

## MEMORANDUM

**DATE:** April 15, 2021

**TO:** Jeremy Loudon, Principal, Ldn Consulting, Inc.

**FROM:** J.T. Stephens, Associate/Senior Noise Specialist

**SUBJECT:** Ambient Noise Results: Round Mountain Project in Shasta County, California

### INTRODUCTION

The following memorandum presents a results summary of our ambient noise monitoring for the Round Mountain project. The Round Mountain project is located east of Fern Road, in Shasta County, California, within an electricity transmission line easement surrounded by cattle-ranch land.

### EXISTING SETTING

#### Land Uses in the Project Vicinity

The project site is surrounded primarily by cattle-ranch land, utility uses, and open space with the nearest existing residences to the northwest. Land uses and residential uses adjacent to the project site include the following:

- **Northwest:** Residence at 12362 Fern Road and Residence at 12377 Fern Road
- **East:** Ranch land, utility uses, open space
- **South:** Stronghold Ranch at 12101 Fern Road
- **West:** Residence (GG Ranch) at 12318 Fern Road

#### Overview of the Existing Noise Environment

The primary existing noise sources in the project area are automobiles on Fern Drive, corona noise from transmission lines, and wildlife/animals in the vicinity. In addition, periodic aircraft operations are audible on the project site.

To capture existing ambient noise conditions surrounding the project site, long-term noise measurements were conducted near sensitive receptors in the vicinity. Three long-term, 24-hour measurements were taken from April 5, 2021, to April 6, 2021. The locations of the noise measurements are shown on Figure 1 (Attachment A) and the results are summarized in Table A. Noise measurement data information is provided in Attachment B of this analysis. All electronic data associated with the measurements, including photos, will be transmitted electronically.

**Table A: Existing Noise Level Measurements**

Location Number	Location Description	Daytime Noise Levels <sup>1</sup> (dBA L <sub>eq</sub> )	Evening Noise Levels <sup>2</sup> (dBA L <sub>eq</sub> )	Nighttime Noise Levels <sup>3</sup> (dBA L <sub>eq</sub> )	Average Daily Noise Levels (dBA CNEL)	Primary Noise Sources
M-1	25 feet east of centerline of Fern Rd., representing two residential receptors at 12362 and 12377 Fern Rd.	46.2-57.8	38.4-46.8	36.2-47.5	51.6	Traffic on Fern Rd., corona noise from power lines, wildlife
M-2	40 feet east of centerline of Fern Rd., representing one residential receptor at 12318 Fern Rd.	43.9-58.2	41.1-45.2	35.7-44.5	50.5	Traffic on Fern Rd., corona noise from power lines, wildlife
M-3	North of Stronghold Ranch buildings, at approximate setback of house/cottage buildings of 12101 Fern Rd.	34.0-48.0	37.1-38.7	37.6-38.6	44.8	Wildlife, corona noise from power lines, distant traffic on Fern Rd.

Source: Compiled by LSA (February 2021).

<sup>1</sup> Daytime Noise Levels = noise levels during the hours of 7:00 a.m. to 7:00 p.m.

<sup>2</sup> Evening Noise Levels = noise levels during the hours of 7:00 p.m. to 10:00 p.m.

<sup>3</sup> Nighttime Noise Levels = noise levels during the hours of 10:00 p.m. to 7:00 a.m.

CNEL = Community Noise Equivalent Level

dBA = A-weighted decibels

ft = foot/feet

Additionally, three short-term (minimum) 20-minute measurements were concurrently taken at the same locations as long-term measurements in order to compare results of the two different Larson Davis sound level meters. Due to the relatively quiet noise environment, measured noise levels reached the noise floor of the meters used for long-term measurements (Spark 706RC) and the short-term meter (LxT) was able to measure lower ambient noise levels. Table B presents a summary comparison of Larson Davis sound level meter results.

**Table B: Comparison of Larson Davis Sound Level Meter Results**

Measurement Number	Date/Time	dBA L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	Sound Level Meter
M-1	4/6/2021:	58.8	85.6	34.9	Spark
ST-1	10:27 to 10:52	58.5	86.1	26.9	LxT
M-2	4/6/2021:	48.7	69.8	33.2	Spark
ST-2	9:50 to 10:10	42.4	63.5	24.0	Lxt
M-3	4/6/2021:	37.5	64.6	33.5	Spark
ST-3	10:27 to 10:52	32.5	63.2	25.0	Lxt

**ATTACHMENT A**

**FIGURE**



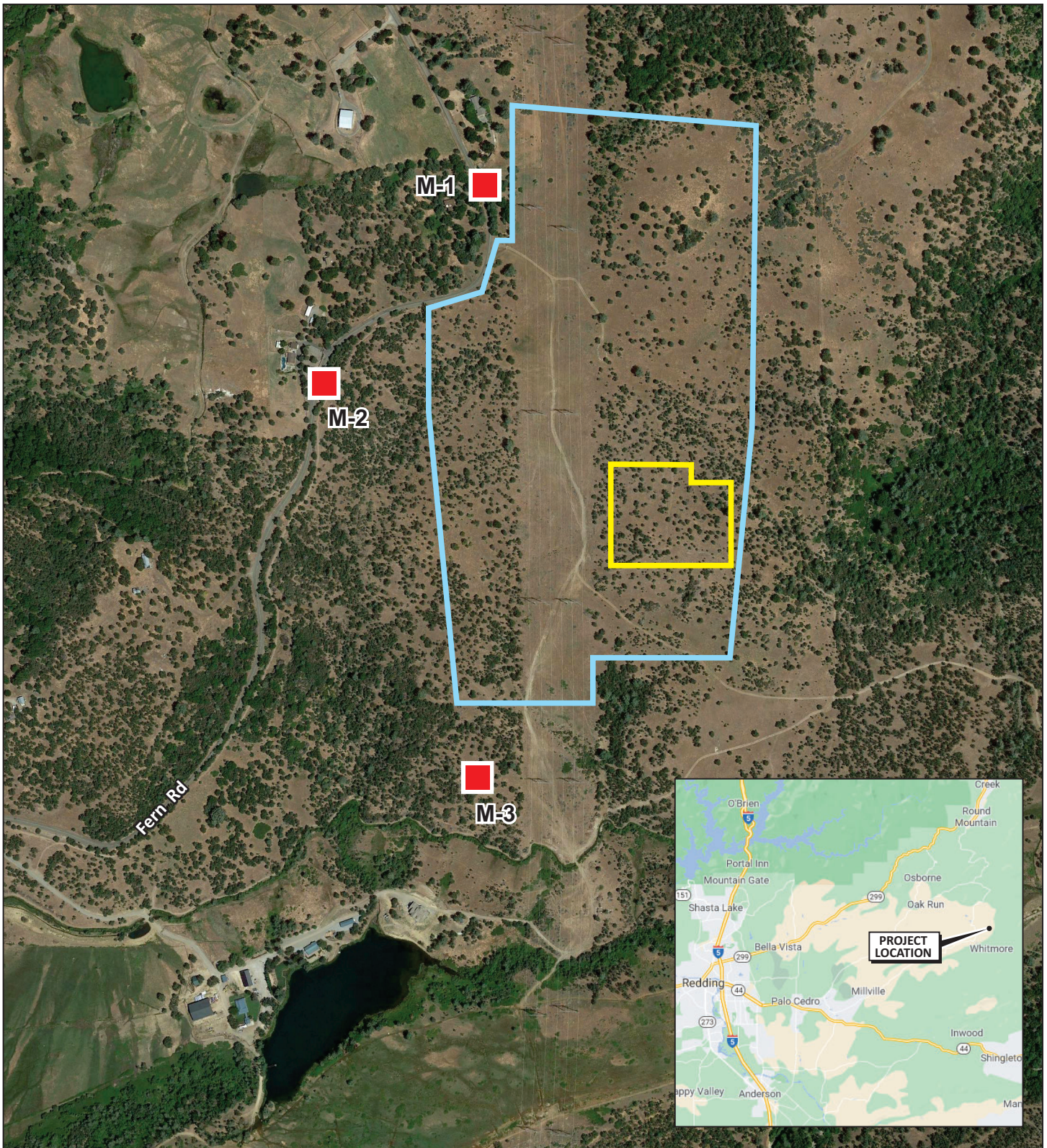


FIGURE 1

LSA



0 330 660  
FEET

SOURCE: Google Earth

LEGEND

- Project Site
- Construction Limits
- Monitoring Locations

*Round Mountain Project*  
Project Location



**ATTACHMENT B**

**NOISE MONITORING SHEETS**

## Noise Measurement Survey – 24 HR

Project Number: LDN2101

Project Name: Round Mountain

Test Personnel: Jordan Roberts

Equipment: Larson Davis Spark 706RC

Site Number: LT-1 Date: 4/5/21

Time: From 11:30 AM To 12:00 PM

Site Location: 25 feet east of centerline of Fern Rd., representing northern two receptors

Primary Noise Sources: Traffic on Fern Rd., corona noise from power lines, wildlife

Location Photo:



## Noise Measurement Survey – 24 HR

Project Number: LDN2101  
Project Name: Round Mountain

Test Personnel: Jordan Roberts  
Equipment: Larson Davis Spark 706RC

Site Number: LT-2 Date: 4/5/21

Time: From 12:30 PM To 1:00 PM

Site Location: 40 feet east of centerline of Fern Rd., representing southern receptor

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Primary Noise Sources: Traffic on Fern Rd., corona noise from power lines, wildlife

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\_\_\_\_\_  
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Location Photo:





## Noise Measurement Survey – 24 HR

Project Number: LDN2101

Project Name: Round Mountain

Test Personnel: Jordan Roberts

Equipment: Larson Davis Spark 706RC

Site Number: LT-3 Date: 4/5/21

Time: From 12:00 PM To 12:00 PM

Site Location: North of Stronghold Ranch Facilities, at approximate setback of house from Fern Rd.

Primary Noise Sources: Wildlife, corona noise from power lines, distant traffic on Fern Rd.

Location Photo:

