Appendix D

NOISE ANALYSIS REPORT

Lost City Renewables LLC

Muhlenberg County, Kentucky

COPPERHEAD
ENVIRONMENTAL CONSULTING

Acoustical Analysis for the Lost City Solar Project Muhlenberg County, Kentucky

Prepared for:

Lost City Renewables Inc.

28 January 2025

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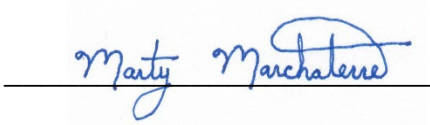

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January 28, 2025

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

Lost City Renewables Inc. (Lost City) contracted Copperhead Environmental Consulting, Inc. (Copperhead) to conduct an acoustical analysis for the proposed Lost City Solar Project (Project) near the unincorporated community of Penrod in Muhlenberg County, Kentucky (Figure 1). The Project Study Area (PSA) consists of approximately 1,413 acres, and has reference coordinates of 37.1206°, -86.9186°.

The Project is an approximately 250 megawatt (MW) solar facility that would generate electricity using photovoltaic solar panels. It would include solar panel arrays, inverter boxes, a utility interconnection substation, transformer, and overhead and underground electrical conveyance lines.

EXISTING LAND USE AND SITE CONDITIONS

According to the National Land Cover Database (NLCD) for Muhlenberg County, the PSA currently consists of agricultural fields/cultivated crops, pasture, forest/wooded land, and residential properties (Figure 2). Historically, the PSA has been used for agriculture.

Land uses on adjacent properties include agriculture, scattered wood lots, and rural residences. The terrain is hilly with slopes ranging from 2 percent to 43 percent).

EXISTING SOUND CONDITIONS

Nearest Sensitive Receptors

Sound-sensitive receptors generally are defined as locations where people reside or where the presence of unwanted sound may adversely affect the existing land use. Typically, sound-sensitive land uses include residences, hospitals, places of worship, libraries, performance spaces, offices, and schools, as well as nature preserves, recreational areas, and parks.

Receptors adjacent to the PSA are nearby residences located primarily along US Highway 431, Kentucky Route 949, Free Lane, and Forgy Mill Road (Figure 3). A total of 38 receptors, all of which are residences, were identified near the PSA (0.44 mile).

A residence on Free Lane (Figure 3, R-07) is the closest sensitive receptor to a proposed solar array; it is located approximately 340 feet from the nearest array. The shortest distance between a sensitive receptor and a proposed inverter pad is approximately 740 feet (Figure 3; R-07 and R-17). The nearest sensitive receptor is approximately 1,270 feet from the proposed substation (Figure 3; R-24). Table 1 displays the distance from each receptor to the nearest array.

Table 1. Distance from Receptors to the Nearest Solar Project Infrastructure Components.

Receptor (Residence)	Distance to Nearest Array (feet)	Distance to Nearest Inverter Pad (feet)	Distance to Transformer (feet)
R-01	1,161	2,119	10,307
R-02	950	1,910	10,918
R-03	738	1,644	9,730
R-04	568	1,219	9,400
R-05	545	1,002	9,186
R-06	604	843	8,773
R-07	339	743	7,729
R-08	424	1,910	8,977
R-09	379	1,321	8,378
R-10	353	1,062	8,187
R-11	661	946	8,093
R-12	506	2,577	6,888
R-13	2,323	2,637	5,796
R-14	1,742	2,323	4,766
R-15	1,056	1,482	5,048
R-16	607	1,164	5,599
R-17	349	796	5,286
R-18	380	1,002	3,222
R-19	916	1,644	2,281
R-20	841	1,683	2,530
R-21	358	1,112	2,416
R-22	367	1,112	2,388
R-23	368	843	2,009

Receptor (Residence)	Distance to Nearest Array (feet)	Distance to Nearest Inverter Pad (feet)	Distance to Transformer (feet)
R-24	608	1,112	1,312
R-25	1,372	1,644	5,472
R-26	950	1,589	6,888
R-27	1,575	2,270	7,381
R-28	1,204	1,589	8,282
R-29	1,636	1,910	8,672
R-30	1,636	2,119	9,400
R-31	1,108	1,910	9,619
R-32	458	1,164	8,672
R-33	821	1,432	9,186
R-34	625	1,432	9,292
R-35	640	1,262	9,619
R-36	739	1,262	9,619
R-37	1,003	1,589	9,957
R-38	1,161	1,910	10,189

