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**Petition for Modification
Tanager Battery Energy Storage System Project**

Data Response Set 6

**Los Esteros Critical Energy Facility
03-AFC-02C**

Submitted to
California Energy Commission

Submitted by
Los Esteros Critical Energy Facility, LLC

October 23, 2026

**LOS ESTEROS CRITICAL ENERGY FACILITY (03-AFC-02C)
PETITION FOR MODIFICATION- TANAGER BESS PROJECT
DATA RESPONSE SET 6**

Los Esteros Critical Energy Facility, LLC, on behalf of Tanager Power, LLC, provides the following response to Data Response Set 6 from the California Energy Commission (“CEC”) Staff, which is summarized below in italics, relating to the Tanager Battery Energy Storage System (“BESS”) Project (“Project”).

Technical Area: Noise

Data Request A117: Please indicate the specific sensitive receptors and provide a minimum 25-hour ambient noise survey (in units of hourly Leq) at the sensitive receptors for the project identified in TN 268268, Figure 4.

RESPONSE: The Los Esteros Critical Energy Facility (“LECEF”) is an operational 320 megawatt (“MW”) combined-cycle power plant located in the City of San Jose at 800 Thomas Foon Chew Way. The LECEF site is located on Assessor Parcel No. 015-31-072. The Tanager Battery Energy Storage System (“BESS”) Project will be co-located on the same parcel, north of Aviso Milpitas Rd. and south of the LECEF just outside of the existing fence line. The Tanager BESS Project will be located on the former laydown and parking area for the LECEF facility, which is currently disturbed and covered by fill and gravel.

The Tanager BESS Project will utilize a containerized lithium-ion battery energy storage system rated at a nominal 200 megawatts (“MW”) with approximately 800 megawatt hours (“MWh”) of BESS storage capacity. (See also, Data Response Set 2C, Data Response A59, TN: 269354.)

The California Energy Commission’s (“CEC”) Final Decision for the Los Esteros Critical Energy Facility II Phase II (“LECEF Final Decision”) identified the nearest sensitive noise receptor to the site as residences located approximately 1,100 feet (0.2 miles) southeast of the site at 1657 Alviso-Milpitas Road. (LECEF Final Decision, p. 314.) The vacant residence was demolished in 2021. (San Jose Data Center Small Power Plant Exemption Commission Decision, p. 4.5-9.) There are no other residences or sensitive receptors within 1,000 feet of the Project site on the north side of the Southbay Freeway (“SR 237”). Other sensitive receptors are separated from the Project site by SR 237 and are located at least 1,500 feet away to the south and southwest. (Attachment DR-A117; See also, Attachment DR-A8, Figure 4, TN: 268268.)

As described in the Petition, the Tanager BESS Project will add minimal new sources of noise to the site and will not cause a significant adverse noise impact. (Petition, p. 5.) A Noise Technical Memo was prepared on behalf of the Project, which included long-term monitoring of ambient noise at the sensitive receptors for the Project identified in Attachment DR-A8, Figure 4. (TN: 268268.) The Noise Technical Memo is provided as Attachment DR-A117.

As detailed in the Noise Technical Memo, long-term monitoring and operational

**LOS ESTEROS CRITICAL ENERGY FACILITY (03-AFC-02C)
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noise modeling indicates that, as modeled: (1) project operations will not exceed local ordinance levels; (2) the modeled operational noise shows an increase of less than 5 dbA above nighttime ambient noise at the three evaluated off-site sensitive receptor locations; and (3) the Tanager BESS project will not cause significant noise impacts at these receptors.

Data Request A 118. Please provide an operational noise contour map or tabulated values of estimated noise levels of the project (in units of hourly Leq) at the sensitive receptors and at the project boundary.

RESPONSE: An operational noise contour map is provided as Attachment DR-A117, Figure 5.

**LOS ESTEROS CRITICAL ENERGY FACILITY (03-AFC-02C)
PETITION FOR MODIFICATION- TANAGER BESS PROJECT
DATA RESPONSE SET 6**

ATTACHMENT DR-117

October 22, 2026

Memo

Subject: Noise Technical Memo for the Los Esteros Critical Energy Facility (03-AFC-02C) Tanager Battery Energy Storage System (BESS) Project

Executive Summary

This Noise Technical Memo evaluates existing ambient conditions and future operational sound from the Los Esteros Critical Energy Facility (LECEF) Tanager BESS Project. As detailed in this report, long-term monitoring that occurred on October 12 and 13, 2026, and operational noise modeling indicates that, as modeled: (1) project operations are not expected to exceed applicable local ordinance levels; (2) the modeled operational noise shows an increase of less than 5 dBA above nighttime ambient noise at the three evaluated off-site sensitive receptor locations; and (3) the Tanager BESS project is not expected to cause significant noise impacts at these receptors. The ambient results are presented in Table 1 through Table 4 and Figure 1 through Figure 4.

Operational noise was predicted using CadnaA Version 2026 and ISO 9613-2-based propagation algorithms for the equipment described below, consisting of 232 Lithium battery enclosures, 67 SMA three-stack inverter/MVPS units, one main transformer, and five auxiliary transformers. The model includes equipment geometry, ground and atmospheric effects, intervening buildings, terrain, and a 6-foot-high concrete wall along the southern project boundary, excluding the access gate. The analysis assumes simultaneous, continuous operation at the defined acoustic inputs.

CadnaA predicts project-only hourly L_{eq} levels of 45, 29, and 31 dBA at NSA1, NSA2, and NSA3, respectively. Predicted nighttime ambient increases up to 0.81 dB (Table 9). Project-only sound levels at four representative property-line points are 62 dBA north, 59 dBA west, 63 dBA south, and 60 dBA east (Table 10). Figure 5 shows modeled operational noise contours. The results below indicate the Project results in less than significant noise impacts.

1. Introduction and Purpose

1.1 Project Background

The Tanager BESS Project is proposed at the former laydown and construction parking area for LECEF. LECEF is an operational 320-MW combined-cycle natural gas turbine power plant located in the City of San José at 800 Thomas Foon Chew Way. The LECEF site is located on Assessor Parcel No. 015-31-072. The Tanager BESS Project will be co-located on the same parcel, south of the existing Los Esteros Energy Center and north of Alviso Milpitas Road and State Route (SR) 237 in San José, California. The Tanager BESS project includes battery energy storage enclosures, power conversion equipment, a main power transformer, auxiliary transformers, and associated electrical infrastructure. The operational noise assessment considers 232 battery enclosures, 67 three-stack inverter/MVPS units, one main power transformer, and five auxiliary transformers.

The project layout identifies equipment areas, access roads, electrical facilities, and proposed screening features, including a 6-foot-high concrete wall along the southern project boundary. The project also

includes a proposed 230-kilovolt generation tie line. The CadnaA analysis evaluates the project equipment configuration and acoustic shielding conditions described in Sections 6 and 7.

1.2 CEC Data Requests and Reporting Scope

CEC Staff's Data Request A117 requests identification of specific noise-sensitive receptors and monitoring of ambient noise for a minimum of 25 hours of ambient noise monitoring, with results reported as hourly equivalent continuous sound levels (L_{eq}). Data Request A118 requests an operational noise contour map or tabulated predicted hourly L_{eq} levels at sensitive receptors and the project boundary.

This report documents the long-term ambient noise monitoring program and presents operational hourly L_{eq} levels predicted using CadnaA at three noise-sensitive areas (NSA1, NSA2, and NSA3) and four representative project property-line locations. The CadnaA analysis incorporates the modeled equipment locations, intervening buildings, terrain, and a 6-foot-high concrete wall along the southern project boundary. The predicted noise levels and nighttime ambient noise increases are presented in Section 8, and Figure 5 illustrates the operational noise contours. The four property-line results represent selected locations and do not necessarily identify the maximum noise level along the entire project boundary.

Noise assessment metrics and applicable evaluation criteria are described in Sections 3 and 4, respectively. Ambient noise measurements are presented in Section 5, operational noise sources in Section 6, CadnaA modeling methodology in Section 7, and operational noise results and impact evaluation in Section 8. Supporting modeling inputs, assumptions, and results are documented in Appendix C.

1.3 Noise Analysis Scope

This technical memorandum addresses Data Requests A117 and 118, and further provides information related to ambient noise, project-only operational noise at NSA1–NSA3, and modeled noise at representative site-boundary positions, in support of the identified CEC data requests. The operational sources include the battery enclosures, inverter/MVPS stations, the main transformer, and auxiliary transformers. Construction noise and vibration are discussed qualitatively in Section 9. Emergency or other non-routine incidents are outside the operational model scenario.

2. Project Setting and Noise-Sensitive Land Uses

The project site is immediately south of the existing LECEF and north of SR 237. The surrounding area includes existing energy infrastructure, transportation facilities, and commercial and industrial development. Residential neighborhoods are present south of SR 237. Figure 1 identifies the project site, three noise-sensitive areas (NSAs), and the associated long-term ambient noise monitoring locations.

- NSA1, located approximately 0.3 mile southeast of the project, includes multi-family residential uses represented by LT-01.
- NSA2, located approximately 0.5 mile southwest of the project near the Zanker Road/Silicon Valley Village area, includes single-family residential uses represented by LT-02.
- NSA3, located approximately 0.6 mile southwest of the project, includes multi-family residential uses represented by LT-03.

The ambient sound levels at these locations may be affected by existing sound sources including SR 237 and local roadway traffic, industrial activities, and occasional aircraft.

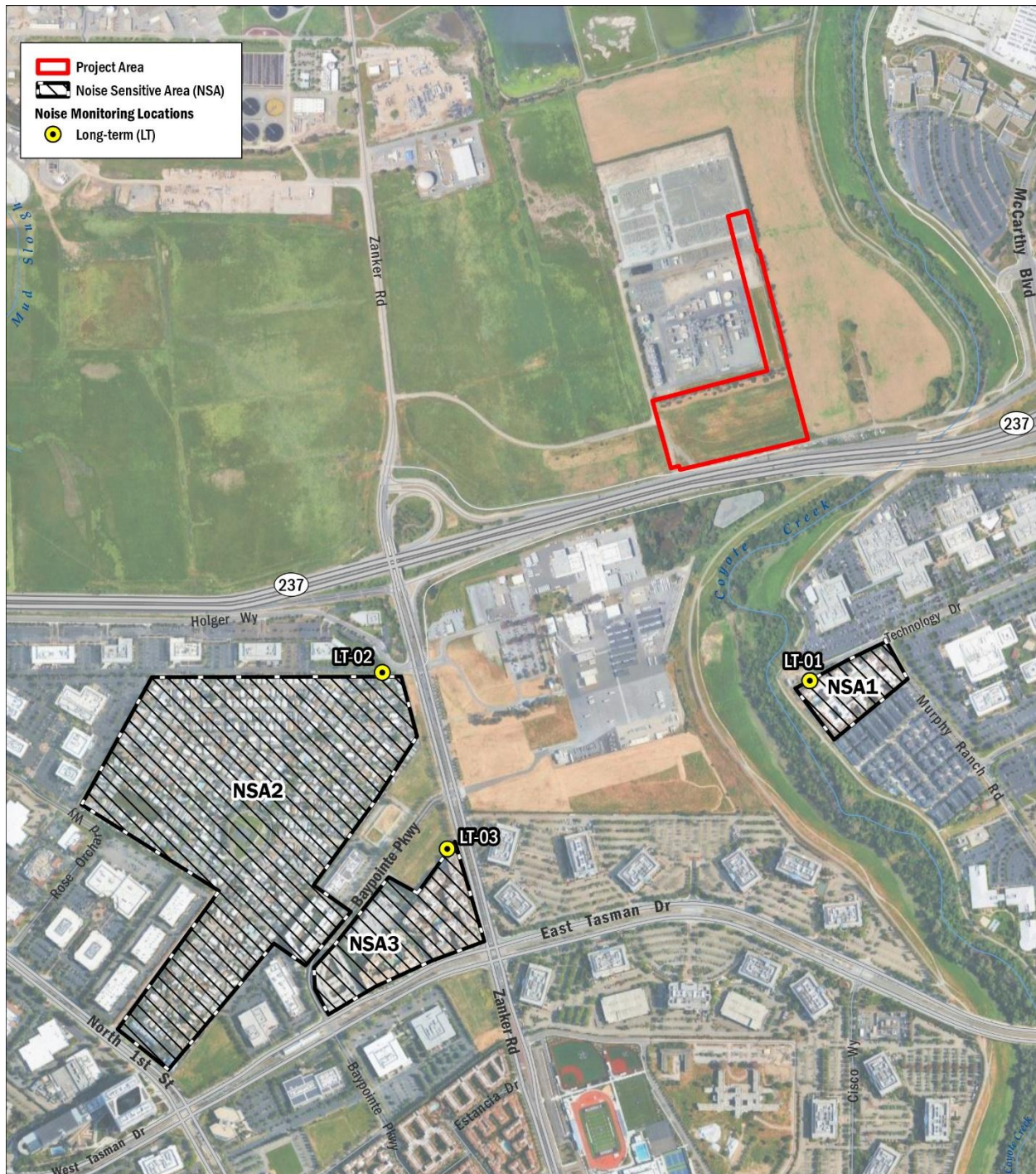


Figure 1. Project Site, Noise-Sensitive Areas, and Ambient Noise Monitoring Locations

The monitoring locations provide representative existing noise conditions near the identified NSAs, as identified in Figure 1. Ambient monitoring at LT-01, LT-02, and LT-03 represents the nearest portion of NSA1, NSA2, and NSA3, respectively (Figure 1).

