

**CASE NO. 2020-00190**  
**HORSESHOE BEND SOLAR, LLC**  
**RESPONSES TO SITING BOARD'S SECOND REQUEST FOR INFORMATION**

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- 1. Refer to the supplement to the Section 6 of the Site Assessment Report related to the mitigation measures filed on February 12, 2021.**
  - a. Describe under what conditions a 120 db sound level at a neighboring residential home would be acceptable.**
  - b. Provide an equivalent or comparative noise level to 120 db (i.e., jet engine, rock concert).**
  - c. Explain why this unacceptable noise level should not be set at a lower level such at 55 db.**
  - d. Explain how Horseshoe Bend plans to mitigate noise impacts if they exceed 120 db as measured at a neighboring home.**

RESPONSE: Horseshoe Bend proposes the following amendment to our proposed mitigation measure relating to noise, which we previously filed as a supplement to Section 6 of the Site Assessment Report. This revised proposal for noise divides the mitigation measure into two separate categories: construction noise and operational noise.

We know that for solar projects like Horseshoe Bend, the construction period will generate more noise than the operational period. Construction is time constrained and expected to be completed in less than a year, with the loudest portion of the construction process (pile driving) occurring during only a portion of the construction period. Therefore, we propose a higher noise threshold during the construction period, and a lower noise threshold during the operation period.

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Construction Noise

As stated in Section 6 of the Site Assessment Report, Horseshoe Bend proposes that all solar equipment (not including fencing and vegetative buffers) will be set back at least 150 feet from neighboring residential homes. This proposed setback means that the closest the loudest piece of construction equipment, a pile driver, would be to a residential home during construction would be 150 feet.

The Noise and Traffic Study, Attachment G to the Site Assessment Report, has a table on page 2 which calculates the noise of a pile driver at different setback distances. At 150 feet, a pile driver is expected to produce sound of 91 dBA. In order to ensure that variances in site conditions do not prohibit pile driving from being able to occur in the required locations on site, Horseshoe Bend therefore proposes a limit of 95 dBA at the receptor (the residential home) during the construction period.

We note that as shown on the Nearest Residences Map (Attachment C to the Site Assessment Report) there are two homes at Horseshoe Bend that will be located as close as 150 feet from solar equipment. Most homes in the area are located more than 300 feet from solar equipment. Pile driving near the homes that lie closest to the project site will take place over a limited period of time, since the pile driver crews will complete their work in those areas, and then move on to other areas of the Project site. Therefore, the amount of time that a neighboring residence will experience pile driving sound at Horseshoe Bend at a 150 foot distance will be very limited, a much shorter period of time than the full construction period or even the overall pile driving period, and likely as short as 1 day since the pile drivers will complete their work nearest the neighboring home, and move on to install piles farther away.

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For a 6-minute video showing the solar pile installation process, please refer to: <https://www.youtube.com/watch?v=5bE9XexB4yM>. The video demonstrates that once each pile is installed, the pile driver moves on, and that the pile driving process does not stay in the same location for very long.

Operational Noise

With respect to operational noise, Horseshoe Bend has proposed specific setbacks for the noise-producing equipment that will be installed on site, proposing setbacks for central inverters and energy storage systems of 300 feet from residential homes in Section 6 of the Site Assessment Report. String inverters, because they are installed at the end of rows of solar panels, are proposed to have the same 150 foot setback from residential homes as other solar equipment. These proposed setbacks set the closest distances these three pieces of noise producing equipment would be to a residential home during operation of the Project.

The Noise and Traffic Study, Attachment G to the Site Assessment Report, contains charts on page 3 which calculate the noise of central inverters, string inverters, and energy storage HVAC units at different setback distances. The noise generated by each piece of equipment at the proposed setback distance is as follows. The noise generated by solar inverters can be characterized as a “humming noise,” and the noise generated by Energy Storage HVAC is the typical type of noise generated by residential or commercial HVAC.

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Piece of equipment	Proposed setback from neighboring residence	Sound level at setback distance, according to Noise and Traffic Study
Central Inverter	300 feet	45.1-51.1 dBA
Energy Storage HVAC	300 feet	24.5-30.5 dBA
String Inverter	150 feet	31.5-37.5 dBA

Based on these expected noise ranges, and in order to ensure that the project is able to operate within the requirement, Horseshoe Bend proposes a limit of 60 dBA at the receptor (a neighboring residential home) during the operation period.

Proposed language for the mitigation measures related to noise are as follows:

1. If noise levels during the construction period are unacceptable to nearby residents or landowners, Horseshoe Bend shall mitigate the noise impact so that noise levels are no more than 95 dBA as measured at a neighboring residential home (occupied dwelling).

2. If noise levels during the operation period are unacceptable to nearby residents or landowners, Horseshoe Bend shall mitigate the noise impact so that noise levels are no more than 60 dBA as measured at a neighboring residential home (occupied dwelling).

