# Marici Project, LLC

## Sound Impact Assessment

Updated September 2025

**Prepared For:**

Geoff Forner
Senior Manager of Development, CAISO
Marici Project, LLC

**Prepared By:**

TRC
6 Executive Circle, Suite 200
Irvine, CA 92614

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# 1.0 Introduction

TRC Solutions, Inc. (TRC) is pleased to provide this noise report to support Marici Project, LLC in obtaining needed discretionary permits for the Marici Project in the City of Industry, California. The project is a proposed battery energy storage system (BESS) to be developed on 5 parcels comprising approximately 9.2 acres (the Site). The Site is currently developed with commercial buildings, parking, and associated landscaping. The proposed facility also includes a 220 kV tie-line across the eastern boundary of the Site into the adjacent Walnut Substation.

# 2.0 Concepts of Environmental Sound

Sounds are generated by a variety of sources (e.g., a musical instrument, a voice speaking, or an airplane that passes overhead). Energy is required to produce sound and this sound energy is transmitted through the air in the form of sound waves – tiny, quick oscillations of pressure just above and just below atmospheric pressure. These oscillations, or sound pressures, impinge on the ear, creating the sound we hear. The range of sound pressures that can be detected by a person with normal hearing is very wide, ranging from about 20 micro-pascals (μPa) for very faint sounds at the threshold of hearing to nearly 10 million μPa for extremely loud sounds, such as a jet during take-off at a distance of 300 feet. Because the range of human hearing is so wide, sound levels are reported using "sound pressure levels", which are expressed in terms of decibels. The sound pressure level in decibels is the logarithm of the ratio of the sound pressure of the source to the reference sound pressure of 20 μPa, multiplied by 20.

Table 2.1 provides some examples of common sources of sound and their sound pressure levels. All sound levels in this assessment are provided in A-weighted decibels, abbreviated "dB(A)" or "dBA." The A-weighted sound level reflects how the human ear responds to sound, by deemphasizing sounds that occur in frequencies at which the human ear is least sensitive to sound (at frequencies below about 100 hertz and above 10,000 hertz) and emphasizing sounds that occur in frequencies at which the human ear is most sensitive to sound (in the mid-frequency range from about 200 to 8,000 hertz). In the context of environmental sound, noise is defined as "unwanted sound."

**Table 2.1 Examples of Common Sound Pressure Levels**

| Sound Level dB(A) | Common Indoor Sounds | Common Outdoor Sounds |
|---|---|---|
| 110 | Rock Band | Jet Takeoff at 1000 feet |
| 100 | Inside NYC Subway Train | Chain Saw at 3 feet |
| 90 | Food Blender at 3 feet | Impact Hammer (Hoe Ram) at 50 feet |
| 80 | Garbage Disposal at 3 feet | Diesel Truck at 50 feet |
| 70 | Vacuum Cleaner at 10 feet | Lawn Mower at 100 feet |
| 60 | Normal Speech at 3 feet | Auto (40 mph) at 100 feet |
| 50 | Dishwasher in Next Room | Busy Suburban Area at night |
| 40 | Empty Conference Room | Quiet Suburban Area at night |
| 25 | Empty Concert Hall | Rural Area at night |

Sound pressure levels are typically presented in community noise assessments utilizing the noise metrics described below and expressed in terms of A-weighted decibels.

- "$L_{10}$" is the sound level that is exceeded for 10 percent of the time. This metric is a measure of the intrusiveness of relatively short-duration noise events that occurred during the measurement period.
- "$L_{50}$" is the sound level that is exceeded for 50 percent of the measurement period.
- "$L_{90}$" is the sound level that is exceeded for 90 percent of the time and is a measure of the background or residual sound levels in the absence of recurring noise events.
- "$L_{eq}$" is the constant sound level which would contain the same acoustic energy as the varying sound levels during the time period and is representative of the average noise exposure level for that time period.
- "$L_{MAX}$" is the instantaneous maximum sound level for the time period.