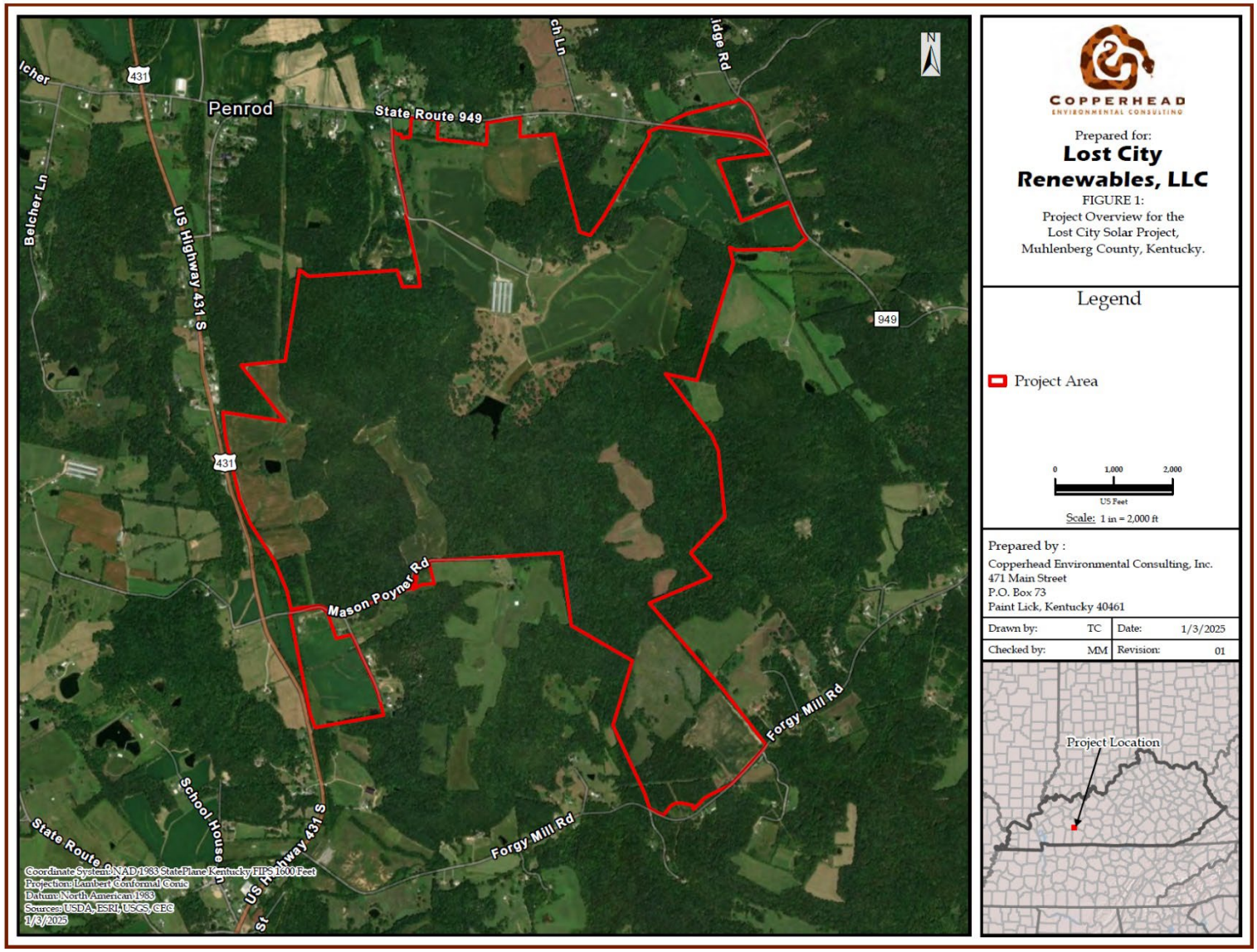

Figure 1. Project location

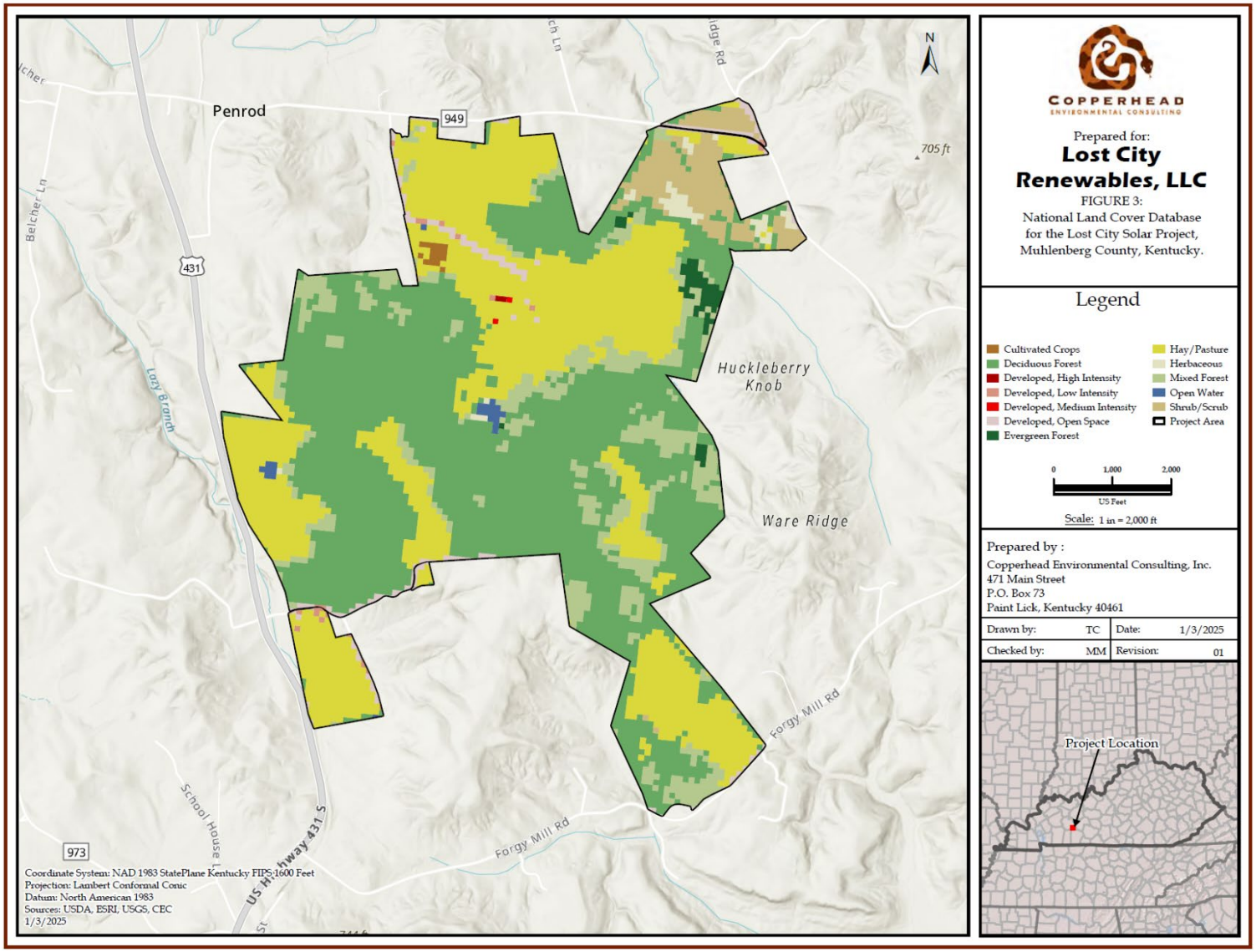

Figure 2. Land Use

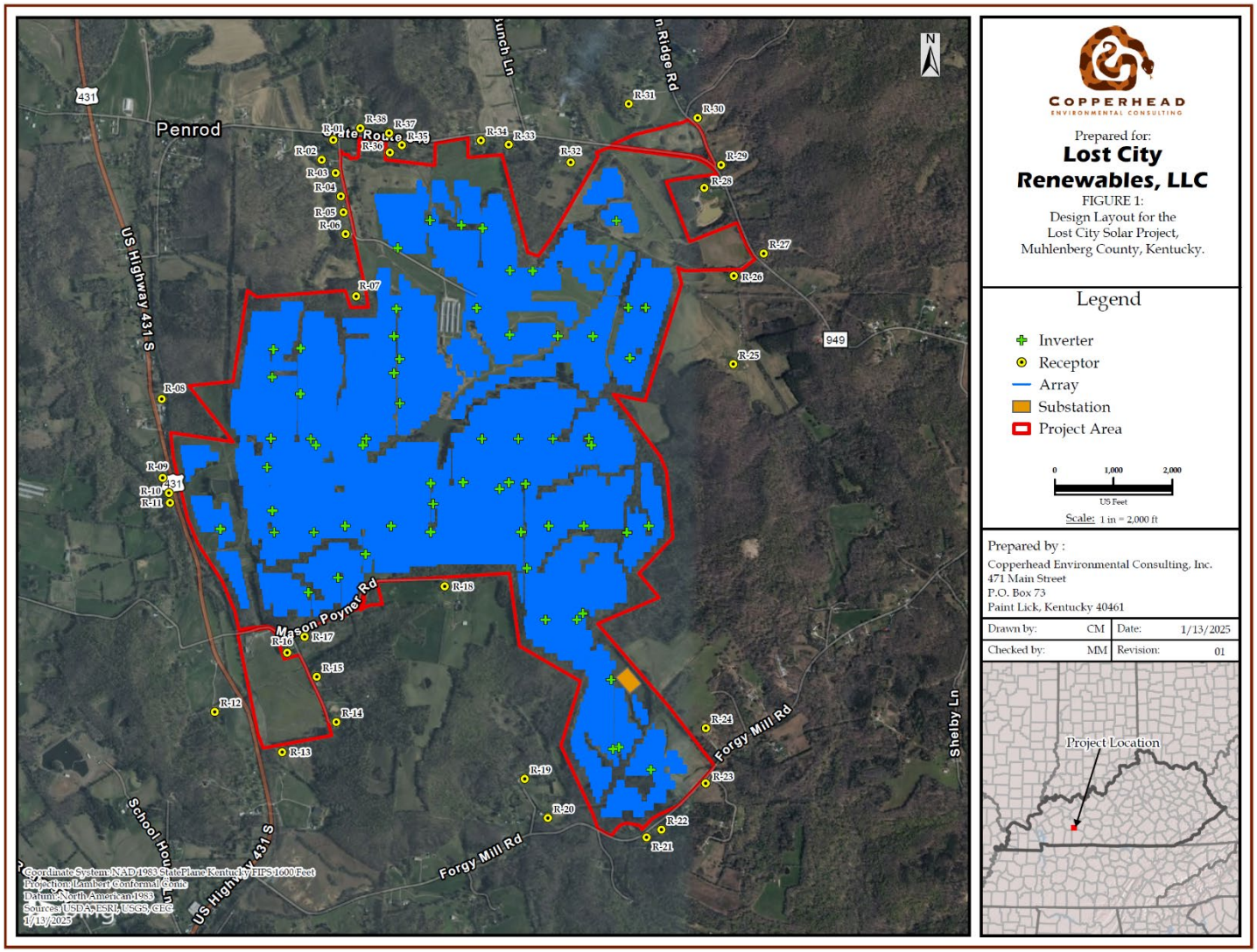

Figure 3. Sensitive Sound Receptors

Existing Sound from Surrounding Areas

Noise is generally described as unwanted sound, which can be based either on objective effects (hearing loss, damage to structures, etc.) or subjective judgments (such as community annoyance). Sound is usually represented on a logarithmic scale with a unit called the decibel (dB). Sound on the decibel scale is referred to as sound level. The threshold of human hearing is approximately 0 dB, and the threshold of discomfort or pain is around 120 dB.

Noise levels are computed over a 24-hour period and adjusted for nighttime annoyances to produce the day-night average sound level (Ldn). Ldn is the community noise metric recommended by the US Environmental Protection Agency (USEPA) and has been adopted by most federal agencies (USEPA 1974). A Ldn of 65 A-weighted decibels (dBA) is the most common level for noise planning purposes and represents a compromise between community impact and the need for activities such as construction. The A-weighting network measures sound in a similar fashion to how a person perceives or hears sound, thus achieving a strong correlation with how people perceive acceptable and unacceptable sound levels.

Areas exposed to a Ldn above 65 dBA are generally not considered suitable for residential use. A Ldn of 55 dBA was identified by USEPA as a level below which there is no adverse impact (USEPA 1974). For reference, approximate sound levels (measured in dBA) of common activities/situations are provided in Table 1.

Table 2. Sound Levels of Common Activities/Situations.

Activity/Event	dBA
Lowest audible sound to person with average hearing	0
Quiet rural, nighttime (outdoors)	25
Crickets, distant frogs	30
Birds, distant dog bark	40
Quiet urban, nighttime (outdoors)	45
Large business office (indoors)	60
Normal speech at 3 feet (indoors)	60-70
Noisy urban area, daytime (outdoors)	75
Food blender at 3 feet	85

Activity/Event	dBA
Gas lawn mower at 3 feet	100
Jet flyover at 1,000 feet	110

Source: Caltrans 2013.

Local conditions such as traffic, topography, and wind can alter background sound conditions. In general, the Ldn sound levels for outdoor quiet rural nighttime conditions is approximately 25 dBA (EPA 1974). Sound levels attenuate (or diminish) at a rate of approximately 6 dBA per doubling of distance from an outdoor point source due to the geometric spreading of the sound waves.

Existing Project Site Area Sound

The PSA is within an agricultural, rural-residential, and undeveloped area of Muhlenberg County. Ambient sound at the PSA consists mainly of agricultural sounds, such as noise from farm machinery; natural sounds, such as from wind and wildlife; and moderate traffic sounds. Sound levels of these types generally range from 45 to 55 dBA (USDOT 2015).

Typical sounds produced from farming and agriculture activities in the PSA include trucks, all-terrain vehicles (ATVs), tractors, and other farming equipment. The adjacent farms produce sound similar to those within the PSA. Table 3 lists the sound level of common agricultural sounds.

Table 3. Decibel Ratings of Common Agricultural Sounds.