Horseshoe Bend submits that the noise levels proposed herein will provide certainty and protection for the neighbors of the Project from excessive noise, while ensuring that Horseshoe Bend is able to be built and operate.

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**2. Refer to the Supplement to Section 6 of the Site Assessment Report related to mitigation measures. Explain whether decommissioning includes subsurface structures such as foundation piles for the racking systems. Describe any subsurface structures that might remain after decommissioning is completed.**

RESPONSE: Horseshoe Bend's proposed mitigation measure related to decommissioning, from our supplemental mitigation measures filing, is copied below, and includes the removal of subsurface structures such as concrete pads and trenched electrical wiring. There will not be any subsurface structures that will remain after decommissioning is completed.

Solar racking systems are typically pounded into the ground with pile drivers, and without the use of concrete foundations. Very limited amounts of concrete are typically installed at site as pad mounts for central inverters and energy storage systems, if used. The racking piles are removed by pulling them out of the earth, so that nothing remains in the ground.

Proposed mitigation measure:

Horseshoe Bend, its successors or assigns, shall decommission the entire site if the Project ceases producing electricity for a period of more than twelve (12) months. Decommissioning shall involve the removal of all solar panels, racking, and equipment including concrete pads and trenched electrical wiring. Fencing and internal access roads shall also be removed, unless the landowner states in writing that they prefer fencing and internal roads to remain in place. This mitigation requirement shall be deferred if Horseshoe Bend continues with its currently proposed operation beyond 40 years.

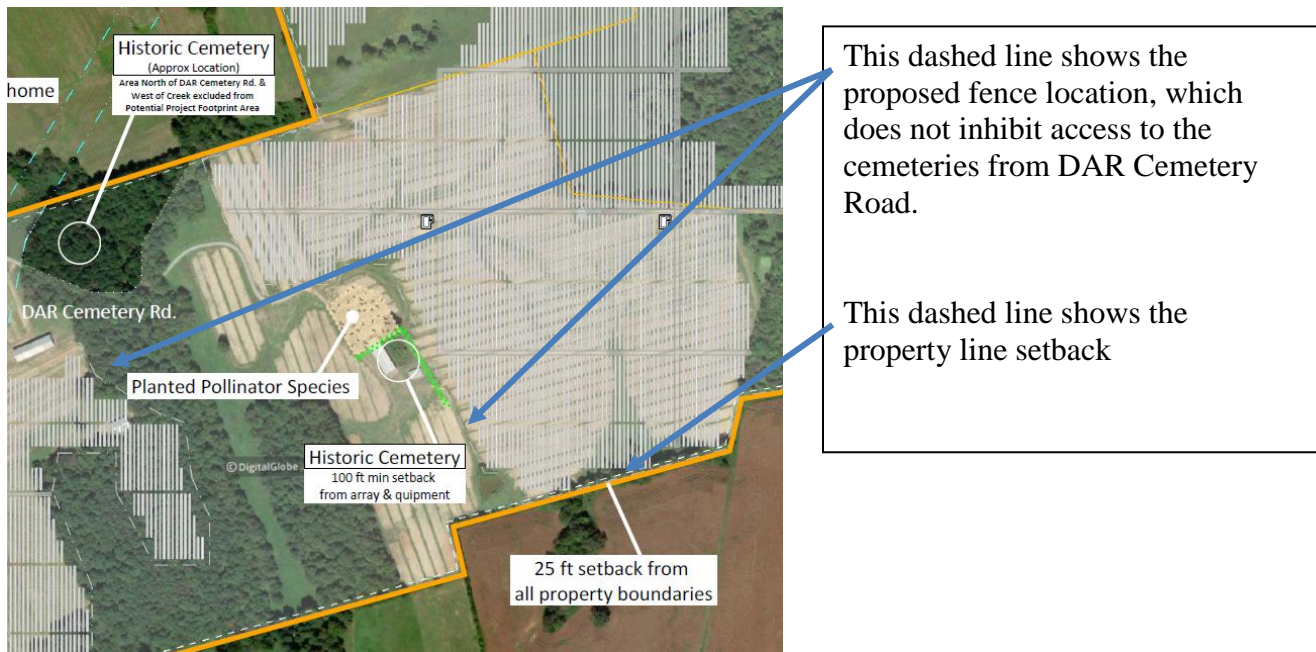
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3. Since the two historic cemeteries are located within the fence boundaries (see Site Assessment Report, Appendix A: Preliminary Project Layout), describe any plans to cut back vegetation periodically.

RESPONSE: There are multiple different dashed lines shown on the site plan, which may have created confusion. As shown on the clip of the site plan below, the fence boundary excludes the historic cemeteries. While the fence boundary location is subject to change within the potential project footprint, the Project will in no case encapsulate the historic cemeteries.



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4. Refer to the questions propounded by Wells Engineering, which are attached as an Appendix to this information request, and provide responses to those questions.

RESPONSE: Please see the separately filed responses.