3. Noise Assessment Metrics

Equivalent continuous sound level (L_{eq}) is the steady acoustic level containing the same sound energy as a fluctuating sound over a specified measurement period. The maximum and minimum sound levels (L_{max} and L_{min}) represent the highest and lowest measured sound levels, respectively, under the applicable instrument settings. Statistical exceedance levels, including L_{10} , L_{50} , and L_{90} , represent the sound levels exceeded during 10, 50, and 90 percent of the measurement period, respectively. L_{10} is commonly used

to characterize relatively elevated sound events, L_{50} represents the median sound level, and L_{90} is commonly used to characterize background sound conditions. The day-night average sound level (L_{dn}) is a 24-hour energy-average sound level that includes a 10-decibel (dB) adjustment for noise occurring between 10:00 p.m. and 7:00 a.m. Unless otherwise stated, sound levels are expressed in A-weighted decibels (dBA).

Decibels must be energy summed or energy averaged. For N equal-duration measurement intervals, the equivalent continuous sound level is calculated using the following equation:

$$L_{eq,total} = 10 \log_{10} \left[\frac{1}{N} \sum_{i=1}^N 10^{L_{eq,i}/10} \right]$$

Where:

- $L_{eq,total}$ = energy-averaged equivalent sound level (dBA)
- $L_{eq,i}$ = equivalent sound level during interval i (dBA)
- N = number of equal-duration measurement intervals

For multiple concurrent noise sources, sound levels are combined logarithmically. This relationship describes the general acoustic summation principle; the project-only operational noise predictions in Section 8 were generated using the CadnaA model described in Section 7:

$$L_{project} = 10 \log_{10} \left[\sum_{i=1}^N 10^{L_i/10} \right]$$

Where:

- $L_{project}$ = combined project-generated sound level (dBA)
- L_i = sound level contributed by source i at the receiver (dBA)
- N = number of contributing noise sources

Combined project and existing ambient sound require energy summation rather than direct decibel addition.

Hourly L_{eq} values were calculated by logarithmically averaging four consecutive 15-minute L_{eq} measurement intervals. Hourly L_{max} and L_{min} values were determined from the maximum and minimum values recorded during the corresponding four intervals. Hourly statistical exceedance levels were estimated from the available 15-minute statistical measurements.

4. Regulatory and Evaluation Framework

4.1 California Energy Commission Information Requirements

Although not applicable to the post-certification modification petition for the LECEF Final Decision, the California Energy Commission's information requirements for Applications for Certification were reviewed to provide guidance for this analysis. California Code of Regulations (CCR), Title 20, Division 2, Chapter 5, Appendix B, subsection (g)(4)(A), requires identification of noise-sensitive land uses within areas potentially affected by a project-related increase of at least 5 dBA over existing background conditions. Subsection (g)(4)(B) addresses ambient noise measurements, including a minimum monitoring period of 25 consecutive hours at a representative location, relevant atmospheric conditions, hourly L_{eq} , L_{dn} or Community Noise Equivalent Level (CNEL), and statistical exceedance levels L_{10} , L_{50} , and L_{90} . Subsection (g)(4)(C) addresses characterization of project noise sources, while subsequent provisions address construction and operational noise predictions and potentially affected electrical facilities.

The Tanager BESS ambient monitoring program included three long-term monitoring locations, each providing simultaneous 25 consecutive hours of measurements. Therefore, the monitoring program satisfies the minimum duration and representative-location components of the CEC ambient

measurement requirement. Hourly L_{eq} and supporting statistical sound-level results are provided in Section 5, with the original 15-minute measurements documented in Appendix B.

The 5-dBA change criterion is used as a CEC Staff screening method to identify noise-sensitive areas that may warrant evaluation. It is not, by itself, a regulatory noise limit or a threshold for determining the significance of project-related noise impacts. Project noise levels are evaluated separately against applicable noise standards and changes in existing ambient conditions.

4.2 City of San José Municipal Code

For evaluation purposes, the City of San José Municipal Code, Section 20.50.300(B)(4)(a), establishes noise performance standards for industrial uses based on the use or zoning of adjacent properties. As specified in Table 20-135, the maximum permissible sound pressure levels are 55 dBA at property lines adjacent to residential uses, 60 dBA adjacent to commercial uses, and 70 dBA adjacent to industrial or other noncommercial, nonresidential uses. These standards apply to noise generated by the subject use at the applicable property line, rather than to overall ambient noise levels measured at distant noise-sensitive receptors. Further, as described in the Petition, the limits imposed by the existing LECEF Conditions of Certification would ensure that potential noise impacts are less than significant. Accordingly, project-generated noise levels at representative property-line locations and predicted changes in existing ambient noise at noise-sensitive receptors are evaluated separately.

4.3 Impact Considerations

Noise impacts are generally evaluated at existing noise-sensitive receptors, such as residences, schools, and other occupied uses potentially affected by project-generated noise. Noise impacts at project property lines are assessed where applicable local ordinances or project-specific permit conditions provide additional criteria for evaluating operational noise.

The assessment presented in this technical memorandum considers potential increases in ambient noise and disturbance of noise-sensitive land uses, consistent with common environmental noise evaluation principles. Accordingly, this study evaluates predicted project-generated noise and increases over existing ambient conditions at the identified NSAs. Applicable property-line noise standards are considered separately as regulatory performance requirements.

5. Ambient Noise Monitoring

5.1 Field Program and Locations

Existing ambient noise conditions were measured on October 12–13, 2026, using three simultaneously operated unattended long-term sound level meters at LT-01, LT-02, and LT-03. Each location provided 25 consecutive hours of noise measurements. The instruments recorded sound-level data at 15-minute intervals, including L_{eq} , L_{max} , L_{min} , and statistical exceedance levels. The monitoring locations were selected to represent existing ambient noise conditions at the nearest boundary of the three identified noise-sensitive areas: LT-01 for NSA1, LT-02 for NSA2, and LT-03 for NSA3. Figure 1 identifies the monitoring locations and corresponding noise-sensitive areas. Field photographs and monitoring documentation are provided in Appendix A, and the original 15-minute instrument records are provided in Appendix B.

Hourly sound levels were processed from the original 15-minute measurement records using complete, consecutive one-hour intervals. Hourly L_{eq} values were calculated using logarithmic energy averaging, while hourly L_{max} and L_{min} values were obtained from the corresponding interval extrema. Hourly L_{10} , L_{50} , and L_{90} values were estimated from the available 15-minute statistical exceedance levels. The original instrument records, processing methods, and supporting calculations are maintained in the project noise calculation workbook.

5.2 Summary of Measured Sound Levels

Table 1 summarizes the measured ambient noise levels at the three long-term monitoring locations, while Table 2 through Table 4 provide the corresponding hourly data. Overall L_{eq} values were calculated from the 25-hour measurement periods. Daytime and nighttime L_{eq} values represent energy-averaged levels for the corresponding time periods, while L_{dn} values were calculated over 24 consecutive hours using the standard nighttime adjustment.

Measured daytime L_{eq} levels ranged from 56.9 to 59.7 dBA, while nighttime L_{eq} levels ranged from 51.9 to 55.3 dBA. The calculated L_{dn} values ranged from 59.4 dBA at LT-01 to 62.7 dBA at LT-03. These measurements provide the existing ambient noise baseline for evaluating project-generated operational noise at the corresponding noise-sensitive areas.

Table 1. Summary of Ambient Noise Measurements

Monitoring Location	Represented NSA / Area	Overall L_{eq} (dBA)	Day L_{eq} (dBA)*	Night L_{eq} (dBA)	24-h L_{dn} (dBA)
LT-01	NSA1	55.7	56.9	51.9	59.4
LT-02	NSA2	57.2	58.4	53.5	61.0
LT-03	NSA3	58.6	59.7	55.3	62.7

Notes: dBA = A-weighted decibels; L_{eq} = equivalent continuous sound level; L_{dn} = day-night average sound level; LT = long-term; NSA = noise-sensitive area. Overall L_{eq} values represent the 25-hour monitoring periods. Daytime (7:00 a.m.–10:00 p.m.) and nighttime (10:00 p.m.–7:00 a.m.) L_{eq} values were calculated using logarithmic energy averaging of the available hourly measurements within the respective periods. L_{dn} values were calculated for 24 consecutive hours, including a 10-dB nighttime adjustment. Daytime averages include the available daytime hours from October 12 and 13, 2026.

5.3 Interpretation of Ambient Data

The ambient noise monitoring results indicate that existing sound levels vary among the three monitoring locations. LT-01, representing NSA1, recorded the lowest 24-hour L_{dn} of 59.4 dBA, while LT-03, representing NSA3, recorded the highest L_{dn} of 62.7 dBA. Existing traffic, industrial activity, and other environmental sound sources contribute to the measured conditions. The nighttime L_{eq} values, which range from 51.9 to 55.3 dBA, are used as representative baseline levels for evaluating potential operational noise increases during nighttime periods.

5.4 Hourly Ambient Noise Results

The hourly L_{eq} values were calculated from the four corresponding 15-minute L_{eq} measurements using logarithmic energy averaging. Hourly L_{max} and L_{min} values represent the maximum and minimum recorded levels within each hour. Hourly L_{10} , L_{50} , and L_{90} were estimated from the available 15-minute statistical measurements. All results are expressed in dBA, and timestamps represent the beginning of each hourly interval in Pacific Daylight Time (PDT).

Long-Term Monitoring Location LT-01

Figure 2 illustrates the hourly variations in ambient noise levels measured at LT-01 during the October 12–13, 2026, monitoring period. The figure presents L_{eq} , L_{max} , L_{min} , L_{10} , L_{50} , and L_{90} to characterize changes in the existing sound environment throughout the 25-hour monitoring period. Table 2 provides the corresponding hourly numerical results. LT-01 represents existing ambient noise conditions at NSA1.

Long-Term Monitoring Location LT-02

Figure 3 presents the hourly ambient noise levels measured at LT-02 during the October 12–13, 2026, monitoring period. The figure illustrates variations in sound levels over the 25-hour period, while Table 3 provides the corresponding hourly measurements. LT-02 represents existing ambient noise conditions at NSA2.

Long-Term Monitoring Location LT-03

Figure 4 presents the hourly ambient noise levels measured at LT-03 during the October 12–13, 2026, monitoring period. The figure illustrates variations in measured sound levels, and Table 4 provides the corresponding hourly numerical results. LT-03 represents existing ambient noise conditions at NSA3.

