

13131 Los Angeles Street Industrial Project

Noise Impact Assessment

Irwindale, California

Prepared For:
Community Development Department, Planning Division
5050 North Irwindale Avenue
Irwindale, CA
July 2019



ECORP Consulting, Inc. has assisted public and private land owners with environmental regulation compliance since 1987. We offer full service capability, from initial baseline environmental studies through environmental planning review, permitting negotiation, liaison to obtain legal agreements, mitigation design, construction monitoring, and compliance reporting.

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ATTACHMENTS

Attachment A – Existing Baseline Noise Measurements – Project Site Vicinity

Attachment B – Traffic Noise Measurements

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1.0 INTRODUCTION

This report documents the results of a Noise Impact Assessment completed for the 13131 Los Angeles Street Industrial Project (Project), which includes the construction of a stand-alone concrete tilt-up, 528,710 square foot building in Irwindale, California. This assessment was prepared as a comparison of predicted Project noise levels to noise standards promulgated by the City of Irwindale General Plan Noise Element and Municipal Code, the City of Baldwin Park Municipal Code, and the City of Arcadia General Plan. The purpose of this report is to estimate Project-generated noise levels and to determine the level of impact the Project would have on the environment.

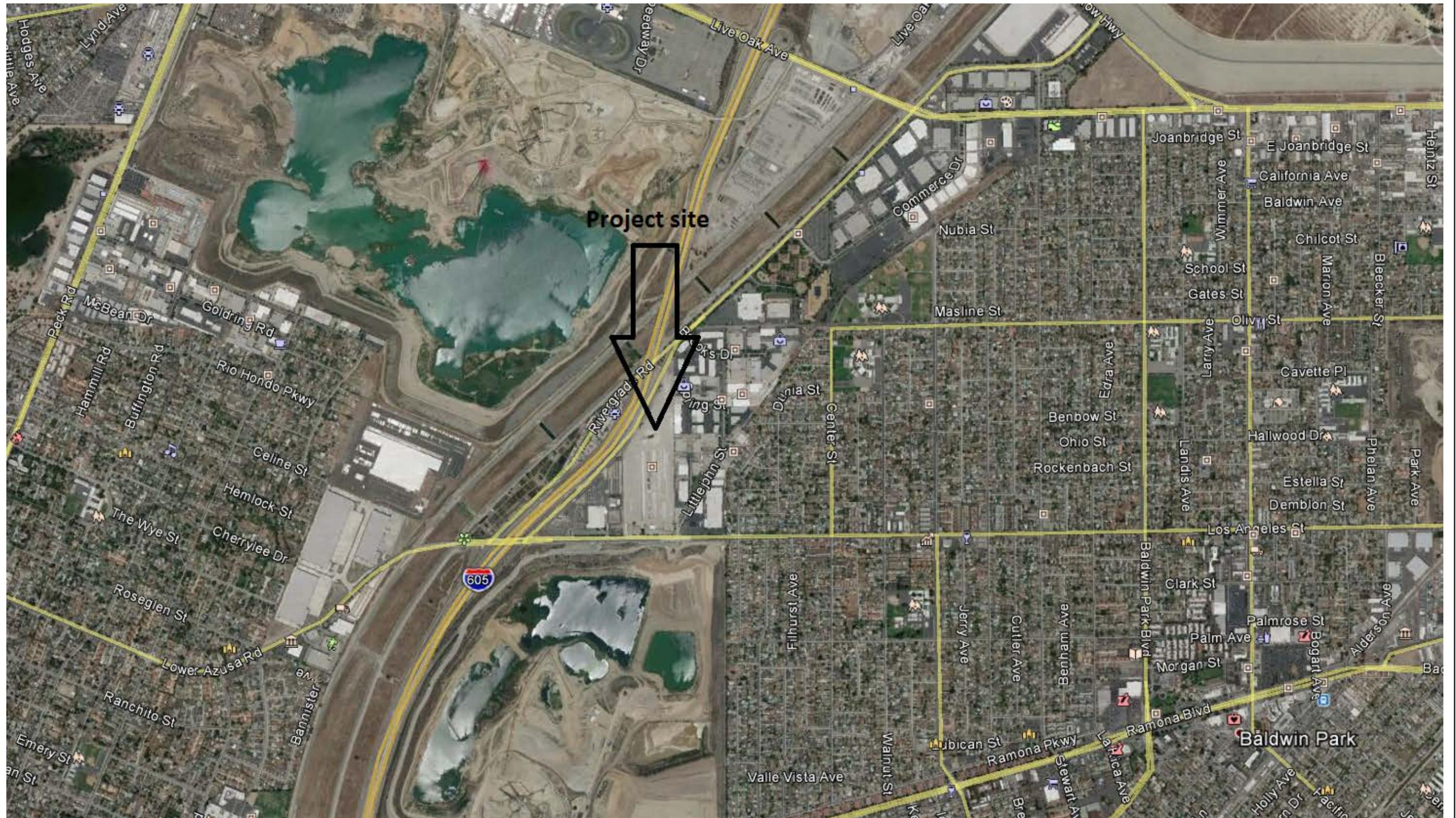
1.1 Project Location and Description

The Project site is located in the City of Irwindale, located in central Los Angeles County (see **Figure 1**). The Project site is an approximate 24.88-acre lot located along Rivergrade Road and Los Angeles Street. The irregular shaped site is generally bound by Interstate 605 (I-605) to the north and west, industrial uses and residences located in the City of Baldwin Park to the east, and Los Angeles Street to the south (see **Figure 2**). The Project is proposing a 528,710 square foot concrete tilt-up building that would be used for industrial purposes (see **Figure 3**). The site has been previously developed as an industrial use and is currently occupied with multiple buildings proposed for demolition.