Decibel	Sound
30	Crickets, distant frogs, whisper
40	Kitten meowing, songbirds, distant dog bark
50	Refrigerator running, babbling stream, quiet empty barn
60	Average conversation level
70	Chicken coop, busy restaurant. At this level, noise may begin to affect your hearing if exposed over a long period of time.
80	Tractor idling, barn cleaner, conveyors, elevators. These noises can damage hearing if exposed for more than eight continuous hours.
90	Tractor at 50 percent load, blower, compressor, combine. As noise levels increase, the "safe" exposure time decreases, damage can occur in less than eight hours.

Decibel	Sound
100	Tractor at 80 percent load, pig squeal, power tools. Even two hours of exposure can be dangerous. With each 5-decibel increase, the "safe time" is cut in half.
120	Tractor at full load, bad muffler, old chain saw. The danger is immediate.
140	Gunshot, backfire, dynamite blast. Any length of exposure time is dangerous. At this level, the noise may actually cause pain in the ear.

Source: Texas A&M 2012.

Roadway traffic contributes to sound within the PSA. Portions of the PSA are bounded by two-lane roadways that receive local traffic (i.e., cars, trucks, and tractor trucks with trailering equipment). Based on Kentucky Transportation Cabinet traffic count data (accessed January 17, 2025), the average annual daily traffic (AADT) on US 431 west of the PSA is 3,332 vehicles and on KY 949 north of the PSA the AADT is 392 vehicles. Roadway traffic noise levels typically range from 70 to 80 dBA at approximately 50 feet and peak during normal business hours.

CONSTRUCTION SOUND CONDITIONS

Muhlenberg County does not have a noise ordinance. Lost City is not aware of any solar-specific United States Standards for sound mitigation during project construction or operation. Common practice is to treat solar projects like any other sources of sound, applying existing laws that govern noise pollution from all sources in the applicable jurisdiction (MAREC 2021). The following sections describe Project-related noise conditions, their timing and duration, and sound levels at nearby sensitive receptors.

Construction Timing

Construction activity would be limited to the hours of 7am – 7pm, Monday through Saturday, over a period of approximately 12 – 18 months. Construction activities that create a higher level of noise, such as pile driving, will be limited to 8am – 5pm, Monday through Friday. Non-noise-causing and non-construction activities can take place between 6am and 10pm, Monday through Sunday, including field visits, arrival, departure, planning, meetings, mowing, surveying, etc.

Most construction equipment would not operate for the entire construction period, but would be phased in and out according to the progress of construction. Because construction would be limited to daytime hours, there would be no effect on ambient noise levels at night

Equipment and Machinery

Construction would use equipment typical for site development (i.e., backhoes, generators, pile drivers, and flatbed trucks). Equipment would be spread out over the entire site, with some equipment operating along the perimeter of the site while the rest of the equipment may be located from several hundred to several thousand feet from the perimeter.

The U.S. Department of Transportation Federal Highway Administration (FHWA) publishes noise levels for typical construction equipment as shown in the table below.

Table 4. Sound Levels for Common Construction Equipment.

Equipment Type	Typical Sound Level (dBA) at 50 Feet
Backhoe	80
Chainsaw	85-115
Crane (Mobile)	85
Dozer	85
Dump Truck	84
Generator	81
Grader	85
Front End Loader	80-85
Pickup Truck	55
Pile Driver	90-95
Pneumatic Tool	85
Pump	76
Roller	74
Scraper	89
Shovel	82
Spike Driver	77
Tractor	84
Truck (Flatbed)	80-90
Welder/Torch	73

Source: FHWA Construction Noise Handbook, August 2006. Table based on US EPA Report and measured data.

The most common method of installing the support posts for the solar panels is to drive them into the ground. This pile-driving procedure produces a repetitive, metallic impact sound. Individual piles take only a few minutes to be driven into the ground. Pile driving is short-lived and will take approximately six months to complete. This would occur at the earlier stages of construction, typically in the second or third month.

While standard construction pile drivers are estimated to produce between 90 to 95 dBA at a distance of 50 feet, the specialty pile drivers used for solar panel installation produce less noise, and the piles supporting solar panels will be driven primarily into soil. Based on a common type of pile driver used to install solar panel support posts (e.g., Vermeer Pile Driver - PD 10), the anticipated sound level is 84 dBA at 50 feet (Vermeer 2012). The nearest residence is approximately 340 feet from the nearest solar panel array: at this distance, temporary and intermittent construction sound levels would be approximately 67.4 dBA when a pile driver is used to install the piles/posts for the nearest solar panel array tracking system. This sound level is temporary and will decrease within hours as sections of the array are completed and the pile driver moves further away.

Only limited concrete pouring is anticipated for the Project. Base slabs for the inverters and other electrical equipment will be precast and dropped in place. The transformer base at the substation may be poured concrete. During this time, a concrete pump truck will be needed. A concrete pump truck typically generates a sound of approximately 82 dBA at 50 feet. At the nearest receptor (1,270 feet from the substation), the sound level is estimated to be 53.9 dBA intermittently for a day or two.