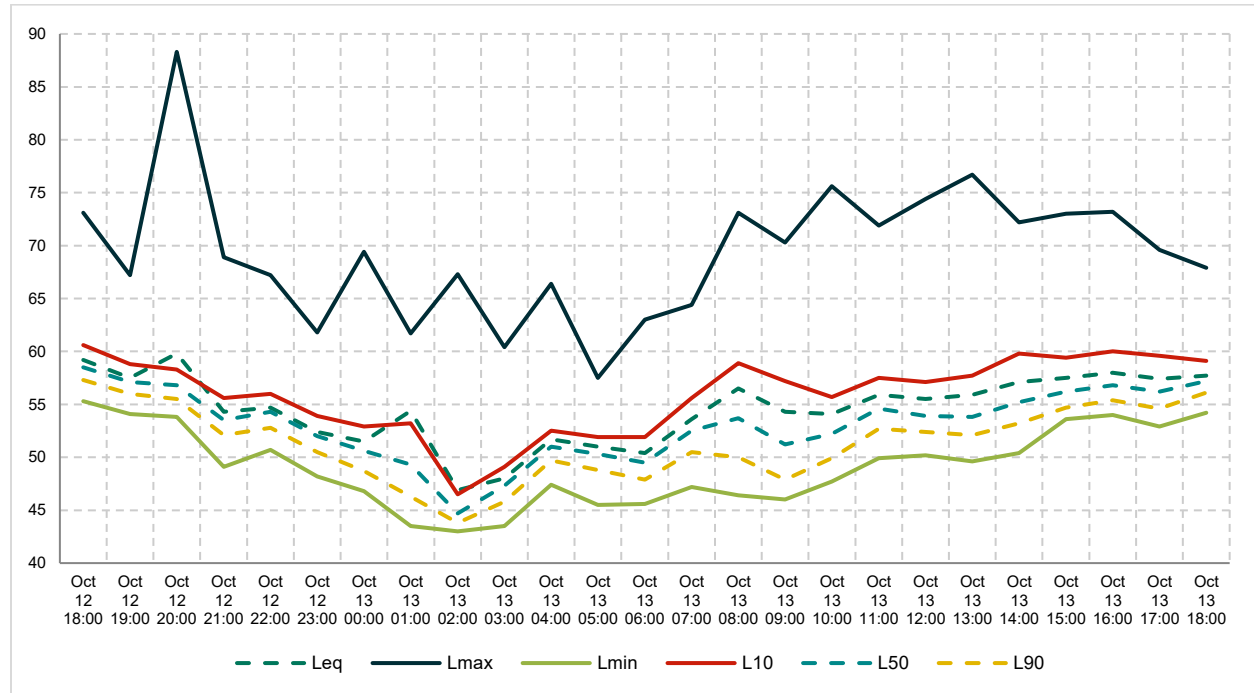


Figure 2. LT-01 Hourly Noise Levels Over the 25-Hour Monitoring Period

Table 2. LT-01 Hourly Ambient Noise Measurements

Start Timestamp	L _{eq} , dBA	L _{max} , dBA	L _{min} , dBA	L ₁₀ , dBA	L ₅₀ , dBA	L ₉₀ , dBA
Oct 12 18:00	59.2	73.1	55.3	60.6	58.5	57.3
Oct 12 19:00	57.5	67.2	54.1	58.8	57.1	56.0
Oct 12 20:00	59.8	88.3	53.8	58.3	56.8	55.5
Oct 12 21:00	54.3	68.9	49.1	55.6	53.5	52.1
Oct 12 22:00	54.7	67.2	50.7	56	54.3	52.8
Oct 12 23:00	52.4	61.8	48.2	53.9	52	50.5
Oct 13 00:00	51.5	69.4	46.8	52.9	50.6	48.7
Oct 13 01:00	54.4	61.7	43.5	53.2	49.3	46.3
Oct 13 02:00	46.9	67.3	43.0	46.5	44.7	43.8
Oct 13 03:00	48.0	60.4	43.5	49.1	47.3	45.8
Oct 13 04:00	51.7	66.4	47.4	52.5	51	49.7
Oct 13 05:00	51.0	57.5	45.5	51.9	50.3	48.8
Oct 13 06:00	50.4	63.0	45.6	51.9	49.5	47.9
Oct 13 07:00	53.6	64.4	47.2	55.6	52.5	50.5
Oct 13 08:00	56.5	73.1	46.4	58.9	53.7	50.0
Oct 13 09:00	54.3	70.3	46.0	57.2	51.2	47.9
Oct 13 10:00	54.1	75.6	47.7	55.7	52.2	49.9
Oct 13 11:00	55.9	71.9	49.9	57.5	54.6	52.7
Oct 13 12:00	55.5	74.4	50.2	57.1	53.9	52.4
Oct 13 13:00	55.9	76.7	49.6	57.7	53.8	52.1
Oct 13 14:00	57.1	72.2	50.4	59.8	55.2	53.2
Oct 13 15:00	57.5	73.0	53.6	59.4	56.2	54.7

Start Timestamp	L _{eq} , dBA	L _{max} , dBA	L _{min} , dBA	L ₁₀ , dBA	L ₅₀ , dBA	L ₉₀ , dBA
Oct 13 16:00	58.0	73.2	54.0	60	56.8	55.4
Oct 13 17:00	57.4	69.6	52.9	59.6	56.2	54.6
Oct 13 18:00	57.7	67.9	54.2	59.1	57.2	56.1

Notes: All values are expressed in dBA. L_{eq} = equivalent continuous sound level; L_{max} = maximum sound level; L_{min} = minimum sound level; L₁₀, L₅₀, and L₉₀ = statistical exceedance levels corresponding to 10, 50, and 90 percent of the measurement period, respectively. Hourly L_{eq}, L_{max}, and L_{min} were calculated from four 15-minute records; hourly statistical exceedance levels were estimated using the available interval statistics. Timestamps identify the start of each one-hour period.

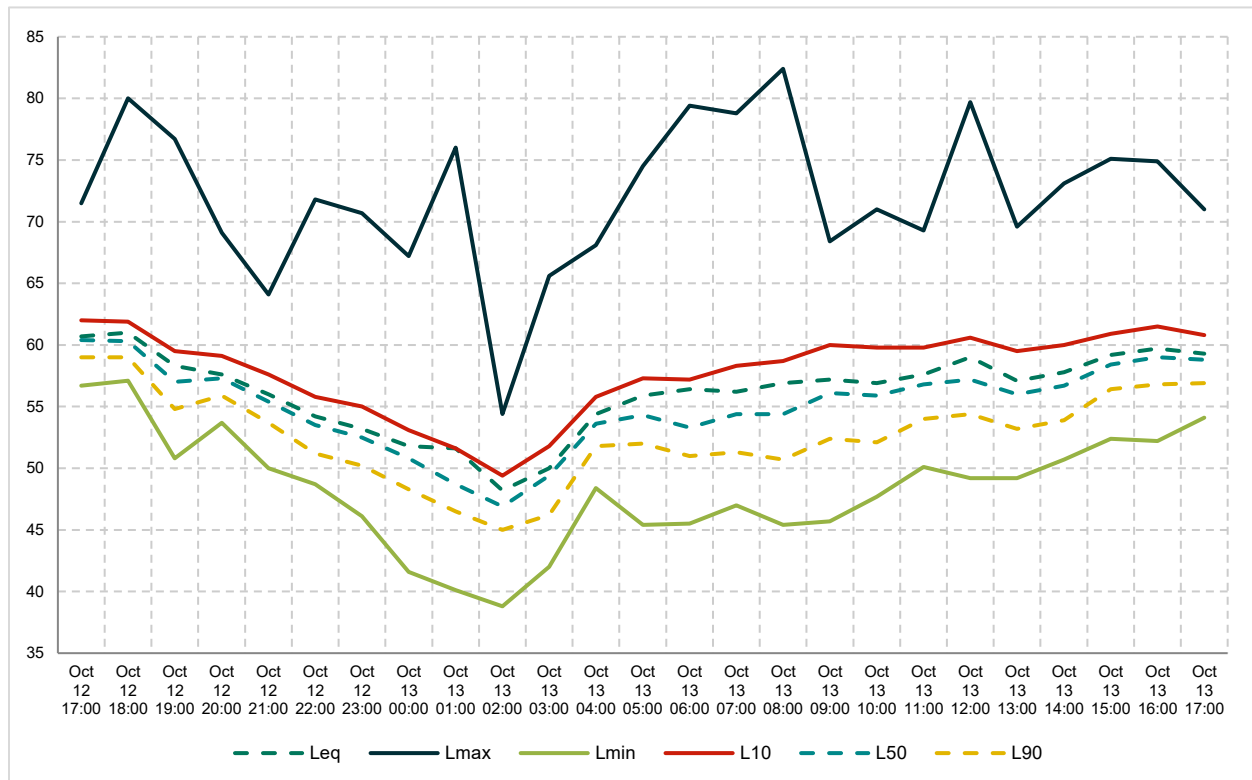


Figure 3. LT-02 Hourly Noise Levels Over the 25-Hour Monitoring Period

Table 3. LT-02 Hourly Ambient Noise Measurements

Start Timestamp	L _{eq} , dBA	L _{max} , dBA	L _{min} , dBA	L ₁₀ , dBA	L ₅₀ , dBA	L ₉₀ , dBA
Oct 12 17:00	60.7	71.5	56.7	62	60.4	59.0
Oct 12 18:00	61.0	80.0	57.1	61.9	60.3	59.0
Oct 12 19:00	58.3	76.7	50.8	59.5	57	54.8
Oct 12 20:00	57.6	69.1	53.7	59.1	57.3	55.9
Oct 12 21:00	56.0	64.1	50.0	57.6	55.4	53.7
Oct 12 22:00	54.2	71.8	48.7	55.8	53.5	51.2
Oct 12 23:00	53.2	70.7	46.1	55	52.5	50.2
Oct 13 00:00	51.8	67.2	41.6	53.1	50.8	48.3
Oct 13 01:00	51.6	76.0	40.1	51.6	48.7	46.5
Oct 13 02:00	48.2	54.4	38.8	49.4	46.9	45.0
Oct 13 03:00	50.0	65.6	42.0	51.8	49.4	46.2
Oct 13 04:00	54.4	68.1	48.4	55.8	53.6	51.8
Oct 13 05:00	55.9	74.5	45.4	57.3	54.3	52.0
Oct 13 06:00	56.4	79.4	45.5	57.2	53.3	51.0
Oct 13 07:00	56.2	78.8	47.0	58.3	54.4	51.3
Oct 13 08:00	56.9	82.4	45.4	58.7	54.4	50.7
Oct 13 09:00	57.2	68.4	45.7	60	56.1	52.4
Oct 13 10:00	56.9	71.0	47.7	59.8	55.9	52.1
Oct 13 11:00	57.6	69.3	50.1	59.8	56.8	54.0

Start Timestamp	L _{eq} , dBA	L _{max} , dBA	L _{min} , dBA	L ₁₀ , dBA	L ₅₀ , dBA	L ₉₀ , dBA
Oct 13 12:00	59.0	79.7	49.2	60.6	57.2	54.4
Oct 13 13:00	57.1	69.6	49.2	59.5	56	53.2
Oct 13 14:00	57.8	73.1	50.7	60	56.7	53.9
Oct 13 15:00	59.2	75.1	52.4	60.9	58.4	56.4
Oct 13 16:00	59.7	74.9	52.2	61.5	59	56.8
Oct 13 17:00	59.3	71.0	54.1	60.8	58.8	56.9

Notes: All values are expressed in dBA. L_{eq} = equivalent continuous sound level; L_{max} = maximum sound level; L_{min} = minimum sound level; L₁₀, L₅₀, and L₉₀ = statistical exceedance levels corresponding to 10, 50, and 90 percent of the measurement period, respectively. Hourly L_{eq}, L_{max}, and L_{min} were calculated from four 15-minute records; hourly statistical exceedance levels were estimated using the available interval statistics. Timestamps identify the start of each one-hour period.

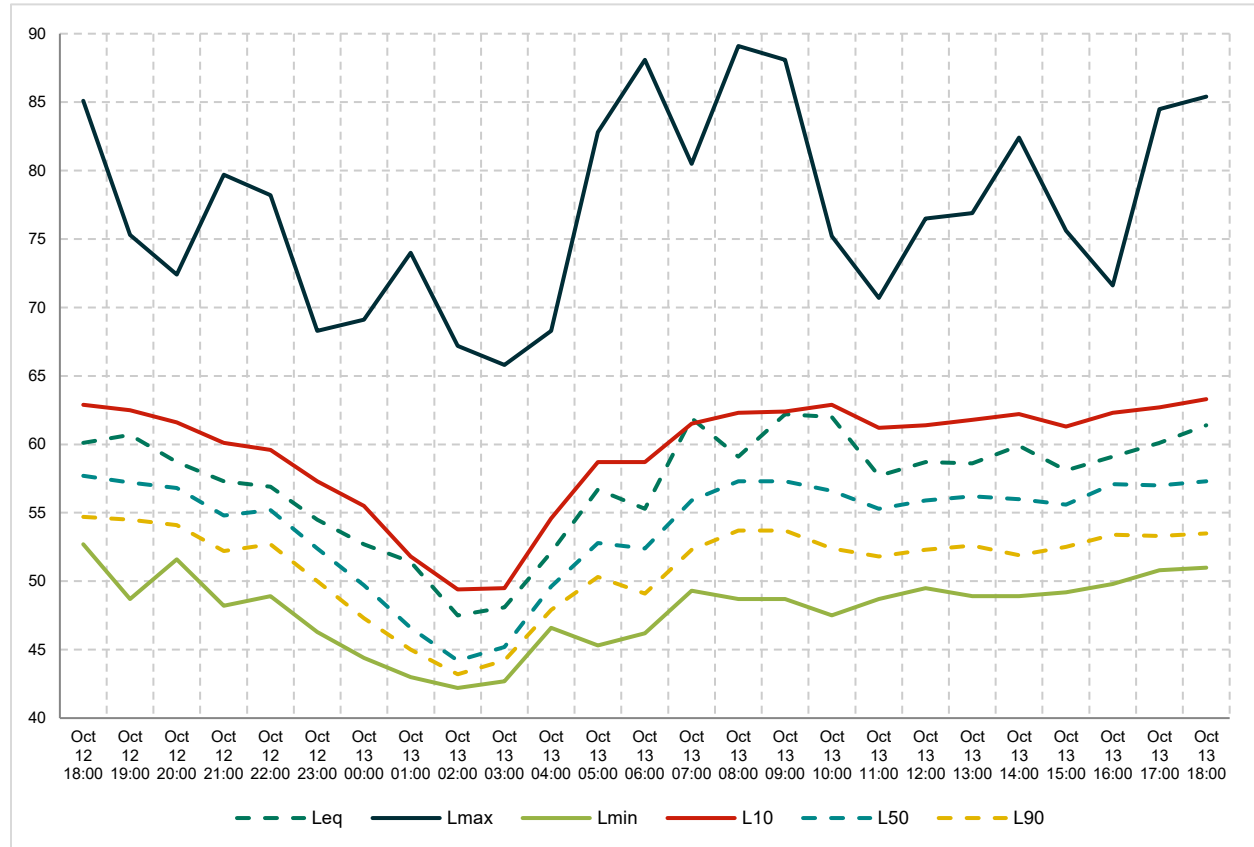


Figure 4. LT-03 Hourly Noise Levels Over the 25-Hour Monitoring Period

Table 4. LT-03 Hourly Ambient Noise Measurements

Start Timestamp	L _{eq} , dBA	L _{max} , dBA	L _{min} , dBA	L ₁₀ , dBA	L ₅₀ , dBA	L ₉₀ , dBA
Oct 12 18:00	61.2	85.1	52.7	62.9	57.7	54.7
Oct 12 19:00	58.8	75.3	48.7	62.5	57.2	54.5
Oct 12 20:00	58.6	72.4	51.6	61.6	56.8	54.1
Oct 12 21:00	57.1	79.7	48.2	60.1	54.8	52.2
Oct 12 22:00	56.7	78.2	48.9	59.6	55.2	52.7
Oct 12 23:00	53.8	68.3	46.3	57.3	52.4	50.0
Oct 13 00:00	51.9	69.1	44.4	55.5	49.7	47.3
Oct 13 01:00	50.9	74.0	43.0	51.8	46.6	45.0
Oct 13 02:00	47.5	67.2	42.2	49.4	44.2	43.2
Oct 13 03:00	49.4	65.8	42.7	49.5	45.2	44.2
Oct 13 04:00	53.4	68.3	46.6	54.6	49.6	47.9
Oct 13 05:00	56.6	82.8	45.3	58.7	52.8	50.3
Oct 13 06:00	61.0	88.1	46.2	58.7	52.4	49.1
Oct 13 07:00	59.0	80.5	49.3	61.5	55.9	52.3
Oct 13 08:00	61.7	89.1	48.7	62.3	57.3	53.7
Oct 13 09:00	62.5	88.1	48.7	62.4	57.3	53.7

Start Timestamp	L _{eq} , dBA	L _{max} , dBA	L _{min} , dBA	L ₁₀ , dBA	L ₅₀ , dBA	L ₉₀ , dBA
Oct 13 10:00	58.8	75.2	47.5	62.9	56.6	52.4
Oct 13 11:00	57.7	70.7	48.7	61.2	55.3	51.8
Oct 13 12:00	58.8	76.5	49.5	61.4	55.9	52.3
Oct 13 13:00	58.7	76.9	48.9	61.8	56.2	52.6
Oct 13 14:00	59.8	82.4	48.9	62.2	56	51.9
Oct 13 15:00	58.6	75.6	49.2	61.3	55.6	52.5
Oct 13 16:00	58.8	71.6	49.8	62.3	57.1	53.4
Oct 13 17:00	60.9	84.5	50.8	62.7	57	53.3
Oct 13 18:00	60.8	85.4	51.0	63.3	57.3	53.5

Notes: All values are expressed in dBA. L_{eq} = equivalent continuous sound level; L_{max} = maximum sound level; L_{min} = minimum sound level; L₁₀, L₅₀, and L₉₀ = statistical exceedance levels corresponding to 10, 50, and 90 percent of the measurement period, respectively. Hourly L_{eq}, L_{max}, and L_{min} were calculated from four 15-minute records; hourly statistical exceedance levels were estimated using the available interval statistics. Timestamps identify the start of each one-hour period.

6. Operational Noise Sources

6.1 Lithium Battery Enclosures

The proposed facility design includes 232 Lithium LX501501 battery enclosures. Manufacturer acoustic data for the Lithium LX501501 battery enclosure (5.016-megawatt-hour [MWh] class) include directional sound pressure measurements at distances of 1, 5, 8, and 10 meters under various compressor and fan operating conditions. Directional octave-band sound power spectra were developed from the manufacturer sound pressure measurements at 10 meters for the front, right, rear, and left faces of each enclosure. The corresponding model-input overall A-weighted sound power levels are approximately 79, 93, 83, and 76 dBA, at the four faces of the enclosure, as summarized in Table 5. These sound power levels are distinct from the maximum manufacturer-reported sound pressure level of 79.6 dBA at 1 meter.

The four faces of each enclosure were represented separately in CadnaA to account for directional sound emissions without double-counting the enclosure's acoustic output. This approach provides a slightly conservative representation of enclosure noise, with the highest sound emissions occurring on the right side. The four face sources represent the directional sound emissions of each of the 232 battery enclosures rather than separate battery units.

6.2 SMA Inverters and Power Conversion Stations

The CadnaA analysis uses the SMA Sunny Central UP (SC-UP) inverter acoustic data, identified as "Kodiak Inverter" in the source-input documentation. The modeled inverter/MVPS configuration consists of 67 SMA three-stack units, with each inverter and its associated MVPS represented as a single acoustic source to avoid double-counting sound emissions.

6.3 Main Power Transformer

The CadnaA model includes one main power transformer with an A-weighted sound pressure input of 77 dBA referenced to 1 meter for acoustic modeling purposes. An octave-band sound power spectrum was developed using representative substation transformer spectral characteristics and hemispherical sound propagation, resulting in an overall model-input sound power level of approximately 85 dBA. The input spectrum and overall sound power level are summarized in Table 5 and Appendix C.

6.4 Auxiliary Transformers

The CadnaA model includes five auxiliary transformers, each represented by an A-weighted sound pressure input of 60 dBA at a reference distance of 1 meter. Representative transformer octave-band spectral characteristics and hemispherical sound propagation were used to develop an overall sound power level of approximately 68 dBA per unit. These inputs are summarized in Table 5 and Appendix C.

6.5 Operating Conditions and Source Inputs

Table 5 summarizes the equipment quantities, overall A-weighted sound power inputs, and acoustic data sources used in the CadnaA analysis. The model incorporates separate directional sound power spectra for the four faces of each Hithium enclosure, the inverter/MVPS sound power data, and adjusted representative octave-band spectra for the main and auxiliary transformers. All modeled equipment is assumed to operate simultaneously and continuously under the specified acoustic conditions. The octave-band input spectra are documented in Appendix C.

Table 5. CadnaA Operational Noise Source Inputs

Noise Source	Physical Count	Input LWA (dBA)	Basis
Hithium front face	232 enclosures	79	10-m directional measurements
Hithium right face	232 enclosures	93	10-m directional measurements
Hithium rear face	232 enclosures	83	10-m directional measurements
Hithium left face	232 enclosures	76	10-m directional measurements
SMA three-stack inverter/MVPS	67	93 (rounded)	SC-UP input; "Kodiak" source label
Main power transformer	1	85	77-dBA assumed SPL at 1 m; representative spectrum
Auxiliary transformer	5	68	60-dBA assumed SPL at 1 m; representative spectrum

Notes: LWA = A-weighted sound power level referenced to 1 pW; SPL = sound pressure level; MVPS = medium-voltage power station. Hithium face entries describe directional radiation from 232 physical enclosures, not separate equipment units. Overall acoustic inputs are rounded to the nearest decibel.

7. CadnaA Operational Noise Modeling Methodology

7.1 Model and Acoustic Propagation

The CadnaA sound prediction model, Version 2026 was used with ISO 9613-2-based sound propagation methods to predict project-generated A-weighted sound pressure levels. The model incorporates the locations and acoustic characteristics of individual project equipment, geometric divergence, atmospheric absorption, ground effects, acoustic reflections, terrain, and shielding by intervening buildings and barriers. Table 5 summarizes the acoustic source inputs, and Table 7 identifies the modeled equipment quantities.

7.2 Equipment and Receptor Geometry

The CadnaA model represents the project equipment at its respective locations within the facility layout. Operational sound levels were calculated at NSA1, NSA2, and NSA3 using receptor heights of 5 feet above local ground. Four representative property-line locations were also evaluated. Figure 1 identifies the noise-sensitive areas and corresponding ambient monitoring locations, while Figure 5 presents the modeled operational noise contours. Table 6 provides approximate distances between the project and the evaluated noise-sensitive areas for geographic context. The CadnaA predictions account for the actual modeled source and receiver positions rather than relying on these approximate distances.

Table 6. Approximate Distances to Noise-Sensitive Area Boundaries (Context Only)

NSA	Project Center to Nearest NSA Boundary (ft)	Nearest Project Boundary to NSA Boundary (ft)	Ambient Site
NSA1	1,950	1,650	LT-01
NSA2	3,000	2,500	LT-02
NSA3	3,700	3,150	LT-03

Note: Distances are approximate horizontal measurements to the closest part of the corresponding NSA boundary; CadnaA uses model-specific distributed source and receiver locations.

7.3 Terrain, Shielding, and Calculation Settings

The CadnaA model incorporates terrain elevations based on USGS elevation data and surrounding building geometry. General buildings were represented at heights of approximately 15 feet, while larger intervening buildings, including the neighboring commercial campus, were represented at approximately 30 feet. A 6-foot-high concrete wall along the southern project boundary was represented as a solid barrier in the CadnaA model, excluding the access gate. The wall provides acoustic shielding through its height, location, and physical configuration. No special sound-absorptive treatment is assumed for the concrete wall.

The CadnaA calculations use an air temperature of 50°F (approximately 10°C), relative humidity of 70 percent, downwind propagation conditions represented by a wind speed of 6.7 miles per hour, second-order reflections, a ground absorption coefficient of 0.4, and a building absorption coefficient of 0.21. Sound propagation was calculated using ISO 9613-2-based methods, accounting for geometric divergence, atmospheric absorption, ground effects, and shielding from buildings, barriers, and terrain.

7.4 Modeled Equipment Configuration

Table 7 summarizes the single modeled inventory, comprising 305 physical equipment units operating simultaneously and continuously at the source acoustic assumptions described in Section 6.

Table 7. Equipment Inventory Used in the CadnaA Operational Model

Equipment	Count	Assumed Condition
Hithium battery enclosures	232	Four directional face spectra
SMA inverter/MVPS units	67	SC-UP nominal modeled spectrum
Main transformer	1	Representative adjusted spectrum
Auxiliary transformers	5	Representative adjusted spectra
Total	305	Simultaneous continuous operation

Notes: Equipment counts represent physical units included in the operational noise model. All sources were evaluated under simultaneous and continuous operating conditions. Hithium face spectra describe directional sound emissions from each enclosure.

7.5 Ambient Noise Combination Method

The predicted project-only hourly L_{eq} levels from CadnaA were logarithmically combined with the measured nighttime ambient L_{eq} values from Table 1 to estimate the change in existing nighttime noise conditions at each NSA. The resulting increase is calculated using the following equation:

$$\Delta L = 10 \log_{10} [1 + 10^{((L_{project} - L_{ambient})/10)}]$$

Where:

- ΔL = Increase in existing nighttime ambient sound level (dB)
- $L_{ambient}$ = Measured existing nighttime L_{eq} (dBA)
- $L_{project}$ = CadnaA-predicted project-only hourly L_{eq} (dBA)

This calculation was performed after the CadnaA modeling and does not represent an additional CadnaA prediction. Results are summarized in Table 9 and Appendix C.

8. Operational Noise Estimates and Impact Evaluation

8.1 Predicted Noise Levels at Noise-Sensitive Areas

The CadnaA model predicted project-only hourly L_{eq} of 45 dBA at NSA1, 29 dBA at NSA2, and 31 dBA at NSA3, at receiver heights of 5 feet. The results are reported in Table 8, and Figure 5 depicts the distribution of project noise. NSA2 is predicted to receive less project sound than NSA3 despite being

closer to the project site because the modeled intervening buildings, terrain, and propagation paths affect the two locations differently.

Table 8. CadnaA-Predicted Operational Noise at Noise-Sensitive Areas

NSA	Monitoring Site	Receiver Height (ft)	Project-only L_{eq} (dBA)
NSA1	LT-01	5	45
NSA2	LT-02	5	29
NSA3	LT-03	5	31

Notes: L_{eq} = equivalent continuous sound level; NSA = noise-sensitive area; LT = long-term monitoring location. Values are project-only hourly A-weighted predictions at receiver heights of 5 feet above local ground.

8.2 Nighttime Ambient Noise Increases

The CadnaA-predicted project-only hourly L_{eq} levels were logarithmically combined with the measured nighttime ambient L_{eq} levels from Table 1 to estimate the resulting nighttime noise conditions at the three noise-sensitive areas. Table 9 presents the existing ambient levels, predicted project contributions, combined sound levels, and resulting increases.

Table 9. Predicted Increases over Existing Nighttime Ambient L_{eq}

NSA / LT	Ambient L_{eq} (dBA)	Project L_{eq} (dBA)	Combined L_{eq} (dBA)	Increase (dB)
NSA1 / LT-01	51.9	44.8	52.7	0.8
NSA2 / LT-02	53.5	29.1	53.5	< 0.1
NSA3 / LT-03	55.3	31.0	55.3	< 0.1

Notes: Ambient L_{eq} values are from Table 1; project-only L_{eq} values are from Table 8. Combined levels and increases were calculated by logarithmic energy summation using the reported whole-decibel project predictions.

As shown in Table 9, the predicted increase in existing nighttime ambient L_{eq} is approximately 0.81 dB at NSA1 and 0.02 dB at NSA2 and NSA3. These results indicate minimal changes in overall A-weighted nighttime sound levels at the three evaluated noise-sensitive areas under the modeled operating conditions. The CEC 5-dBA provision discussed in Section 4.1 is used to identify noise-sensitive areas warranting evaluation and is not applied as a universal operational noise significance threshold.

8.3 Representative Project Property-Line Noise Levels

Operational noise levels were predicted at four representative project property-line locations to characterize sound emissions along the northern, western, southern, and eastern boundaries. The CadnaA-predicted project-only hourly L_{eq} levels are summarized in Table 10.

Table 10. CadnaA-Predicted Operational Noise at Representative Property-Line Locations

Property-line Location	Project-only L_{eq} (dBA)
PL North	62
PL West	59
PL South	63
PL East	60

Notes: Values represent project-only hourly L_{eq} at four representative property-line evaluation locations. The predictions incorporate the modeled site configuration and southern acoustic wall.

As shown in Table 10, predicted project-only hourly L_{eq} levels range from 59 to 63 dBA at the four evaluated property-line locations. The highest of these predictions is 63 dBA at the southern property line. The CadnaA model incorporates the 6-foot-high concrete sound wall along the southern project boundary, including its acoustic shielding effects. These results characterize project-generated noise at the representative property-line locations under the modeled operating conditions.

