

## **Late-Filed Exhibit 2**

Revised Noise Analysis to account for the correct location of the inverters and inclusion of the tracker system.

*Revised noise calculations are provided to account for the relocated inverters and two (2) transformers. The calculations do not account for noise associated with the tracker motors as there is no available data pertaining to their noise generation. It should be noted that the results of the revised noise calculations indicate that the highest collective operational noise level at the property boundary will be approximately 29.7 decibels, which is less than the previous results (35.8 decibels).*

### 3.12 NOISE

Noise from the construction of the solar panel facility is exempted under Connecticut regulations for the control of noise. For more information refer to RCSA 22a-69-1.8(h). During construction, the increase in noise will likely lead to a subsequent elevation in ambient sound levels in the immediate vicinity of the Project. Standard construction equipment will be used for the Project, and the highest level of noise generated from this equipment - such as backhoes, bulldozers, cranes and trucks – is expected to be approximately 88 dBA from the origin.

The primary sources of noise generation associated with the Facility will be the (2) 2,000 kVA transformers and (8) inverters. The tracker motors for the solar panels themselves also emit noise, but the level of noise for these motors is minimal. A summary of the equipment and manufacturer’s listed sound data is provided below in Table 1.

**Table 1: Equipment Sound Summary**

Equipment	Number of Sources	Listed Sound Pressure (dBA)	Distance of Observed Sound Level (meters)
Sungrow SG125HV 125kW Inverters	8	61.6	1
2,000 kVA Transformers	2	61	1

The logarithmic decibel scale is utilized to combine sound levels and adjust for distance based on the Inverse Square Law. Total sound levels from the proposed equipment was calculated as shown below:

#### Calculate Anticipated Sound Level at Nearest Property Boundary

Multiple analysis points were studied along the property boundary to determine at which point the highest level of sound will be produced by the equipment on-site. Once the point was determined, following equation was used to determine the sound level of each piece of noise-producing equipment:

$$L_b = L_a - 20 \times \log_{10}\left(\frac{D_b}{D_a}\right)$$

Where:

$L_b$  = Noise level at new distance (dBA)

$L_a$  = Noise level at original distance (dBA)

$D_b$  = New distance from source of noise (meters)

$D_a$  = Original distance from source of noise (meters)

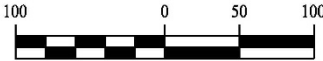
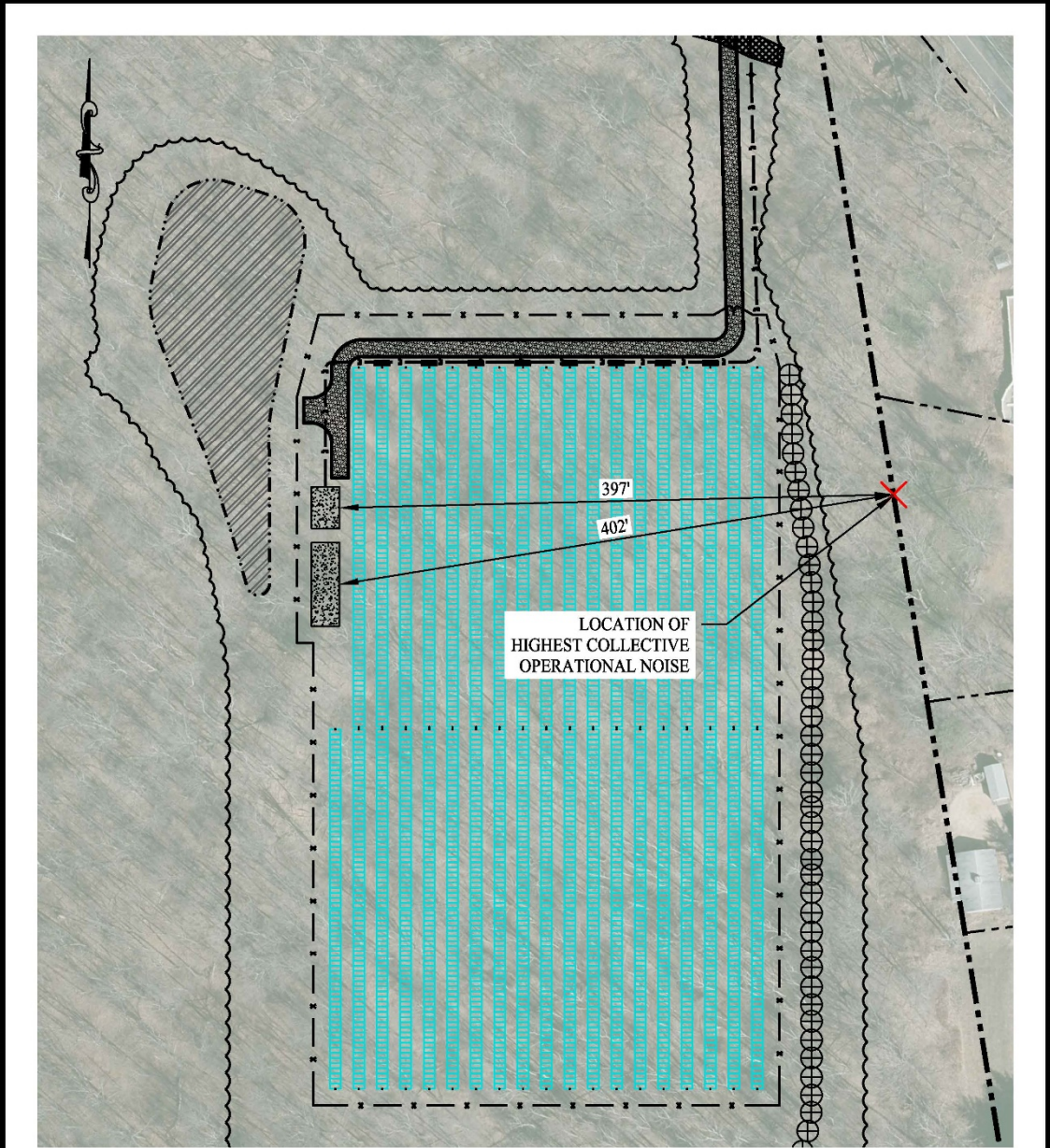
Using the data from Table 1, as well as the distances from each inverter (402’) and the transformers (397’) to the property line, the total anticipated sound level for each piece equipment was calculated.

#### Combining Sound Levels

To add multiple sound levels of different strength, the following equation was used:

$$L_t = 10 \log_{10}\left(\sum 10^{\frac{L_b}{10}}\right)$$

After combining all sound levels from each piece of equipment, it was determined that the highest collective operational noise at the property boundary would be 29.7 decibels. This noise level meets applicable CT DEEP Noise Standards, and noise levels will effectively be reduced to zero during nighttime hours when the array is not generating electricity.



**SOLLI**  
ENGINEERING  
501 Main Street, Monroe, CT 06468  
T: (203) 880-5455 F: (203) 880-9695

**NOISE CALCULATIONS**  
250 CARTER STREET  
MANCHESTER, CONNECTICUT

Project #: 23100101  
Plan Date: 05/06/24  
Scale: 1" = 100'  
Figure: