SOARING RANCH PHASE II

10001 SOARING WAY
TRUCKEE, CA 98161

ENVIRONMENTAL NOISE STUDY

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1. INTRODUCTION

This report presents the results of the noise analysis for Soaring Ranch Phase II project located at 10001 Soaring Way in Truckee California. The purpose of the noise analysis was to determine the existing noise levels from traffic at the site and, based on results from the measurements and the environmental noise model, to provide recommendations, if applicable, for the buildings' envelope to reduce noise levels inside the residential units to within the design criteria of 45 dBA CNEL. The principal source of noise at the site is traffic from Soaring Way.

2. DESIGN CRITERIA

2.1. Town of Truckee Development Code

§18.44.050 – Residential Interior Noise Standards

(A) ***Interior Noise Standard.*** *Whenever a new single-family or multifamily dwelling unit is proposed on a parcel where the existing exterior ambient noise level may exceed 60 dBA CNEL, the land use permit application shall include an acoustical analysis showing the dwelling unit has been designed to limit intruding noise to an interior CNEL of 45 dB in compliance with California Code of Regulations Title 24, Part 2.*

3. ENVIRONMENTAL NOISE SURVEY

The measurement was conducted from 12/08/2021 to 12/09/2021 using one SoftdB Piccolo Class 2 sound level meter which operates in accordance with the American National Standards Institute (ANSI) standard S1.4-2014. One continuous 24-hour noise measurement was located on site to determine existing noise levels from traffic in the area, as shown in the figure below. Short term measurements of traffic was also conducted on site of large trucks passing and the small aircraft of the nearby airport. Results from the measurement are presented in the next section.

Figure 1: Measurement Location Map

3.1. Measurement Results

The CNEL results are presented in Error! Reference source not found.. The hourly results are shown in the **Figure** below.

Table 1: CNEL Results

	Measurement Location (Measured)	Building E North Façade (Predicted)
Setback from Soaring Way	~50'	~270'
Noise Level (CNEL dBA)	64	51

The CNEL measured at the measurement location (setback ~50' from Soaring Way centerline) was 64 dBA. The hourly L_{EQ} at this position ranged from 58 dBA to 65 dBA during the daytime (7AM – 7PM), 55 dBA to 57 dBA during the evening time (7PM – 10PM), and 48 dBA to 60 dBA during the nighttime (10PM – 7AM) over the measurement period.

The predicted CNEL at the north façade of the residential building, Building E, including the shielding of Building D is 51 dBA (setback about 270' from Soaring Way centerline).

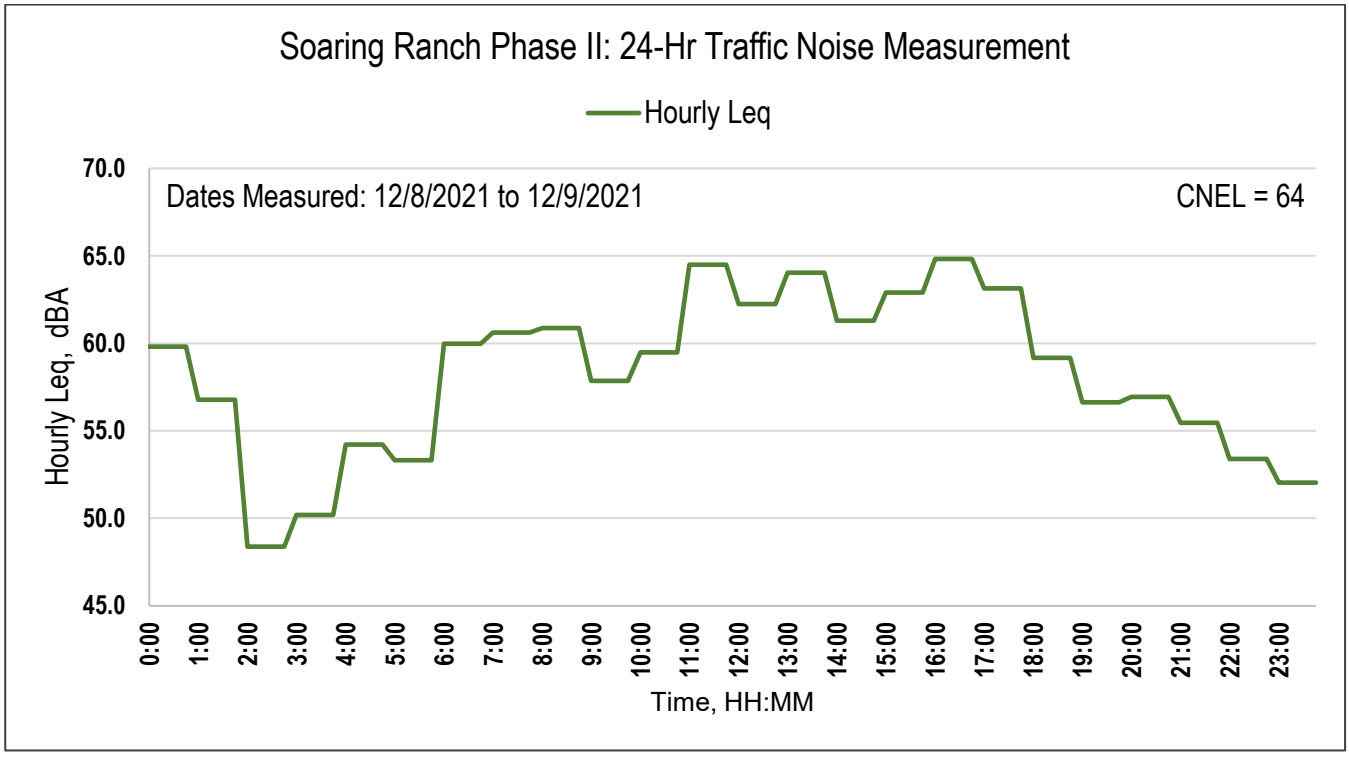

Figure 2: Long-term Noise Measurement Results – Hourly Data

3.2. Environmental Noise Model

Using an environmental noise modeling software (CadnaA®), noise levels were predicted on each elevation based on the drawings, the noise survey results from above, and traffic volume data. The noise model took into consideration the current traffic levels. Predicted CNEL noise levels (dBA) from traffic are presented in the figures below, ranging from green (low) to red (high).

Figure 3: Environmental Noise Model

Based on the noise model, the predicted noise levels at the residential building, Building E, for Soaring Ranch Phase II, are below CNEL 60 dBA (as shown in green in the noise model above), and no additional mitigation is required. As currently designed, the predicted noise levels inside the residential units will be within CNEL 45 dBA.

4. SUMMARY

This report has presented the results of the measurements conducted at the Soaring Ranch Phase II project site, and based on the results of the noise measurements, predicted noise levels at the façade, and noise model, provided recommendations to meet design criteria. The predicted noise levels at the residential building, Building E, for Soaring Ranch Phase II, are below CNEL 60 dBA, and no additional mitigation is required. As currently designed, the predicted noise levels inside the residential units will be within CNEL 45 dBA.

Please contact us with any questions or concerns.

Sincerely,

Brenna Glaser
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