It is often necessary to combine the sound pressure levels from one or more sources. Because decibels are logarithmic quantities, it is not possible to simply add the values of the sound pressure levels together. For example, if two sound sources each produce 70 dB and they are operated together, their combined impact is 73 dB – not 140 dB as might be expected. Four equal 70 dB sources operating simultaneously result in a total sound pressure level of 76 dB. In fact, for every doubling of the number of equal sources, the sound pressure level goes up another three decibels. A tenfold increase in the number of sources makes the sound pressure level increase by 10 dB, while a hundredfold increase makes the level increase by 20 dB. The logarithmic combination of *n* different sound levels is calculated by the following equation:

$$L_{total}=10*\log_{10}\left(10^{\frac{L_1}{10}} + 10^{\frac{L_2}{10}} + \ldots + 10^{\frac{L_n}{10}}\right)$$

Perceived changes in sound level can be slightly more subjective; the average person will not notice a change of 1-2 dB, a 3 dB increase is just barely perceptible, while a 5 dB change is clearly noticeable.

## 3.0 Applicable Noise Standards and Regulations

There are no regulations for the City of Industry or the state of California that set quantitative standards for noise levels that would be applicable to the Project. The California Environmental Quality Act (CEQA), Appendix G, requires environmental impact assessments to determine whether projects would result in:

- Increase in ambient noise levels in excess of local applicable standards;
- Excessive ground-borne vibration or ground-borne noise levels; or
- Exposure of people residing or working in the project area to excessive noise levels (for a project within 2 miles of an airport).

The City of Industry falls within Los Angeles County, which has an ordinance regarding noise levels at new developments. Ordinance 12.08, Noise Control, includes designated noise zones based on sensitivity of the receiving property. The most sensitive applicable noise zone that could be affected by the Project is Noise Zone II, residential properties, which has an exterior noise level limit of 45 dB at night (10 p.m. to 7 a.m.) and 50 dB during the day (7 a.m. to 10 p.m.). If the measured ambient L50 sound level exceeds this level, then the measured ambient L50 sound level becomes the noise level standard. More lenient (higher) noise level standards are provided in 12.08.390 Section B for shorter cumulative durations within a given hour. Since sound levels from the Project are assumed to be continuous, these would not apply to the Project.

Ordinance 12.08.440, Construction Noise, sets limitations for mobile construction equipment at single-family residential structures of 75 dBA between 7 a.m. and 8 p.m., and 60 dBA between 8 p.m. and 7 a.m. The daytime and nighttime limits at semi-residential/commercial receiving properties are 85 dBA and 70 dBA, respectively.

Based on desktop review of the proposed BESS site and surrounding area, the nearest areas that could be considered areas of sensitive land use are the residential areas immediately south of the Site along Gale Avenue and Folger Street (see Section 4.0, Noise Sensitive Areas). The land uses to the north, east, and west are predominantly industrial and commercial and are not considered areas of sensitive land use.

Ordinance 12.08.560, Vibration, prohibits operating or permitting the operation of any device that creates vibration above the vibration perception threshold (0.01 in/sec) beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way.

## 4.0 Noise Sensitive Areas

The facility is being proposed on an industrial property with the only noise sensitive areas (NSAs) being the single-family residential properties on the south side of Gale Avenue to the south of the Site in Hacienda Heights. Table 4.1 lists the closest NSAs and their approximate distance and direction from the proposed facility.

**Table 4.1 Closest Noise Sensitive Residences**

| NSA | Description | Approximate Distance from the Facility to NSA, feet | Direction to NSA |
|---|---|---|---|
| 1 | Residence | 600 | W |
| 2 | Residence | 340 | W |
| 3 | Residence | 180 | SW |
| 4 | Residence | 200 | SW |
| 5 | Residence | 260 | SW |
| 6 | Residence | 150 | SW |
| 7 | Residence | 130 | S |
| 8 | Residence | 140 | S |
| 9 | Residence | 130 | S |
| 10 | Residence | 140 | S |
| 11 | Residence | 140 | S |
| 12 | Residence | 150 | SE |

| | | | |
|---|---|---|---|
| 13 | Residence | 190 | SE |
| 14 | Residence | 240 | SE |
| 15 | Residence | 290 | SE |

## 5.0 Long-Term Ambient Sound Survey

A long-term pre-construction ambient sound survey was conducted at the Project site from August 20th to August 25th, 2025, to characterize the existing sound environment (i.e., background) in the Project area. The methodology and results of the survey are further described below.

Continuous sound level measurements were taken near the property line within the proposed site at location LT-1 (see Figure 1). The measurements were taken using a Larson Davis SoundExpert® LxT sound level meter that meets the requirements of the American National Standards Institute (ANSI) Standards for Type I instruments. The sound level meter was calibrated before and after each monitoring period using a CAL200 acoustic calibrator. The microphone was positioned according to the ANSI Standard on a tripod 1.5 meters above ground, 7.5 meters from large reflecting surfaces, and at least 1.5 meters from tall trees.

The results of the baseline measurements collected at the Project site are summarized in Table 5.1 below. The overall background level, typically represented by the $L_{90}$ metric, was 48.6 dBA.

**Table 5.1 Ambient Sound Survey Summary**

| Sound Metric | Sound Level (dBA) |
|---|---|
| LAeq | 68.0 |
| LCeq | 74.1 |
| $LAS_{MAX}$ | 103.8 |
| $LAS_{MIN}$ | 39.0 |
| $LA_5$ | 73.2 |
| $LA_{10}$ | 72.0 |
| $LA_{50}$ | 64.9 |
| **$LA_{90}$** | **48.6** |

## 6.0 Construction Noise Modeling

Short-term, localized increases in sound levels are likely to occur during construction. Standard construction equipment will be used in the construction of the facility. To be conservative in the construction noise calculations, all Project construction equipment was included in the noise model as operating at the same time. The highest sound levels during construction are expected during the early earthmoving phase. Based on the Project equipment usage predictions, a sound level calculation was performed using the Federal Highway Administration's Roadway Construction Noise Model version 1.1 (FHWA, 2006).

Table 6.1 lists the equipment that will be used during each phase of construction based on preliminary design and schedules.

**Table 6.1 Construction Equipment and Phases**

| Construction Phase | Schedule | Equipment | Horsepower | Number | Hours/Day |
|---|---|---|---|---|---|
| Demolition Phase 1 | Month 1 | Aerial Lift | 25 | 2 | 6 |
| | | Generator Set | 60 | 1 | 6 |
| | | Water Truck | 180 | 1 | 2 |
| | | Skid Steer Loader | 70 | 1 | 4 |
| | | Tractor/Loader/Backhoe | 100 | 1 | 6 |
| Demolition Phase 2 | Month 2 | Crawler Tractor | 150 | 1 | 6 |
| | | Excavator | 150 | 1 | 6 |
| | | Generator Set | 60 | 1 | 6 |
| | | Water Truck | 180 | 1 | 2 |
| | | Skid Steer Loader | 70 | 1 | 4 |
| | | Tractor/Loader/Backhoe | 100 | 1 | 6 |
| Demolition Phase 3 | Month 3 | Crawler Tractor | 150 | 1 | 6 |
| | | Excavator | 150 | 1 | 6 |
| | | Generator Set | 60 | 1 | 6 |
| | | Water Truck | 180 | 1 | 2 |
| | | Skid Steer Loader | 70 | 1 | 4 |
| | | Tractor/Loader/Backhoe | 100 | 1 | 6 |
| Site Prep | Month 4 | Crawler Tractor | 150 | 1 | 6 |
| | | Water Truck | 180 | 1 | 3 |
| | | Rubber Tire Loader | 150 | 1 | 6 |
| | | Skid Steer Loader | 70 | 1 | 4 |
| | | Tractor/Loader/Backhoe | 100 | 1 | 6 |
| Grading | Month 5 | Crawler Tractor | 150 | 1 | 6 |
| | | Grader | 140 | 1 | 6 |
| | | Water Truck | 180 | 1 | 4 |
| | | Skid Steer Loader | 70 | 1 | 4 |
| | | Tractor/Loader/Backhoe | 100 | 1 | 4 |
| Drilling | Month 6.5 | Bore/Drill Rig | 160 | 1 | 6 |
| Foundations | Month 6-9 | Forklift | 60 | 1 | 4 |
| | | Generator Set | 60 | 1 | 6 |
| | | Water Truck | 180 | 1 | 4 |
| | | Skid Steer Loader | 70 | 1 | 4 |
| | | Tractor/Loader/Backhoe | 100 | 1 | 6 |
| Collector Substation Prep | Month 7-12 | Aerial Lift | 25 | 2 | 6 |
| | | Forklift | 60 | 1 | 4 |
| | | Generator Set | 60 | 1 | 6 |
| Crane Work | Month 8 | Crane | 150 | 1 | 4 |
| Equipment Installation | Month 8-11 | Crane | 150 | 1 | 6 |
| | | Forklift | 60 | 1 | 4 |
| | | Generator Set | 60 | 1 | 6 |
| | | Water Truck | 180 | 1 | 2 |
| | | Skid Steer Loader | 70 | 1 | 4 |
| | | Tractor/Loader/Backhoe | 100 | 1 | 2 |
| | | Pile Drivers | 75 | 2 | 4 |
| Trenching | Month 9-10 | Plate Compactor | 5 | 2 | 6 |
| | | Rubber Tire Loader | 150 | 1 | 4 |
| | | Tractor/Loader/Backhoe | 100 | 1 | 6 |
| Tie Line Install | Month 12 | Aerial Lift | 25 | 2 | 4 |
| Pave/Surface/Landscape | Month 12 | Paving Equipment | 150 | 1 | 6 |
| | | Roller | 50 | 1 | 6 |
| | | Skid Steer Loader | 70 | 1 | 6 |
| | | Tractor/Loader/Backhoe | 100 | 1 | 6 |

Table 6.2 summarizes the results of the construction noise modeling for all the nearby NSAs using the loudest construction phase. For construction noise modeling purposes, all equipment listed for each phase is assumed to be operating simultaneously at the nearest possible site location to each receptor group.

**Table 6.2 Sound Level Increases During Construction**

| NSA Group | NSA | Measured Ambient Sound Level ($L_{90}$) | Max. Predicted Sound Level, Single Daytime Shift (dBA) | Combined Sound Level (dBA) |
|---|---|---|---|---|
| **Group 1** | 1 | 48.6 | 79.4 | 79.4 |
| **Group 2** | 2 | 48.6 | 84.1 | 84.1 |
| **Group 3** | 3, 4, 13 | 48.6 | 86.9 | 86.9 |
| **Group 4** | 5, 14, 15 | 48.6 | 89.2 | 89.2 |
| **Group 5** | 6, 7, 8, 9, 10, 11, 12 | 48.6 | 91.7 | 91.7 |

**NSAs are grouped based on the similarity of their distances to the Project Site.*

Table 6.3 lists the predicted construction sound levels for each phase at each NSA group. The highest modeled impacts occur during the equipment installation phase. The maximum impact is below the 75 dBA daytime residential threshold established by Los Angeles County Code during the majority of construction.

**Table 6.3 Construction Sound Levels**

| Construction Phase | Schedule | Sound Level ($L_{EQ}$) at NSA Group | | | | |
|---|---|---|---|---|---|---|
| | | Group 1 | Group 2 | Group 3 | Group 4 | Group 5 |
| Demolition Phase 1 | Month 1 | 60.6 | 65.3 | 68.2 | 70.4 | 72.9 |
| Demolition Phase 2 | Month 2 | 61.7 | 66.5 | 69.3 | 71.6 | 74.1 |
| Demolition Phase 3 | Month 3 | 61.7 | 66.5 | 69.3 | 71.6 | 74.1 |
| Site Prep | Month 4 | 60.7 | 65.5 | 68.3 | 70.6 | 73.1 |
| Grading | Month 5 | 60.9 | 65.6 | 68.4 | 70.7 | 73.2 |
| Drilling | Month 6.5 | 50.3 | 55.0 | 57.8 | 60.1 | 62.6 |
| Foundations | Month 6-9 | 59.5 | 64.2 | 67.0 | 69.3 | 71.8 |
| Collector Substation Prep | Month 7-12 | 57.0 | 61.7 | 64.5 | 66.8 | 69.3 |
| Crane Work | Month 8 | 50.7 | 55.4 | 58.3 | 60.6 | 63.0 |
| Equipment Installation | Month 8-11 | 79.4 | 84.1 | 86.9 | 89.2 | 91.7 |
| Trenching | Month 9-10 | 58.0 | 62.7 | 65.6 | 67.8 | 70.3 |
| Tie Line Install | Month 12 | 45.8 | 50.6 | 53.4 | 55.7 | 58.2 |
| Pave/Surface/Landscape | Month 12 | 57.3 | 62.0 | 64.8 | 67.1 | 69.6 |

As shown above, the RCNM model predicts that there will be moderate temporary increases in sound levels at the closest nearby NSAs during Project construction activities, the most significant being at NSAs 6-12, which are directly south of the site. To ensure compliance with county ordinance thresholds, temporary mitigation measures such as noise fencing, enclosures, or barriers around specific equipment or along the property boundary may be used.

The vibration impacts during construction are assumed to be minor based on the preliminary list of construction equipment. No rock blasting is anticipated, and all equipment that will have the potential to generate groundborne vibration, such as trucks and tracked construction vehicles, will be mobile/transient and used over short durations. Equipment will likely be used within the interior of the site rather than along the property line on a frequent basis. Traffic along Gale Avenue and railroad activity in the vicinity may have more significant vibration impact than construction equipment. Therefore, vibration impacts during construction are expected to be minimal.

The FTA Transit Noise and Vibration Impact Assessment Manual provides methodology and vibration reference levels for certain equipment. At the 150-foot distance specified by the Los Angeles county ordinance, the highest estimated vibration levels during construction is 0.006 in/sec, based on a large bulldozer with a reference PPV of 0.089 in/sec at 25 feet (FTA 2018). This level is below the 0.01 in/sec threshold established by the ordinance.

# 7.0 Predictive Modeling of Sound Impacts During Operation

This section describes the methods, assumptions, and results of the Cadna-A® noise modeling used to predict future sound levels resulting from the operation of the proposed BESS containers and associated equipment at the property line.

## 7.1 Noise Model

The Cadna-A® computer noise model was used to predict future sound pressure levels from the operation of the proposed BESS at the property line and at the nearest noise-sensitive areas. An industry standard, Cadna-A® was developed by DataKustik GmbH to provide an estimate of sound levels at distances from specific noise sources. This model takes into account:

- Sound power levels from stationary and mobile sources;
- The effects of terrain features including relative elevations of noise sources;
- Intervening objects including buildings and sound barrier walls; and
- Ground effects due to areas of pavement and unpaved ground.

Cadna-A® accounts for shielding and reflections due to intervening buildings or other structures in the propagation path, as well as diffracted paths around and over structures, which tend to reduce computed noise levels. The shielding effects due to intervening terrain are included in the model. The shielding effects due to existing off-site buildings and ground vegetation were excluded from the model to provide a level of conservatism to the analysis.

For ground effects, the reflectivity of the surface is described by a “ground factor” variable (G), which ranges from 0 for ‘hard’ ground (paved surfaces, concrete, etc.) and 1 for “porous” ground (grassland and other vegetated areas). The model used a “hard” ground absorption factor (G) of 0 to represent the proposed paved conditions.

The International Standards Organization current standard for outdoor sound propagation (ISO 9613 Part 2 – “Attenuation of sound during propagation outdoors”) was used within Cadna-A®. This standard provides a method for calculating environmental noise in communities from a variety of sources with known emission levels. The method contained within the standard calculates the attenuation over the entire sound path under weather conditions that are favorable for sound propagation, such as for downwind propagation or "under a well-developed moderate ground-based temperature inversion." Application of conditions that are favorable for sound propagation yields conservative estimates of operational noise levels in the surrounding area.

### *7.1.1 Modeling Inputs*

The primary noise-producing sources on the site during Project operation will be the BESS containers and medium-voltage transformers, as well as two substation step-up transformers. A total of 480 BESS containers and 120 transformers are proposed throughout the site. Two additional 34.5/220 kV station service transformers will be located within the substation in the southeast portion of the site. The location of these sources is shown on Figure 1.

The source model inputs and locations were based on proposed electrical equipment specifications in design drawings by TRC dated February 5, 2025. The sound power level for the proposed battery containers, the Sungrow PowerTitan 2.0, is 75 dBA according to manufacturer specifications. The sound level for the transformer units, the Sungrow MVS5000-LV-US, is not listed in manufacturer specifications, so the modeled sound levels are based on a generic 5,140 kVA, 2-winding, KNAN transformer.

