availability of transactions that occurred around the timeframe of the Test Area Sale (generally, within 12 months before/after test sale areas). Control Area Sales are drawn from within the same subdivision if available, or within the same municipality, township or county, depending on the availability of transactions in more rural areas.