Underground electrical lines also will be constructed on site. The trenches to hold the cabling will be approximately 3- to 4-feet deep and approximately 2-feet wide. A ditch trencher (ditch witch) will be used to dig trenches for laying the electrical cables. The anticipated sound level at 50 feet is 74 dBA (Ditch Witch 2021). The nearest residence is approximately 340 feet from the nearest underground medium voltage electrical line. At this distance, temporary and intermittent sound levels for a ditch trencher would be approximately 57.3 dBA. This sound level is temporary and will decrease within hours as sections of the trench are completed and the trencher moves further away from the residence.

Assembly of Solar Panel Array and Construction of Facilities

Solar panels will be manufactured off site and shipped to the site ready for installation. Assembly of the solar panel array tracking system, the installation of solar panels, inverters and other electrical equipment associated with the solar facility and substation would likely employ typical manual hand tools and power tools. These assembly operations would occur several hundred feet to thousands of feet inside the property boundary. Anticipated sound generated by power equipment would be short in duration.

Roadway Sound During Construction

During construction, there would be a temporary increase in traffic volume from commuting construction workers (up to 300 workers during peak phases), delivery of construction equipment and material, delivery of solar panel components and equipment is anticipated. Worker commutes with passenger vehicles and trucks would occur daily with traffic peaks in the morning and afternoon, whereas deliveries of equipment would occur on trailers, flatbeds, or other large vehicles periodically throughout the construction process at various times of day. Based upon FHWA sound levels, the sound contributed by construction vehicles such as flatbed trucks, light passenger cars and trucks falls within acceptable ranges because the sound is of short duration.

Construction Noise Summary

Table 5 displays a summary of anticipated maximum on-site construction sound levels at each of the sensitive receptors identified in Figure 1.

Table 5. Selected Maximum Anticipated Construction Sound Levels at each Sensitive Receptor.

Receptor (Residence)	Distance to Nearest Array (feet)	Pile Driving	Concrete Pouring	Ditch Trenching
R-01	1,161	56.7	54.7	46.7
R-02	950	58.4	56.4	48.4
R-03	738	60.6	58.6	50.6
R-04	568	62.9	60.9	52.9
R-05	545	63.3	61.3	53.3
R-06	604	62.4	60.4	52.4
R-07	339	67.4	65.4	57.4
R-08	424	65.4	63.4	55.4
R-09	379	66.4	64.4	56.4
R-10	353	67.0	65.0	57.0
R-11	661	61.6	59.6	51.6
R-12	506	63.9	61.9	53.9

Receptor (Residence)	Distance to Nearest Array (feet)	Pile Driving	Concrete Pouring	Ditch Trenching
R-13	2,323	50.7	48.7	40.7
R-14	1,742	53.2	51.2	43.2
R-15	1,056	57.5	55.5	47.5
R-16	607	62.3	60.3	52.3
R-17	349	67.1	65.1	57.1
R-18	380	66.4	64.4	56.4
R-19	916	58.7	56.7	48.7
R-20	841	59.5	57.5	49.5
R-21	358	66.9	64.9	56.9
R-22	367	66.7	64.7	56.7
R-23	368	66.7	64.7	56.7
R-24	608	62.3	60.3	52.3
R-25	1,372	55.2	53.2	45.2
R-26	950	58.4	56.4	48.4
R-27	1,575	54.0	52.0	44.0
R-28	1,204	56.4	54.4	46.4
R-29	1,636	53.7	51.7	43.7
R-30	1,636	53.7	51.7	43.7
R-31	1,108	57.1	55.1	47.1
R-32	458	64.8	62.8	54.8
R-33	821	59.7	57.7	49.7
R-34	625	62.1	60.1	52.1
R-35	640	61.9	59.9	51.9
R-36	739	60.6	58.6	50.6

Receptor (Residence)	Distance to Nearest Array (feet)	Pile Driving	Concrete Pouring	Ditch Trenching
R-37	1,003	58.0	56.0	48.0
R-38	1,161	56.7	54.7	46.7

OPERATIONAL SOUND CONDITIONS

This section described the sound conditions during Project operation. Sound power levels for Project equipment were obtained from vendor/manufacturer data and are based on preliminary design.

Solar Panel Array

The solar panel array associated with the Project includes single-axis tracking panels (module) distributed evenly across the site. Tracking systems are driven by small, 24-volt brushless DC motors to track the arc of the sun to maximize energy generation. Panels would turn no more than five degrees every 15 minutes and would operate no more than one minute out of every 15-minute period during daylight hours.

The sound typically produced by panel tracking motors is approximately 69.6 dBA at 3.3 feet (NextTracker 1P or equivalent). At 340 feet (the closest residential receptor), the predicted sound level would be approximately 29.3 dBA. During the approximately four minutes per hour that tracker motors are operating, the sound generated by the motors is likely to be masked by existing daytime ambient sound sources and inaudible at this distance.