Sound impacts associated with the Project interconnection at the adjacent Walnut Substation were also considered. None of the Project interconnection infrastructure to be installed within the Walnut Substation will be a material source of noise. Sound levels associated with transmission electrostatic effects (also known as "corona" effects) occur during precipitation events or very high humidity and generally are only discernable during very high humidity because the corona effect noise can be masked by the rainfall itself. Since corona effect noise is substantially quieter than the onsite Project noise sources and is dependent on humid conditions that are not typical of the area, corona noise from the short electric tie-line is not expected to be routinely discernable.

Since the sound-producing equipment were assumed to be continuously operating, the $L_{90}$ (background level) and $L_{EQ}$ (equivalent constant level) of the proposed equipment are the same for the purposes of this assessment.

**Table 7.1 Noise Source Inputs to the Cadna-A Model**

| Name | Source Height* | Octave Band Sound Power Levels (dB) | | | | | | | | | Total (dBA) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 31.5 | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | |
| Transformers (120) | 1.2m | 69 | 71 | 72 | 72 | 75 | 68 | 71 | 70 | 66 | 77 |
| Substation Transformer (2) | 1.2m | 64 | 56 | 66 | 68 | 59 | 52 | 39 | 30 | 25 | 62 |
| Battery Containers (480) | 1.4m | 72 | 67 | 67 | 75 | 74 | 69 | 67 | 63 | 64 | 75 |

** Heights based on component dimensions and mounting orientation, assumed pad-mounted equipment. Source levels are extrapolated from manufacturer-provided or generic sound pressure level specifications.*

The conceptual site layout and existing topography was used to create a terrain model that represents the topography during operation of the proposed facility. Figure 1 shows the proposed topography within the site and adjacent Walnut Substation based on TRC's proposed drainage and grading plan. The inputs to the model are 1-meter contours, based on USGS 3DEP topographic data. A 10-foot-high concrete masonry unit perimeter wall was also included in the model as shown in Figure 1. The model assumed continuous and simultaneous operation of all sound-producing equipment. This was a conservative assumption, since not all equipment will be operating continuously at full load. A search radius of 1 kilometer from each receptor was used in the model to ensure that all noise sources contributing to the predicted facility noise level were modeled at every noise-sensitive receptor.

### *7.1.2 Sound Model Results*

Cadna-A® allows the user to place receptors at selected locations and predicts sound levels at those specific receptor locations. For this analysis, specific receptors were placed at the closest exterior walls of the nearest residential receptors, listed in Table 4.1 above. The model also calculated sound levels for the surrounding area, using a 10-foot receptor grid, with a receptor height of 5.1 feet (representative of average ear height). This data is displayed in the isopleths on Figure 2, which show lines of equal sound level at the site and the surrounding area.

Table 7.2 below lists the steady-state, A-weighted sound level results at each modeled receptor, along with the calculated increase over the ambient sound level (assumed to be the measured $LA_{90}$ value).

**Table 7.2 Modeled Sound Level Results**

| Site ID | Description | Sound Level (dBA) | | | |
|---|---|---|---|---|---|
| | | Modeled | Ambient | Combined | Increase |
| NSA 01 | Residence | 36.6 | 48.6 | 48.9 | 0.3 |
| NSA 02 | Residence | 39.1 | 48.6 | 49.1 | 0.5 |
| NSA 03 | Residence | 41.1 | 48.6 | 49.3 | 0.7 |
| NSA 04 | Residence | 40.9 | 48.6 | 49.3 | 0.7 |
| NSA 05 | Residence | 40.1 | 48.6 | 49.2 | 0.6 |
| NSA 06 | Residence | 43.0 | 48.6 | 49.7 | 1.1 |
| NSA 07 | Residence | 44.1 | 48.6 | 49.9 | 1.3 |
| NSA 08 | Residence | 43.0 | 48.6 | 49.7 | 1.1 |
| NSA 09 | Residence | 42.1 | 48.6 | 49.5 | 0.9 |
| NSA 10 | Residence | 41.1 | 48.6 | 49.3 | 0.7 |
| NSA 11 | Residence | 40.5 | 48.6 | 49.2 | 0.6 |
| NSA 12 | Residence | 39.9 | 48.6 | 49.1 | 0.5 |
| NSA 13 | Residence | 38.9 | 48.6 | 49.0 | 0.4 |
| NSA 14 | Residence | 38.3 | 48.6 | 49.0 | 0.4 |
| NSA 15 | Residence | 37.9 | 48.6 | 49.0 | 0.4 |

## 8.0 Conclusion

Construction will generally occur during weekdays and daytime hours between 7 a.m. and 7 p.m., as stated in the Los Angeles County Code 12.08.440 Construction Noise, which will significantly mitigate construction noise impacts to abutters. Contractors will be required to utilize sound control devices no less effective than those provided by the manufacturer and maintain equipment in accordance with manufacturer's recommendations. No equipment will have unmuffled exhausts and equipment idling will be kept to a minimum. Modeled sound and vibration levels during construction are below the thresholds established by Los Angeles County noise ordinance and are not expected to require additional mitigation.