8.4 CadnaA Operational Noise Contours

Figure 5 presents the CadnaA-predicted project-only operational noise contours for the modeled equipment inventory. The contours account for the distributed equipment locations, atmospheric and

ground attenuation, intervening buildings, terrain, and the 6-foot-high concrete wall along the southern project boundary. The contours represent project-generated sound only and do not include existing roadway traffic or other ambient noise sources. The modeled noise-sensitive receptor predictions are summarized in Table 8, and the representative property-line predictions are provided in Table 10.

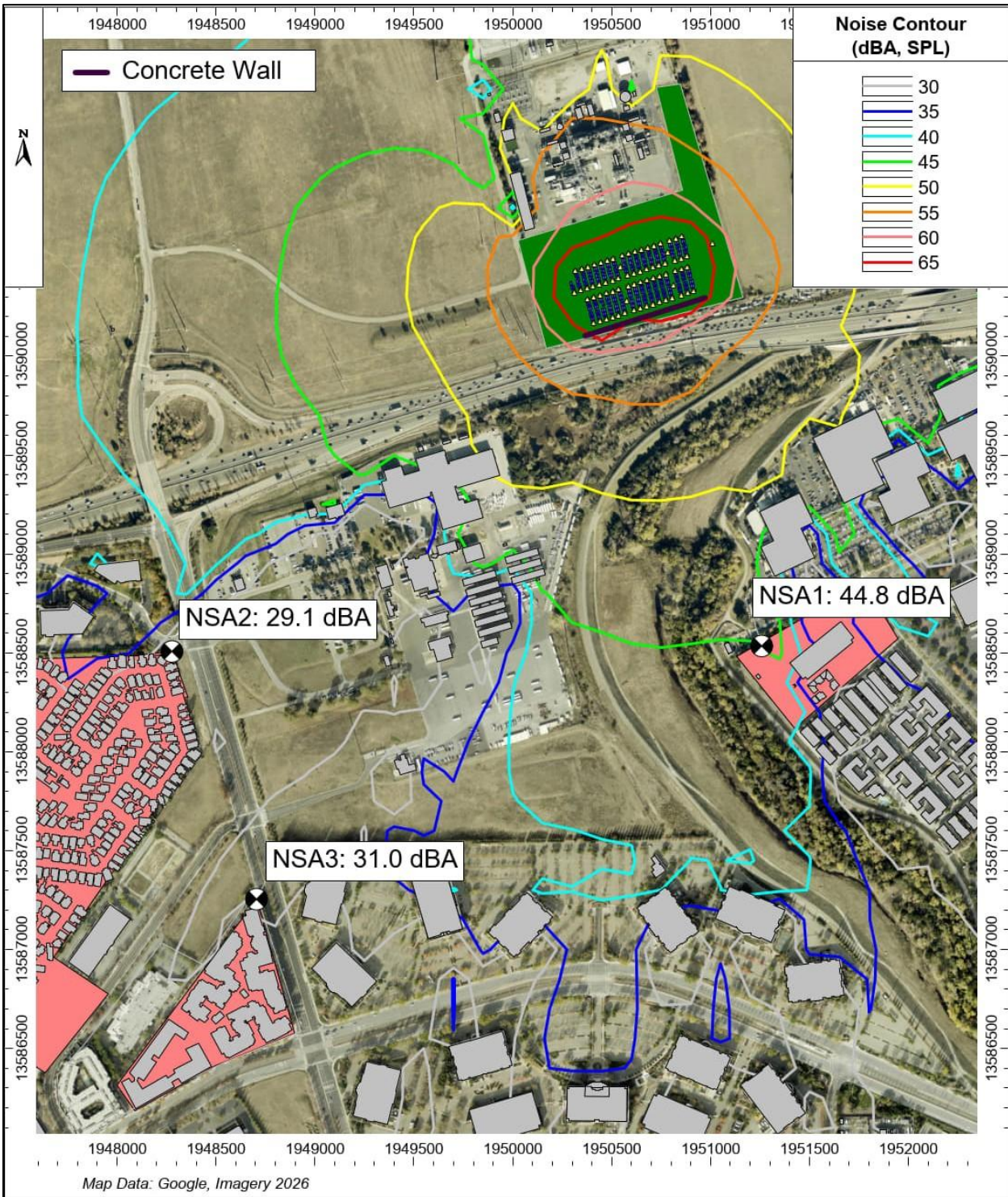


Figure 5. CadnaA-Predicted Project-Only Operational Noise Contours (Leq, dBA)

8.5 Supplemental CadnaA Distance Results

Table 11 presents supplemental project-only operational noise predictions at selected calculation locations ranging from 100 to 1,600 feet from the project. These results illustrate modeled sound levels at

the selected locations rather than a uniform source-distance attenuation relationship. Because the CadnaA model incorporates distributed equipment, intervening buildings, terrain, and acoustic shielding, predicted noise levels vary according to the specific sound propagation conditions at each location.

Table 11. Supplemental CadnaA-Predicted Levels at Reported Distances

Reported Distance (ft)	Project-only L_{eq} (dBA)
100	81
200	70
400	59
800	53
1,600	46

Notes: Distances describe selected calculation locations. Values are project-only hourly L_{eq} and account for modeled source locations, terrain, intervening structures, and acoustic shielding.

8.6 Regulatory Interpretation and Modeling Limitations

The CadnaA analysis predicts project-only hourly L_{eq} levels of 45 dBA at NSA1, 29 dBA at NSA2, and 31 dBA at NSA3. When combined with the measured nighttime ambient noise levels, the predicted increases are less than 1 dB at all three evaluated noise-sensitive areas (Table 9). These results indicate that the project's operational noise contribution would produce minimal changes in existing nighttime ambient noise conditions at the identified receptors.

At the four representative project property-line locations, predicted operational noise levels range from 59 to 63 dBA (Table 10). The assessment incorporates the project equipment configuration, directional sound emissions from the battery enclosures, terrain, intervening buildings, and the 6-foot-high concrete wall along the southern project boundary. The resulting predictions provide a site-specific characterization of operational noise under the equipment operating conditions and acoustic inputs presented in Sections 6 and 7.

9. Conclusions

This Noise Technical Memo documents existing ambient noise conditions and evaluates operational noise associated with the proposed Tanager BESS Project using CadnaA noise modeling. The analysis incorporates the project equipment configuration, modeled equipment locations, intervening buildings, terrain, and the 6-foot-high concrete wall along the southern project boundary. Based on the ambient noise measurements and operational noise predictions presented in this report, the following conclusions are provided:

- Ambient Noise Conditions.** Three simultaneous long-term noise measurements were conducted on October 12–13, 2026, at LT-01, LT-02, and LT-03, representing NSA1, NSA2, and NSA3, respectively. The measured L_{dn} values were 59.4, 61.0, and 62.7 dBA, while the corresponding nighttime L_{eq} values were 51.9, 53.5, and 55.3 dBA. The measurements are summarized in Table 1, with hourly results provided in Table 2 through Table 4 and Figure 2 through Figure 4.
- CadnaA Operational Noise Predictions.** Operational noise was evaluated using CadnaA Version 2026, incorporating the project equipment inventory, modeled source locations, terrain, intervening buildings, and a 6-foot-high wall along the southern project boundary. The analysis predicts project-only hourly L_{eq} levels of 45 dBA at NSA1, 29 dBA at NSA2, and 31 dBA at NSA3, as summarized in Table 8. The predicted operational noise contours are presented in Figure 5.
- Nighttime Ambient Noise Increases.** When combined with measured nighttime ambient conditions, the CadnaA-predicted project-only sound levels would increase existing nighttime L_{eq} by approximately 0.8 dB at NSA1 and less than 0.1 dB at NSA2 and NSA3, as presented in Table 9. These results indicate minimal increases in overall nighttime A-weighted noise levels at the evaluated noise-sensitive areas under the modeled operating conditions.
- Property-Line Predictions.** The CadnaA analysis predicts project-only hourly L_{eq} levels of 62 dBA at the northern property line, 59 dBA at the western property line, 63 dBA at the southern property line,

and 60 dBA at the eastern property line, as summarized in Table 10. These predictions account for the modeled equipment configuration, terrain, intervening structures, and the 6-foot-high sound wall along the southern project boundary. The predicted levels range from 59 to 63 dBA across the four representative property-line locations.

- 5 **Overall Findings.** The CadnaA analysis provides a site-specific evaluation of operational noise associated with the proposed Tanager BESS Project, accounting for equipment locations, acoustic source characteristics, terrain, intervening buildings, and the southern sound wall. The results indicate that project operation would produce minimal increases in existing nighttime ambient noise levels at the three evaluated noise-sensitive areas, with predicted increases ranging from less than 0.1 to 0.8 dB. The analysis also characterizes operational noise at representative project property-line locations. Based on the modeled operating conditions, the project's operational noise contribution would result in a less than significant impact at the identified noise-sensitive areas relative to existing ambient noise conditions.

10. References

- CadnaA. 2026. Tanager Battery Energy Storage System Project – Operational Noise Modeling Methodology and Results. CadnaA Version 2026; source acoustic inputs, calculation settings, operational noise predictions, and noise contour mapping. October 2026.
- California Code of Regulations, Title 20, Division 2, Chapter 5, Appendix B, §(g)(4), Noise.
<https://www.law.cornell.edu/regulations/california/20-CCR-2-Chapter-5-app-B>
- California Energy Commission (2026), Los Esteros Critical Energy Facility, Tanager BESS Project, Data Response Set 1C, TN 268268 (context).
- City of San José, Municipal Code Title 20, Chapter 20.50, industrial district noise performance standards and Table 20-135 (application subject to property zoning and certification jurisdiction).
<https://gocodebook.com/library/us/ca/san-jose/title-20-zoning-1/part-5-performance-standards>

APPENDIX A FIELD PHOTOGRAPHS

Ambient Noise Monitoring – Tanager Battery Energy Storage System Project, San José, California

Photographs document the monitoring locations and field conditions during the October 12–13, 2026 ambient noise survey. Location and weather screenshots are reproduced as field documentation. Photo identifiers correspond to the original filenames provided with the field records.

LT-01 — Long-Term Noise Monitoring



Photo A-1. Long-term monitoring location and surroundings (LT-01a.jpg).



Photo A-2. Long-term monitoring location and surroundings (LT-01b.jpg).

Source: Ambient noise survey field photographs, October 12–13, 2026.

LT-01 — Long-Term Noise Monitoring



Photo A-3. Long-term monitoring location and surroundings (LT-01c.jpg).

Source: Ambient noise survey field photographs, October 12–13, 2026.

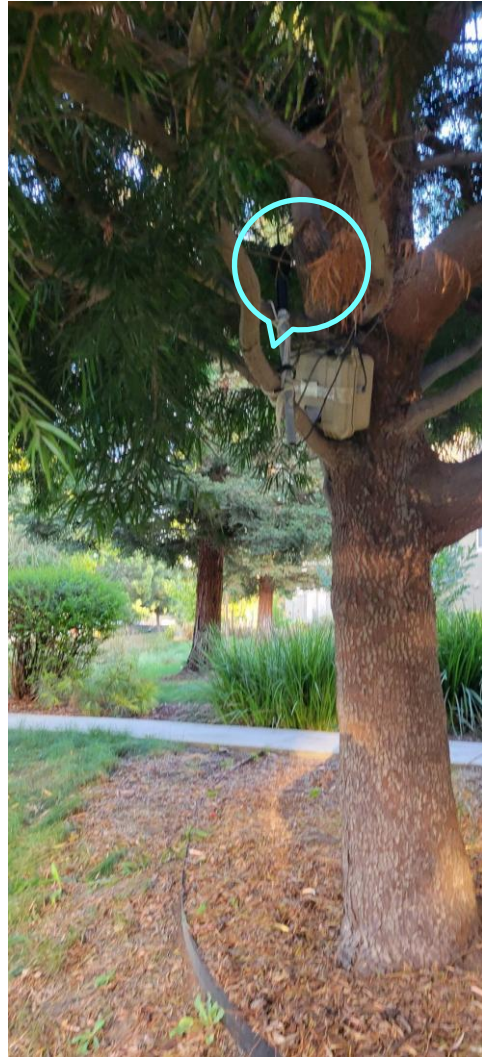


Photo A-4. Long-term monitoring location and surroundings (LT-01d.jpg).