Inverters

The Project includes approximately 61 photovoltaic inverter pads, each containing six inverters. The inverter pads are located at least 740 feet from the nearest residence. The inverters are expected to be SMA MVPS 4000-S2 inverters or similar. According to the manufacturer's specifications, the sound level is less than 81 dBA at a distance of approximately 3 feet. The sound produced by an inverter is described as a hum and has roughly the same sound level of a household refrigerator. A study of solar power facility acoustics in Massachusetts found that at 150 feet from an inverter pad, sound levels approached background levels (Guldberg 2012).

At each inverter pad, the sound emission for multiple inverters is a combined 88.78 dBA using a conservative sound emission estimate. If all six inverters are running simultaneously, the sound level at the nearest residence (740 feet) would be 40.9 dBA. The inverters would only run during daytime hours, and there would be no nighttime sound impacts.

Transformer

The main transformer at the substation is anticipated to be a 138-69/34.5kV 120 MVA or similar transformer. The National Electronic Manufacturers Association estimates that this type of substation transformer generates less than 77 dBA at 6 feet (NEMA 2019). The sound from transformers is produced by alternating current flux in the core that causes it to vibrate, and is characterized as a discrete low frequency hum. Maximum sound level from the transformer would be 30.5 dBA at 1,270 feet (the closest sensitive receptor).

Operational Noise Summary

Table 6 displays a summary of estimated maximum on-site operational sound levels at each of the sensitive receptors identified in Figure 1.

Table 6. Maximum Anticipated Operational Sound Levels at each Sensitive Receptor.

Receptor (Residence)	Nearest Panel Tracking Motors (dBA)	Nearest Inverters[1] (dBA)	Transformer (dBA)
R-01	18.7	31.8	12.3
R-02	20.4	32.7	11.8
R-03	22.6	34.0	12.8
R-04	24.9	36.6	13.1
R-05	25.2	38.3	13.3
R-06	24.3	39.8	13.7
R-07	29.4	40.9	14.8
R-08	27.4	32.7	13.5
R-09	28.4	35.9	14.1
R-10	29.0	37.8	14.3
R-11	23.6	38.8	14.4
R-12	25.9	30.1	15.8
R-13	12.6	29.9	17.3
R-14	15.1	31.0	19.0

Receptor (Residence)	Nearest Panel Tracking Motors (dBA)	Nearest Inverters[1] (dBA)	Transformer (dBA)
R-15	19.5	34.9	18.5
R-16	24.3	37.0	17.6
R-17	29.1	40.3	18.1
R-18	28.4	38.3	22.4
R-19	20.7	34.0	25.4
R-20	21.5	33.8	24.5
R-21	28.9	37.4	24.9
R-22	28.7	37.4	25.0
R-23	28.7	39.8	26.5
R-24	24.3	37.4	30.2
R-25	17.2	34.0	17.8
R-26	20.4	34.3	15.8
R-27	16.0	31.2	15.2
R-28	18.4	34.3	14.2
R-29	15.7	32.7	13.8
R-30	15.7	31.8	13.1
R-31	19.1	32.7	12.9
R-32	26.8	37	13.8
R-33	21.7	35.2	13.3
R-34	24.1	35.2	13.2
R-35	23.8	36.3	12.9
R-36	22.6	36.3	12.9
R-37	19.9	34.3	12.6

Receptor (Residence)	Nearest Panel Tracking Motors (dBA)	Nearest Inverters[1] (dBA)	Transformer (dBA)
R-38	18.7	32.7	12.4

[1]Conservative assumption of all six inverters running simultaneously at the nearest inverter pad.

MAINTENANCE SOUND CONDITIONS

Vehicular Traffic

Traffic associated with project maintenance will include occasional light duty trucks an average of 2 or 3 days per week for staff responsible for maintaining vegetation or performing maintenance or repairs. For vegetation management, periodic truck traffic will occur to deliver and move sheep as part of solar grazing activities or for transporting mowing equipment.

In addition, work may be conducted at night up to 50 days a year. While workers are not anticipated onsite on most weekends, it remains a possibility in the event of the need for timely repairs, or groundskeeping dictated by weather. Employees are anticipated to use mid- or full-sized trucks and would have less contribution to traffic noise than a typical single-family home.

Maintenance Activities

Typical maintenance activities include minor repair and maintenance on the solar panels, tracking systems, electrical wiring, or maintenance/inspections of the inverters/transformer. It is anticipated that trimming and mowing would be performed approximately 20-30 times per year depending on vegetation growth rate. Mowing equipment, if used, would generate temporary sound levels of up to 59.4 dBA at the nearest residential receptor. This periodic mowing would produce sound levels comparable to roadway traffic in the surrounding area, although at less frequent intervals. Lost City anticipates primarily using sheep and solar grazing to maintain vegetation. It is anticipated that the Project will generate less noise during vegetation management than the average solar project.