During Project operation, the maximum predicted sound level from the proposed facility at nearby potential noise-sensitive locations is 44.1 dBA at location NSA 07. The model assumes all sound sources are in continuous operation, so the $L_{EQ}$ over any duration would be the same. Based on the measured baseline ($L_{90}$) sound level of 48.6 dBA, this represents just a 1.3 dBA increase, which is not likely to be perceptible to the human ear. Increases in sound levels caused by the adjacent Walnut Substation would be limited to corona effects during high humidity or precipitation events and would be negligible in terms of overall sound impact.

Based on this assessment, the Project will not result in generation of a substantial temporary or permanent increase in ambient noise levels in excess of applicable noise ordinances. Nearest residences are approximately 100 feet from the closest grading and heavy construction and ground vibration will attenuate to a low level within that distance. The Project is not located within the vicinity of a private airstrip or an airport land use plan or within two miles of a public airport, so the Project will not expose people to excessive airport-related noise.

## 9.0 References


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Los Angeles County. (n.d.). *12.08 Construction Noise*. In *Code of Ordinances*. Accessed September 2025.

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**Figure 1 Site Layout**

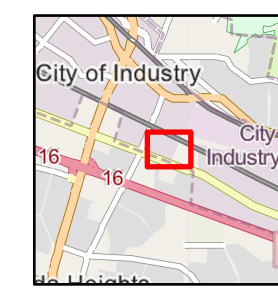

**LEGEND**

EQUIPMENT LOCATIONS

- BATTERY CONTAINER
- TRANSFORMER
- MEASUREMENT LOCATION
- POTENTIAL NSA
- PROPERTY LINE
- 1-METER CONTOUR LINE
- 10-FT CMU WALL

**NOTES:**

1. BASE MAP IMAGERY, ESRI, 1/29/2024.
2. DRAFT LAYOUT, TRC, 2/5/2025
3. ELEVATION DATA, USGS 3DEP, 2024




1:1,800

1" = 150'

0 100 200 FEET

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|---|---|---|---|
| TITLE: | SITE LAYOUT | | |
| DRAWN BY: | M. ERNSTING | PROJ. NO.: | 604109.0000.0000 |
| CHECKED BY: | M. FEINBLATT | FIGURE 1 | |
| APPROVED BY: | J. STENGER | | |
| DATE: | SEPTEMBER 2025 | | |
| FILE: | | | 604109 AypaMarici BESS Noise.aprx |