LT-01 — Long-Term Noise Monitoring

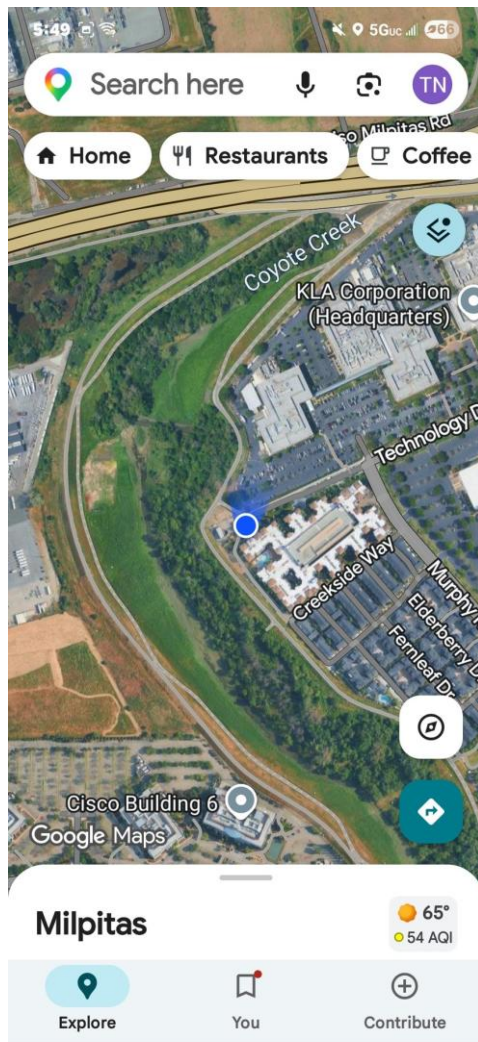


Photo A-5. Long-term monitoring location Map (LT-01e.jpg).

Source: Ambient noise survey field photographs, October 12–13, 2026.

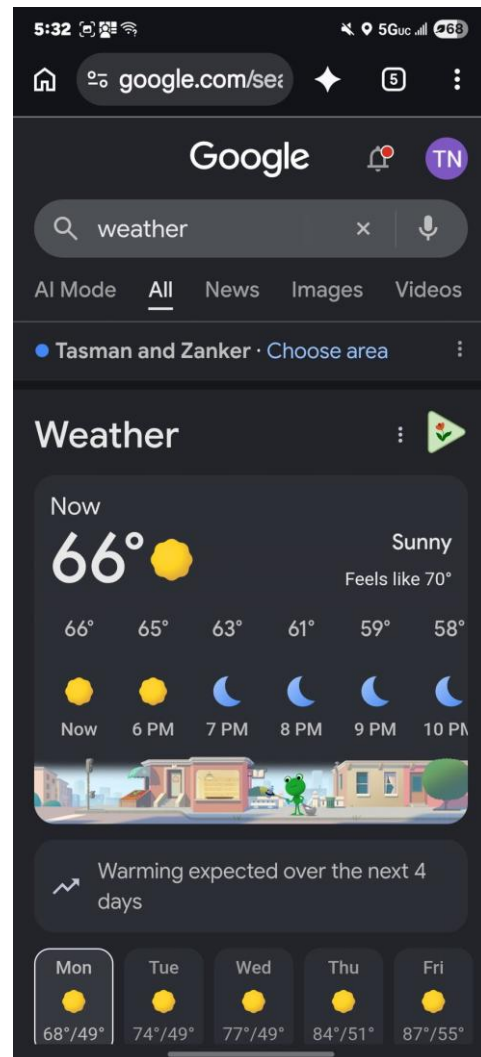


Photo A-6. Field weather record (LT-01f.jpg).

LT-02 — Long-Term Noise Monitoring

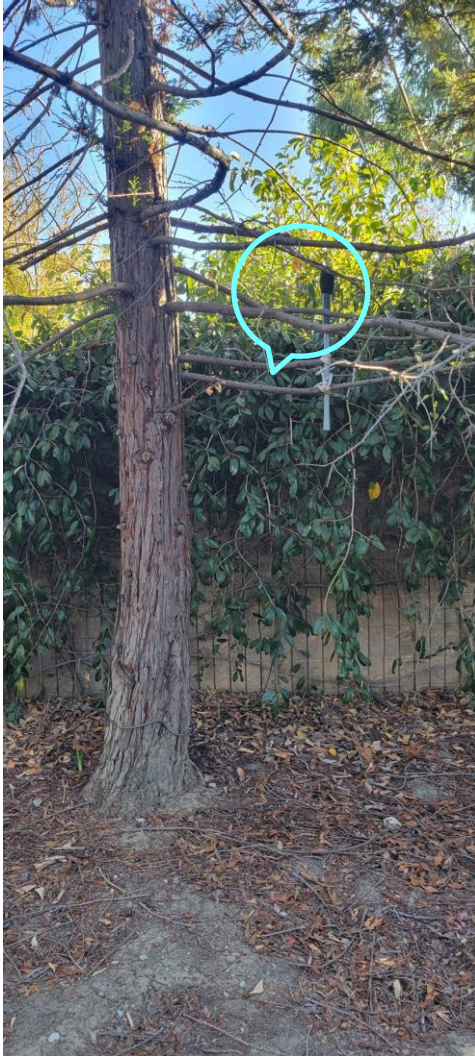


Photo A-9. Long-term monitoring location and surroundings (LT-02a.jpg).

Source: Ambient noise survey field photographs, October 12–13, 2026.

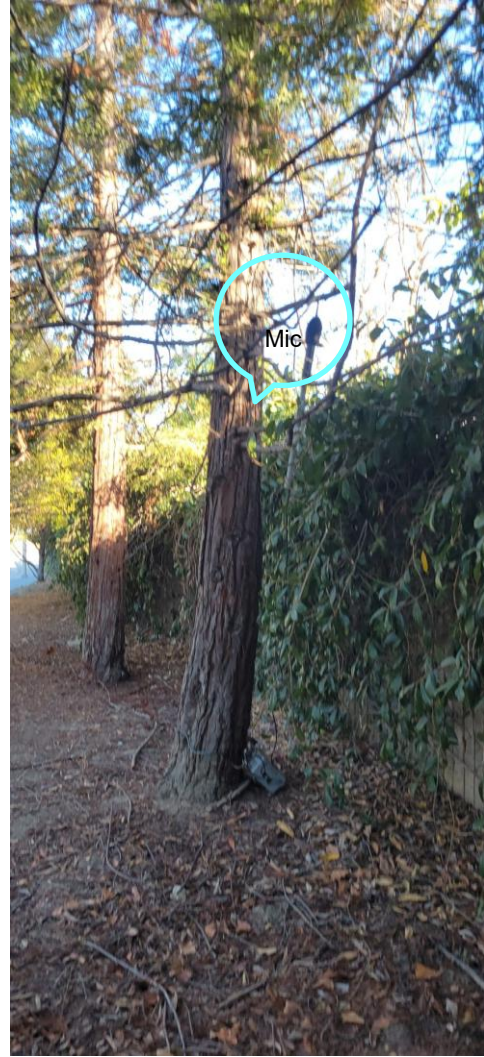


Photo A-10. Long-term monitoring location and surroundings (LT-02b.jpg).

LT-02 — Long-Term Noise Monitoring



Photo A-11. Long-term monitoring location and surroundings (LT-02c.jpg).

Source: Ambient noise survey field photographs, October 12–13, 2026.



Photo A-12. Long-term monitoring location and surroundings (LT-02d.jpg).

LT-02 — Long-Term Noise Monitoring

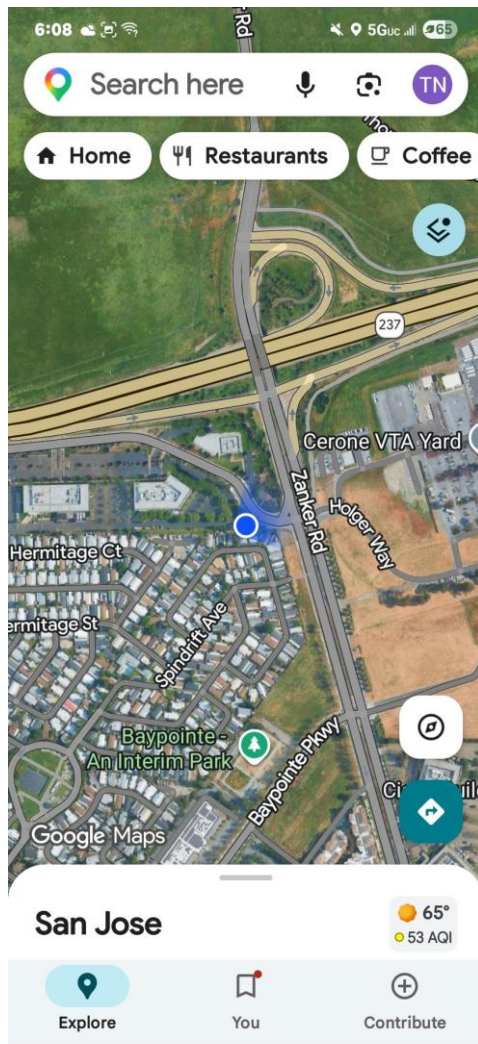


Photo A-13. Long-term monitoring location Map (LT-02e.jpg).

Source: Ambient noise survey field photographs, October 12–13, 2026.

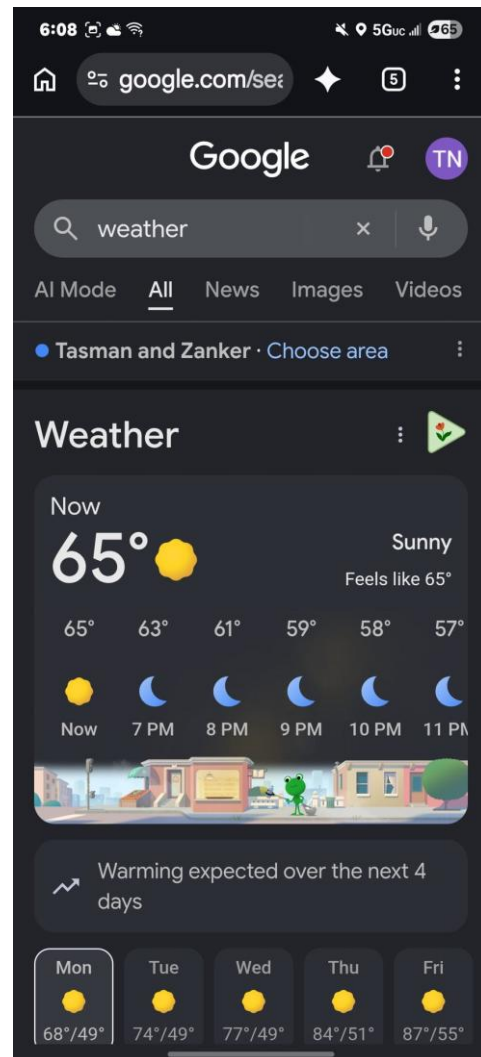


Photo A-14. Field weather record (LT-02fLocation.jpg).

LT-03 — Long-Term Noise Monitoring



Photo A-16. Long-term monitoring location and surroundings (LT-03a.jpg).

Source: Ambient noise survey field photographs, October 12–13, 2026.

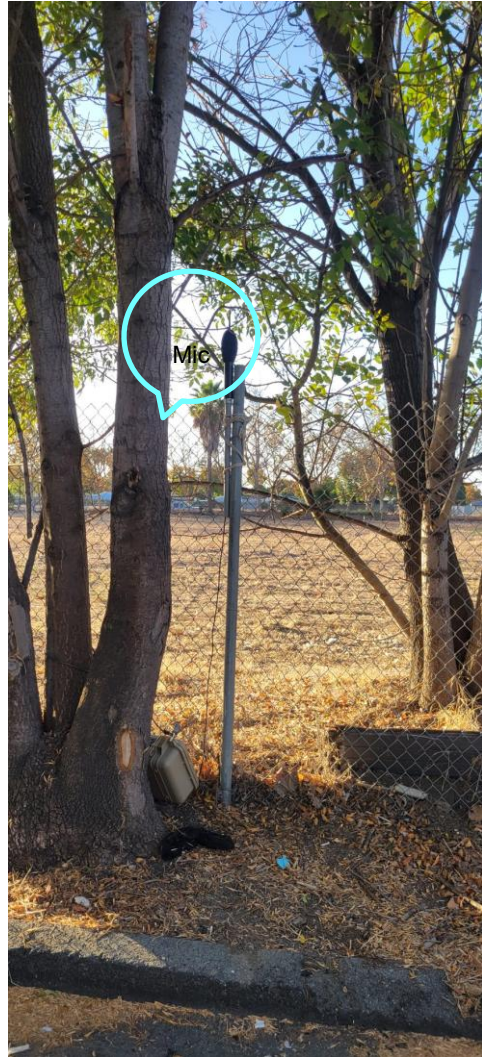


Photo A-17. Long-term monitoring location and surroundings (LT-03b.jpg).

LT-03 — Long-Term Noise Monitoring



Photo A-18. Long-term monitoring location and surroundings (LT-03c.jpg).

Source: Ambient noise survey field photographs, October 12–13, 2026.



Photo A-19. Long-term monitoring location and surroundings (LT-03d.jpg).

LT-03 — Long-Term Noise Monitoring

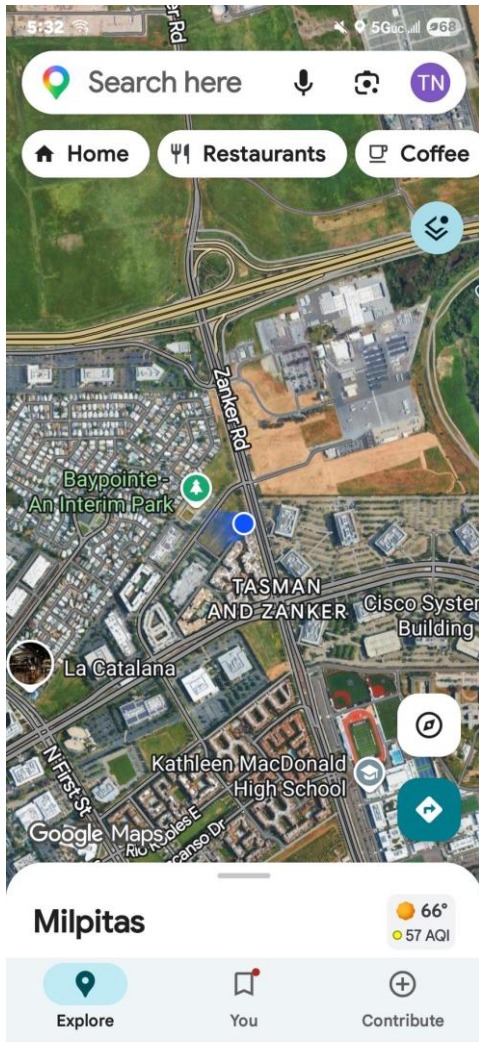


Photo A-20. Monitoring location map (LT-03eLocation.jpg).