MITIGATION MEASURES

Lost City will implement the following measures during and after the construction phase to reduce and minimize noise impacts.

- Construction activities, processes, and deliveries will be limited to the hours between 7:00 am and 7:00 pm, Monday through Saturday; construction activities that create a higher level of noise, such as pile-driving, will be limited to 8 a.m. to 5 p.m. local time, Monday through Friday. Non-noise-causing and non-construction activities can take place on the

site between 6 a.m. and 10 p.m. local time, Monday through Sunday, including field visits, arrival, departure, planning, meetings, mowing, surveying, etc.

- Based on previous experience constructing solar projects, Lost City believes that noise concerns resulting from pile driving activities are most effectively managed through limiting pile driving activities within a certain radius to certain hours during the day to avoid potentially impacting nearby receptors. To this end, Lost City proposes to limit pile driving activities within 1,000 feet of potentially impacted receptors to a reduced period.
- If the pile-driving activity occurs within 1,500 feet of a noise-sensitive receptor, Lost City will implement a construction method that will suppress the noise generated during the pile-driving process (i.e., semi-tractor and canvas method, sound blankets on fencing surrounding the solar site, or any other comparable method). Lost City may forego using noise suppression measures if it employs a panel installation method that does not use pile driving, so long as that method does not create noise levels similar to pile driving.
- Lost City will notify residents and businesses within 2,400 feet of the project boundary about the construction plan, the noise potential, any mitigation plans, and its Complaint Resolution Program, at least one month prior to the start of construction.
- Lost City will place panels, inverters, and substation equipment consistent with the distances to noise receptors to which it has committed in its maps and site plans.

CONCLUSION

The Project would impact sensitive receptors primarily during construction. These receptors are rural residences within 0.44 miles of the PSA. Common sources of construction noise include equipment, such as delivery trucks, backhoes, pile drivers, chain saws, bush hogs, or other large mowers for clearing, that produce maximum sound levels of up to approximately 85 dBA at 50 feet. Construction activities will occur over approximately 12 – 18 months between the hours of 7am and 7pm Monday through Saturday, although activities that create a higher level of noise, such as pile driving, will be limited to 8am – 5pm, Monday through Friday. Construction impacts would be temporary and intermittent, as most equipment would be phased in and out according to the progress of the Project. At times, construction activities will be audible to nearby residences or other sensitive receptors; however, not all equipment will be operating at the same time, and activities will be temporary in duration and spread throughout the Project area.

Pile driving during solar array installation is anticipated to produce the greatest sound level for an extended period of time (approximately six months). Standard solar pile drivers are estimated to produce 84 dBA at a distance of 50 feet (Vermeer 2012). Pile driving may temporarily generate sound levels of 67.4 dBA at the nearest residential receptor, but only for 1 or 2 days when the closest array is being installed; when other arrays are installed, the sound level would be lower. These sound levels represent a worst-case scenario; actual sound levels would likely be lower due to attenuation from vegetation and topography. Construction sounds at a solar project are

comparable to other common construction activities that require pile driving due to their temporary and intermittent nature (MAREC 2021).

Overall, construction-related noise impacts would be temporary and intermittent, and would not contribute to a significant sound increase when compared to sound currently occurring on or near the site (i.e., the operation of farming equipment for agricultural activities and crop harvesting as well as moderate traffic on the nearby roads).

During operation, the ambient sound environment would return to existing levels. The moving parts of the solar panel arrays would produce minimal sound. At the nearest residence, the inverters would produce sound levels of approximately 40.9 dBA, and the Project substation transformer would emit approximately 30.5 dBA. These sound levels are below typical background sound levels in rural areas. In addition, nighttime operation will result in lower sound emissions, as power will not be generated and therefore the solar inverters and substation transformer will be operating in stand-by mode. As a result, impacts of Project operation are anticipated to be minimal to negligible.

Light truck vehicle noise from maintenance employees commuting to the site or driving on the site would be negligible in the context of existing local traffic levels and sounds. Maintenance activities such as periodic mowing of vegetation surrounding the solar panels would produce sound levels comparable to those of agricultural operations in and near the PSA. Mowing equipment, if used, would generate temporary sound levels of up to 59 dBA at the nearest residential receptor. This periodic mowing would produce sound levels comparable to roadway traffic in the surrounding area, although at less frequent intervals. Lost City anticipates primarily using sheep and solar grazing to maintain vegetation and therefore, the Project will generate less noise during vegetation management than the average solar project. As a result, impacts of Project maintenance are anticipated to be negligible.

LITERATURE CITED

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