TRC

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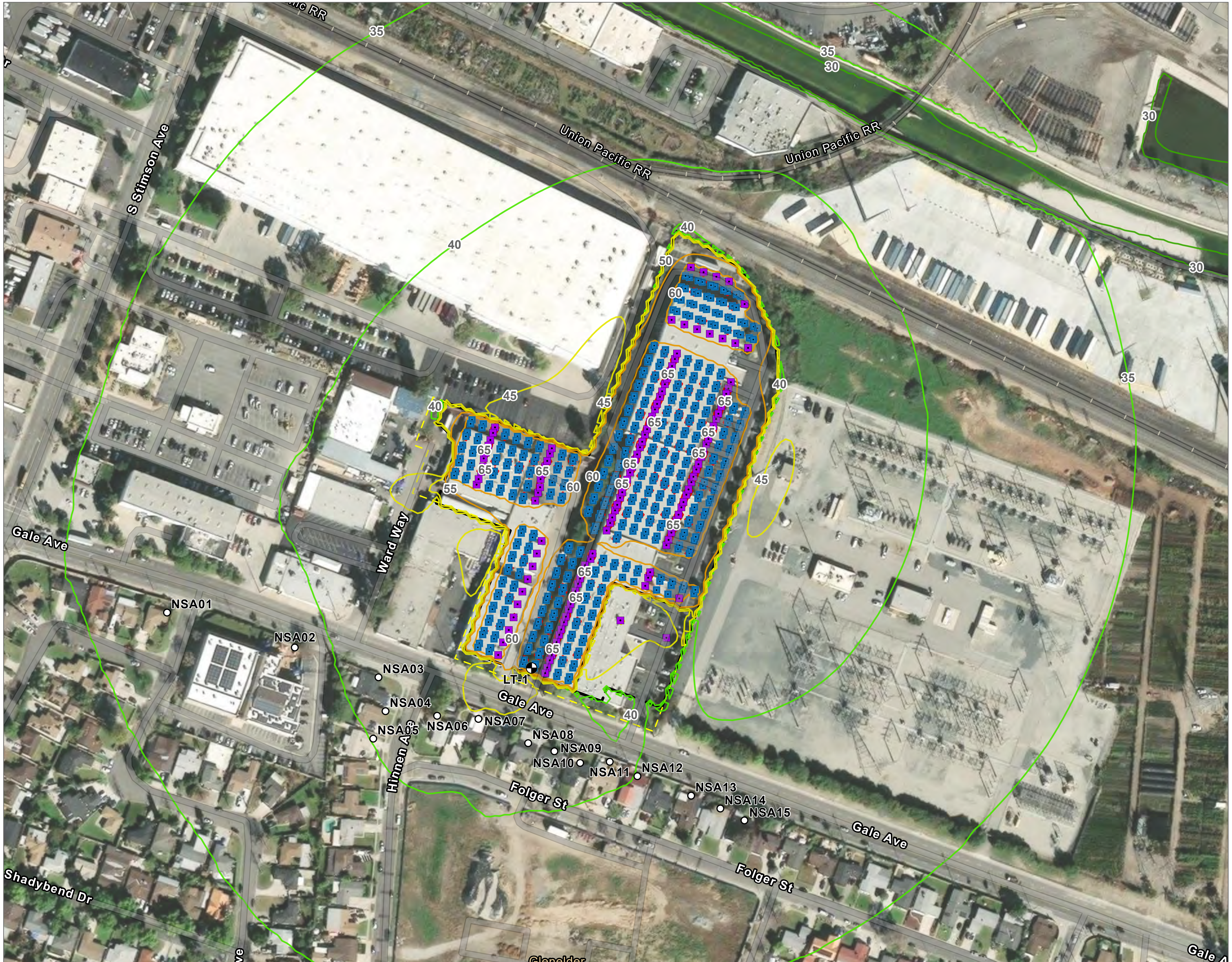
**Figure 2 Noise Modeling Results**




**LEGEND**

EQUIPMENT LOCATIONS

- BATTERY CONTAINER
- TRANSFORMER
- MEASUREMENT LOCATION
- POTENTIAL NSAS
- PROPERTY LINE
- 10-FT CMU WALL

SOUND LEVEL (DBA)

- 25 - 30
- 35 - 40
- 45 - 50
- 55 - 60
- > 60

**/NOTES:**

1. BASE MAP IMAGERY, ESRI, 1/29/2024.
2. DRAFT LAYOUT, TRC, 2/5/2025
3. CADNAA MODELING DATA, TRC, 2025

N

1:2,400
1" = 200'
0 100 200 FEET

| PROJECT: | BESS SOUND STUDY<br>MARICI PROJECT, LLC<br>INDUSTRY, CALIFORNIA | | |
|---|---|---|---|
| TITLE: | MODELING RESULTS | | |
| DRAWN BY: | M. ERNSTING | PROJ. NO.: | 604109.0000.0000 |
| CHECKED BY: | M. FEINBLATT | FIGURE 2 | |
| APPROVED BY: | J. STENGER | | |
| DATE: | SEPTEMBER 2025 | | |

TRC

FILE: 604109 AypaMarici BESS Noise.aprx

Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet; Map Rotation: 0
-- Saved By: MERNSTING on 9/10/2025, 13:02:09 PM; File Path: K:\604109 AypaMarici BESS Noise\04 GRAPHICS\APRX\604109 AypaMarici BESS Noise.aprx; Layout Name: 2. Modeling Results