Source: Ambient noise survey field photographs, October 12–13, 2026.

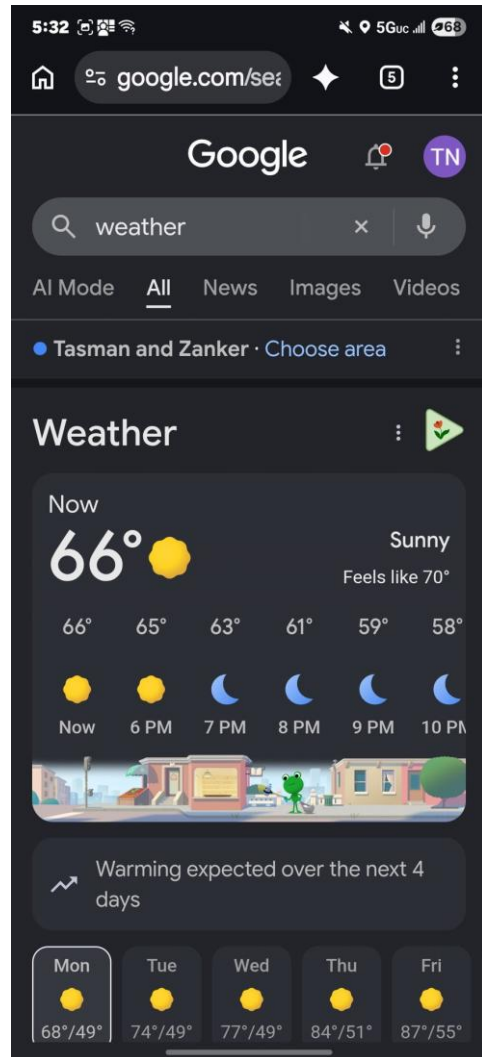


Photo A-21. Field weather record (LT-03fWeather.jpg).

APPENDIX B AMBIENT NOISE MONITORING DATA

Quarter-hour instrument records for LT-01, LT-02 and LT-03 are provided below. The hourly results derived from these records are reported in Table 2 through Table 4 of the main report. The records reflect the original instrument interval durations, including partial intervals at the start or end of a deployment.

Table B-1. LT-01 15-Minute Noise Measurement Records

Start Time (PDT)	Duration (s)	L _{eq} (dBA)	L _{max} (dBA)	L _{min} (dBA)
Oct 12 17:47	730	59.8	73.4	55.9
Oct 12 18:00	900	58.9	66.4	56.4
Oct 12 18:15	900	60.6	73.1	55.8
Oct 12 18:30	900	58.2	61.9	55.3
Oct 12 18:45	900	58.5	61.4	55.9
Oct 12 19:00	900	57.3	63.5	54.6
Oct 12 19:15	900	57.4	62.2	54.2
Oct 12 19:30	900	57.1	67.2	54.1
Oct 12 19:45	900	58.0	64.2	54.7
Oct 12 20:00	900	57.6	65.0	53.8
Oct 12 20:15	900	57.3	59.4	54.6
Oct 12 20:30	900	63.7	88.3	54.4
Oct 12 20:45	900	56.1	65.8	53.8
Oct 12 21:00	900	55.8	63.6	52.5
Oct 12 21:15	900	55.5	68.9	52.2
Oct 12 21:30	900	52.5	59.3	49.1
Oct 12 21:45	900	52.3	56.9	49.4
Oct 12 22:00	900	54.1	58.4	50.7
Oct 12 22:15	900	55.5	62.9	52.9
Oct 12 22:30	900	55.3	67.2	51.1
Oct 12 22:45	900	53.6	58.3	51.1
Oct 12 23:00	900	52.9	56.1	49.5
Oct 12 23:15	900	52.4	57.2	48.3
Oct 12 23:30	900	51.9	61.8	48.2
Oct 12 23:45	900	52.2	59.2	48.7
Oct 13 00:00	900	51.8	66.1	48.3
Oct 13 00:15	900	52.6	69.4	46.8
Oct 13 00:30	900	50.6	55.7	47.1
Oct 13 00:45	900	50.9	57.6	47.1
Oct 13 01:00	900	58.3	61.7	48.8
Oct 13 01:15	900	55.6	59.1	44.6
Oct 13 01:30	900	45.5	52.5	43.8
Oct 13 01:45	900	45.9	53.8	43.5
Oct 13 02:00	900	50.1	67.3	43.4
Oct 13 02:15	900	45.2	53.3	43.4
Oct 13 02:30	900	44.5	46.5	43.0
Oct 13 02:45	900	44.8	50.3	43.3
Oct 13 03:00	900	45.5	54.3	43.5
Oct 13 03:15	900	46.5	52.0	44.0
Oct 13 03:30	900	47.9	51.4	44.9
Oct 13 03:45	900	50.5	60.4	47.5
Oct 13 04:00	900	50.7	55.5	48.4
Oct 13 04:15	900	49.7	52.6	47.7
Oct 13 04:30	900	51.8	66.4	47.4
Oct 13 04:45	900	53.5	57.6	51.1
Oct 13 05:00	900	52.4	55.6	50.6
Oct 13 05:15	900	52.5	57.0	50.0
Oct 13 05:30	900	49.9	57.5	45.9
Oct 13 05:45	900	47.6	56.6	45.5
Oct 13 06:00	900	48.7	55.2	45.6
Oct 13 06:15	900	51.5	63.0	48.0

Start Time (PDT)	Duration (s)	L _{eq} (dBA)	L _{max} (dBA)	L _{min} (dBA)
Oct 13 06:30	900	50.4	58.0	47.2
Oct 13 06:45	900	50.4	56.4	46.9
Oct 13 07:00	900	54.0	64.4	47.2
Oct 13 07:15	900	54.0	63.4	50.2
Oct 13 07:30	900	54.2	62.6	50.5
Oct 13 07:45	900	51.5	60.3	47.8
Oct 13 08:00	900	53.3	69.8	47.1
Oct 13 08:15	900	57.5	69.4	47.5
Oct 13 08:30	900	56.9	73.1	50.0
Oct 13 08:45	900	57.0	68.1	46.4
Oct 13 09:00	900	54.3	68.8	46.0
Oct 13 09:15	900	54.1	70.2	46.4
Oct 13 09:30	900	51.6	62.5	46.3
Oct 13 09:45	900	56.2	70.3	46.8
Oct 13 10:00	900	51.8	65.3	47.7
Oct 13 10:15	900	53.7	62.9	47.8
Oct 13 10:30	900	52.7	64.9	48.3
Oct 13 10:45	900	56.7	75.6	48.7
Oct 13 11:00	900	56.9	71.9	51.7
Oct 13 11:15	900	56.0	67.4	52.9
Oct 13 11:30	900	56.4	71.8	49.9
Oct 13 11:45	900	53.7	65.6	50.8
Oct 13 12:00	900	54.2	64.7	50.2
Oct 13 12:15	900	55.1	68.6	50.9
Oct 13 12:30	900	56.0	74.4	51.8
Oct 13 12:45	900	56.5	70.1	51.5
Oct 13 13:00	900	56.8	70.0	51.6
Oct 13 13:15	900	57.7	76.7	51.2
Oct 13 13:30	900	53.4	58.9	49.6
Oct 13 13:45	900	54.3	64.1	50.0
Oct 13 14:00	900	55.8	65.2	50.4
Oct 13 14:15	900	57.7	72.2	52.2
Oct 13 14:30	900	57.1	67.7	52.2
Oct 13 14:45	900	57.5	68.6	51.6
Oct 13 15:00	900	58.8	73.0	53.7
Oct 13 15:15	900	56.7	68.1	53.6
Oct 13 15:30	900	57.0	66.2	53.6
Oct 13 15:45	900	57.3	68.0	53.8
Oct 13 16:00	900	57.1	71.9	54.2
Oct 13 16:15	900	57.7	70.7	54.2
Oct 13 16:30	900	59.3	71.2	54.0
Oct 13 16:45	900	57.6	73.2	54.5
Oct 13 17:00	900	57.0	67.9	53.0
Oct 13 17:15	900	58.3	69.6	53.1
Oct 13 17:30	900	57.2	69.2	52.9
Oct 13 17:45	900	57.1	68.0	53.1
Oct 13 18:00	900	57.5	64.1	54.8
Oct 13 18:15	900	57.4	66.6	54.2
Oct 13 18:30	900	57.0	65.2	54.6
Oct 13 18:45	900	58.8	67.9	56.1
Oct 13 19:00	900	59.1	64.4	57.2
Oct 13 19:15	900	59.4	70.5	56.9
Oct 13 19:30	96	58.4	60.1	57.4

Source: October 12–13, 2026 field monitoring records.

Notes: L_{eq} = equivalent continuous A-weighted level; L_{max}/L_{min} = interval maximum/minimum levels; LT = long-term; PDT = Pacific Daylight Time.

Table B-2. LT-02 15-Minute Noise Measurement Records

Start Time (PDT)	Duration (s)	L _{eq} (dBA)	L _{max} (dBA)	L _{min} (dBA)
Oct 12 16:51	537	60.7	70.6	55.9
Oct 12 17:00	900	60.1	65.4	56.7
Oct 12 17:15	900	61.0	70.4	57.1
Oct 12 17:30	900	60.7	71.4	58.1
Oct 12 17:45	900	60.9	71.5	57.0
Oct 12 18:00	900	60.9	73.7	57.7
Oct 12 18:15	900	60.6	73.6	57.1
Oct 12 18:30	900	60.5	69.4	57.7
Oct 12 18:45	900	61.8	80.0	57.9
Oct 12 19:00	900	61.0	76.7	56.5
Oct 12 19:15	900	58.4	70.5	53.7
Oct 12 19:30	900	55.7	65.4	51.4
Oct 12 19:45	900	55.7	63.6	50.8
Oct 12 20:00	900	58.4	69.1	55.0
Oct 12 20:15	900	57.8	65.4	55.0
Oct 12 20:30	900	57.5	62.4	54.5
Oct 12 20:45	900	56.7	60.2	53.7
Oct 12 21:00	900	57.1	64.1	52.7
Oct 12 21:15	900	57.1	63.6	54.1
Oct 12 21:30	900	54.4	59.6	51.5
Oct 12 21:45	900	54.6	61.1	50.0
Oct 12 22:00	900	52.9	60.0	48.7
Oct 12 22:15	900	54.3	60.0	48.7
Oct 12 22:30	900	54.1	61.0	49.3
Oct 12 22:45	900	55.1	71.8	51.4
Oct 12 23:00	900	54.1	64.1	50.9
Oct 12 23:15	900	53.2	70.7	47.2
Oct 12 23:30	900	52.9	58.3	48.0
Oct 12 23:45	900	52.2	57.4	46.1
Oct 13 00:00	900	53.8	67.2	49.9
Oct 13 00:15	900	52.6	63.9	49.9
Oct 13 00:30	900	50.1	58.2	41.6
Oct 13 00:45	900	49.1	56.7	41.6
Oct 13 01:00	900	54.2	76.0	40.1
Oct 13 01:15	900	51.3	57.2	49.5
Oct 13 01:30	900	50.6	55.5	49.1
Oct 13 01:45	900	47.7	56.0	40.4
Oct 13 02:00	900	44.8	54.4	39.7
Oct 13 02:15	900	44.8	52.5	38.8
Oct 13 02:30	900	49.8	53.8	42.6
Oct 13 02:45	900	50.3	54.3	49.0
Oct 13 03:00	900	49.9	58.1	42.4
Oct 13 03:15	900	47.5	53.8	42.0
Oct 13 03:30	900	49.2	65.6	44.9
Oct 13 03:45	900	52.1	59.1	47.4
Oct 13 04:00	900	53.8	57.5	51.9
Oct 13 04:15	900	54.6	68.1	49.0
Oct 13 04:30	900	52.5	59.5	48.4
Oct 13 04:45	900	55.9	66.5	50.9
Oct 13 05:00	900	55.8	64.4	51.6
Oct 13 05:15	900	57.7	74.5	54.1
Oct 13 05:30	900	54.9	61.7	51.2
Oct 13 05:45	900	54.3	72.1	45.4
Oct 13 06:00	900	53.5	65.9	45.5
Oct 13 06:15	900	56.8	76.6	49.2
Oct 13 06:30	900	55.5	71.5	50.7

Start Time (PDT)	Duration (s)	L _{eq} (dBA)	L _{max} (dBA)	L _{min} (dBA)
Oct 13 06:45	900	58.5	79.4	51.4
Oct 13 07:00	900	57.4	78.8	47.0
Oct 13 07:15	900	54.6	63.5	48.6
Oct 13 07:30	900	55.9	63.8	49.0
Oct 13 07:45	900	56.6	70.0	49.8
Oct 13 08:00	900	59.1	82.4	51.9
Oct 13 08:15	900	55.7	65.4	50.6
Oct 13 08:30	900	55.3	66.4	46.1
Oct 13 08:45	900	56.6	74.7	45.4
Oct 13 09:00	900	55.6	64.2	45.7
Oct 13 09:15	900	57.0	64.0	50.0
Oct 13 09:30	900	57.9	67.6	51.9
Oct 13 09:45	900	57.9	68.4	50.3
Oct 13 10:00	900	56.8	66.1	47.7
Oct 13 10:15	900	56.9	71.0	48.7
Oct 13 10:30	900	57.0	63.8	49.2
Oct 13 10:45	900	56.9	63.8	52.0
Oct 13 11:00	900	58.1	63.4	52.2
Oct 13 11:15	900	58.1	66.3	50.9
Oct 13 11:30	900	56.8	63.1	50.1
Oct 13 11:45	900	57.3	69.3	50.4
Oct 13 12:00	900	57.6	71.3	49.2
Oct 13 12:15	900	61.2	79.7	53.4
Oct 13 12:30	900	58.1	67.2	53.3
Oct 13 12:45	900	57.8	69.3	51.4
Oct 13 13:00	900	57.3	69.6	49.2
Oct 13 13:15	900	56.5	64.5	50.1
Oct 13 13:30	900	57.1	65.6	50.2
Oct 13 13:45	900	57.4	66.0	52.6
Oct 13 14:00	900	58.6	73.1	52.7
Oct 13 14:15	900	57.6	68.9	51.0
Oct 13 14:30	900	57.2	71.1	50.7
Oct 13 14:45	900	57.7	67.9	51.6
Oct 13 15:00	900	58.8	70.4	52.4
Oct 13 15:15	900	58.9	70.9	54.8
Oct 13 15:30	900	59.2	70.9	54.1
Oct 13 15:45	900	59.7	75.1	53.8
Oct 13 16:00	900	59.7	71.4	54.9
Oct 13 16:15	900	58.7	71.5	52.2
Oct 13 16:30	900	60.3	74.9	55.9
Oct 13 16:45	900	60.0	68.9	56.5
Oct 13 17:00	900	59.6	70.7	56.2
Oct 13 17:15	900	59.5	70.3	55.5
Oct 13 17:30	900	58.9	69.2	54.1
Oct 13 17:45	900	59.2	71.0	54.4
Oct 13 18:00	900	60.1	70.1	56.0
Oct 13 18:15	900	61.4	75.2	56.2
Oct 13 18:30	900	62.3	78.6	56.5
Oct 13 18:45	900	60.6	70.2	56.6
Oct 13 19:00	804	60.9	64.7	58.2

Source: October 12–13, 2026 field monitoring records.

Notes: L_{eq} = equivalent continuous A-weighted level; L_{max}/L_{min} = interval maximum/minimum levels; LT = long-term; PDT = Pacific Daylight Time.

Table B-3. LT-03 15-Minute Noise Measurement Records

Start Time (PDT)	Duration (s)	L _{eq} (dBA)	L _{max} (dBA)	L _{min} (dBA)
Oct 12 17:30	864	60.1	70.8	51.5
Oct 12 17:45	900	59.9	70.0	52.9
Oct 12 18:00	900	59.5	71.7	52.7
Oct 12 18:15	900	60.0	68.8	53.3
Oct 12 18:30	900	60.8	80.8	54.0
Oct 12 18:45	900	63.5	85.1	54.0
Oct 12 19:00	900	59.9	72.0	53.9
Oct 12 19:15	900	58.9	67.0	53.6
Oct 12 19:30	900	58.2	71.7	50.4
Oct 12 19:45	900	58.0	75.3	48.7
Oct 12 20:00	900	58.8	71.2	53.8
Oct 12 20:15	900	59.4	72.4	52.9
Oct 12 20:30	900	58.5	66.6	53.3
Oct 12 20:45	900	57.7	68.0	51.6
Oct 12 21:00	900	57.1	68.2	50.9
Oct 12 21:15	900	58.6	79.7	51.4
Oct 12 21:30	900	55.4	65.2	48.2
Oct 12 21:45	900	56.9	72.0	48.3
Oct 12 22:00	900	56.8	65.4	50.7
Oct 12 22:15	900	56.7	63.4	52.4
Oct 12 22:30	900	57.2	78.2	50.9
Oct 12 22:45	900	56.0	70.3	48.9
Oct 12 23:00	900	54.7	65.3	48.0
Oct 12 23:15	900	54.2	67.5	47.0
Oct 12 23:30	900	52.3	65.3	46.8
Oct 12 23:45	900	53.8	68.3	46.3
Oct 13 00:00	900	53.6	69.1	46.0
Oct 13 00:15	900	51.6	62.5	45.5
Oct 13 00:30	900	50.9	63.9	44.4
Oct 13 00:45	900	50.7	66.1	44.4
Oct 13 01:00	900	54.9	74.0	44.5
Oct 13 01:15	900	48.3	61.1	43.9
Oct 13 01:30	900	47.6	61.3	43.0
Oct 13 01:45	900	47.2	62.3	43.1
Oct 13 02:00	900	46.7	59.5	42.5
Oct 13 02:15	900	48.9	67.2	42.8
Oct 13 02:30	900	46.8	62.8	42.5
Oct 13 02:45	900	47.1	59.2	42.2
Oct 13 03:00	900	47.9	62.7	42.7
Oct 13 03:15	900	47.1	58.8	44.1
Oct 13 03:30	900	49.8	64.1	45.3
Oct 13 03:45	900	51.4	65.8	46.5
Oct 13 04:00	900	51.6	68.3	47.0
Oct 13 04:15	900	51.9	65.0	46.6
Oct 13 04:30	900	53.2	67.6	47.2
Oct 13 04:45	900	55.7	67.9	50.1
Oct 13 05:00	900	55.9	69.8	50.1
Oct 13 05:15	900	59.4	82.8	48.9
Oct 13 05:30	900	53.8	65.5	46.4
Oct 13 05:45	900	55.3	73.8	45.3
Oct 13 06:00	900	55.4	68.7	46.2
Oct 13 06:15	900	55.3	71.6	49.2
Oct 13 06:30	900	55.3	67.1	48.8

Start Time (PDT)	Duration (s)	L _{eq} (dBA)	L _{max} (dBA)	L _{min} (dBA)
Oct 13 06:45	900	66.0	88.1	49.1
Oct 13 07:00	900	57.2	68.3	49.7
Oct 13 07:15	900	59.9	80.5	49.3
Oct 13 07:30	900	58.9	68.1	51.0
Oct 13 07:45	900	59.5	70.2	51.3
Oct 13 08:00	900	59.0	70.8	49.3
Oct 13 08:15	900	59.2	70.8	50.0
Oct 13 08:30	900	58.6	70.5	48.7
Oct 13 08:45	900	65.5	89.1	49.4
Oct 13 09:00	900	59.3	71.6	50.9
Oct 13 09:15	900	59.0	70.0	50.8
Oct 13 09:30	900	61.5	83.4	48.7
Oct 13 09:45	900	66.0	88.1	50.9
Oct 13 10:00	900	59.9	75.2	47.5
Oct 13 10:15	900	57.8	71.8	47.7
Oct 13 10:30	900	59.3	75.1	49.6
Oct 13 10:45	900	57.8	66.7	48.3
Oct 13 11:00	900	58.2	69.3	50.2
Oct 13 11:15	900	58.1	70.7	50.6
Oct 13 11:30	900	56.6	66.9	48.7
Oct 13 11:45	900	57.6	69.4	48.9
Oct 13 12:00	900	57.9	69.6	49.8
Oct 13 12:15	900	59.9	76.5	49.5
Oct 13 12:30	900	58.9	74.8	50.7
Oct 13 12:45	900	58.2	72.5	51.1
Oct 13 13:00	900	59.3	76.9	48.9
Oct 13 13:15	900	58.3	70.0	49.6
Oct 13 13:30	900	58.6	70.3	49.2
Oct 13 13:45	900	58.7	69.3	49.8
Oct 13 14:00	900	61.9	82.4	48.9
Oct 13 14:15	900	59.4	76.6	49.5
Oct 13 14:30	900	58.7	70.2	49.5
Oct 13 14:45	900	57.9	71.8	50.1
Oct 13 15:00	900	57.8	68.6	50.6
Oct 13 15:15	900	57.1	68.6	50.6
Oct 13 15:30	900	59.3	75.6	49.2
Oct 13 15:45	900	59.6	71.1	51.0
Oct 13 16:00	900	58.9	70.3	50.0
Oct 13 16:15	900	58.4	71.6	49.8
Oct 13 16:30	900	59.3	70.4	51.3
Oct 13 16:45	900	58.4	66.9	50.8
Oct 13 17:00	900	59.1	72.8	50.8
Oct 13 17:15	900	62.3	77.8	51.1
Oct 13 17:30	900	59.6	78.8	51.1
Oct 13 17:45	900	61.9	84.5	51.0
Oct 13 18:00	900	58.5	66.9	51.6
Oct 13 18:15	900	60.8	76.9	51.7
Oct 13 18:30	900	63.1	85.4	51.0
Oct 13 18:45	900	59.4	69.1	52.2
Oct 13 19:00	38	59.4	65.4	54.6

Source: October 12–13, 2026 field monitoring records.

Notes: L_{eq} = equivalent continuous A-weighted level; L_{max}/L_{min} = interval maximum/minimum levels; LT = long-term; PDT = Pacific Daylight Time.

APPENDIX C CADNA OPERATIONAL NOISE MODELING SUPPORT

The CadnaA model incorporates the equipment sound power spectra, source and receptor locations, terrain elevations, intervening structures, and 6-foot-high concrete wall along the southern project boundary described in Sections 6 and 7. Tables C.1 through C.4 summarize the acoustic inputs, receptor predictions, nighttime noise increases, property-line predictions, and supplemental calculation results used in the operational noise assessment.

C.1 CadnaA Acoustic Source Inputs

Table C.1. CadnaA Model Octave-Band Sound Power Inputs (dB re 1 pW)

Source	63	125	250	500	1000	2000	4000	8000	LWA
Hithium front	62	75	74	76	74	71	67	58	79
Hithium right	70	89	90	88	85	87	85	79	93
Hithium rear	65	83	82	82	77	74	69	60	83
Hithium left	60	82	74	73	71	67	62	55	76
Inverter (Kodiak label)	66	75	84	83	84	84	89	81	93
Main transformer	84	87	85	85	79	74	69	61	85
Auxiliary transformer	67	70	68	68	62	57	52	44	68

Notes: Sound power levels are expressed in decibels referenced to 1 picowatt (dB re 1 pW). The Hithium octave-band spectra were derived from manufacturer directional sound pressure measurements at 10 meters. The four face spectra represent directional emissions from each enclosure without double-counting the enclosure's sound emissions. Inverter inputs are based on SMA Sunny Central UP acoustic data. Transformer spectra were developed using representative transformer octave-band characteristics adjusted to the adopted overall acoustic inputs.

C.2 Model Settings and Shielding

The CadnaA model was developed using Version 2026 and ISO 9613-2-based sound propagation methods. The CadnaA model incorporates USGS terrain elevations, surrounding buildings represented at approximately 15 or 30 feet in height, and a 6-foot-high concrete wall along the southern project boundary, excluding the access gate. Calculations use an air temperature of 50°F, relative humidity of 70 percent, downwind conditions represented by 6.7 miles per hour, second-order acoustic reflections, a ground absorption coefficient of 0.4, and a building absorption coefficient of 0.21.

C.3 Receptor Predictions and Nighttime Increments

Table C.2. CadnaA NSA L_{eq} and Calculated Ambient Increases

NSA	Night Ambient	Project-only	Combined	Increase
NSA1	51.9	44.8	52.7	0.8
NSA2	53.5	29.1	53.5	< 0.1
NSA3	55.3	31.0	55.3	< 0.1

Notes: CadnaA-predicted project-only hourly L_{eq} levels are presented to the nearest whole decibel. Combined nighttime sound levels and increases over existing ambient conditions were calculated using logarithmic energy summation and the measured nighttime L_{eq} values in Table 1. The resulting increases are presented to two decimal places for calculation consistency; this does not imply equivalent prediction precision.

The increase in existing nighttime ambient noise due to project operation was calculated by logarithmically combining the CadnaA-predicted project-only hourly L_{eq} with the measured nighttime ambient L_{eq} at each noise-sensitive area, using the following equation:

$$\Delta L = 10 \log_{10} [1 + 10^{((L_{project} - L_{ambient})/10)}]$$

Where:

- ΔL = increase in existing ambient noise (dB)
- $L_{ambient}$ = is the measured existing nighttime L_{eq} (dBA)
- $L_{project}$ = is the CadnaA-predicted project-only L_{eq} (dBA)

The calculations use the CadnaA-predicted project-only noise levels reported to the nearest whole decibel. The resulting ambient noise increases are presented to two decimal places for calculation consistency; this does not imply that the underlying noise predictions have the same level of precision. The calculated increases are summarized in Table 9 and Appendix C.