The Project site is designated by the City of Irwindale General Plan as “Industrial/Business Park”. According to the General Plan, the Industrial/Business Park designation allows for office, manufacturing, and warehouse uses, including commercial manufacturing, light manufacturing, and heavy manufacturing.

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Map Date: 6/27/2019
Photo (or Base) Source: Google Earth

Figure 2. Project Location

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2.0 ENVIRONMENTAL NOISE AND GROUNDBORNE VIBRATION ANALYSIS

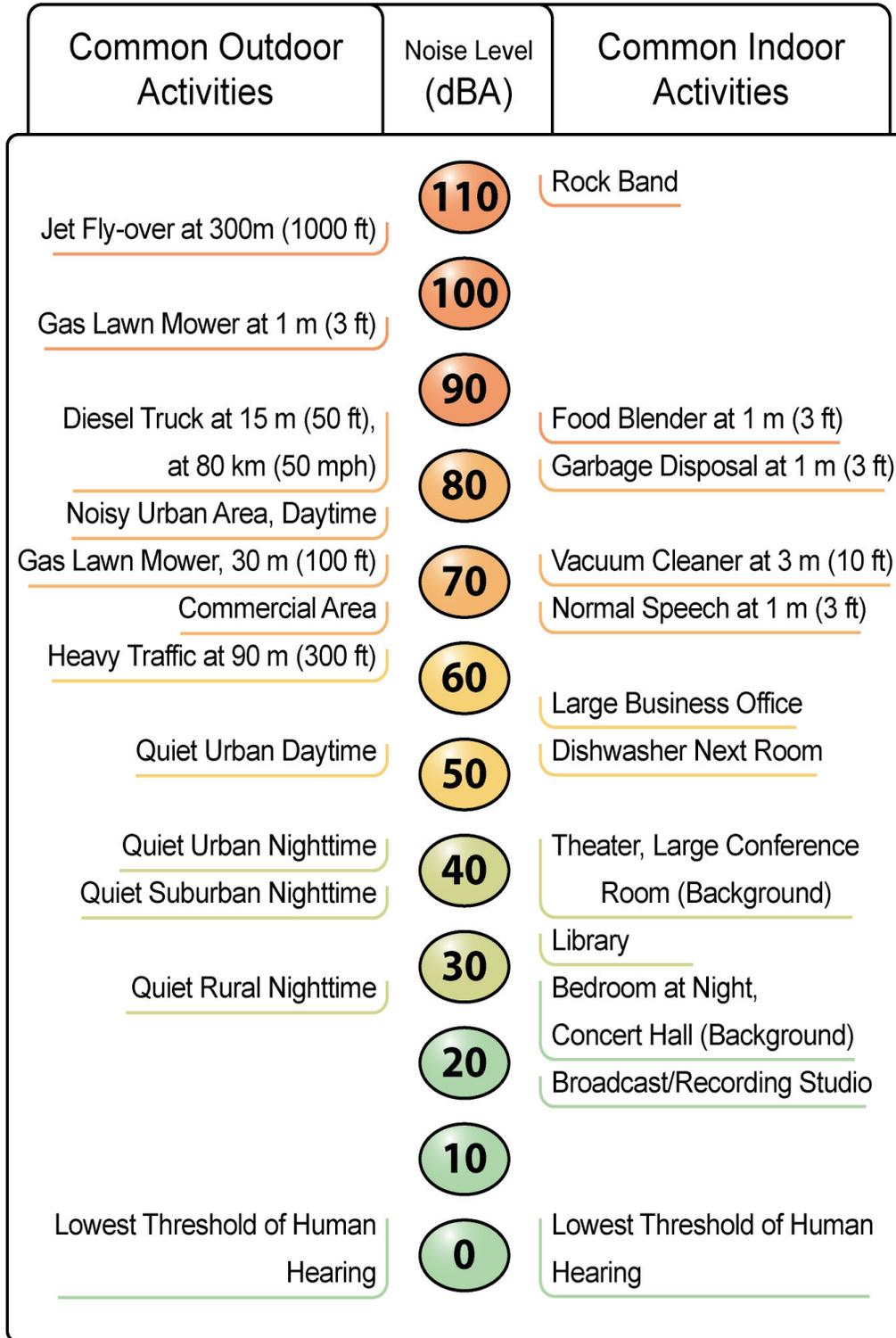
2.1 Fundamentals of Noise and Environmental Sound

Addition of Decibels

The decibel (dB) scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted (dBA), an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions (FTA 2018). For example, a 65-dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

Typical noise levels associated with common noise sources are depicted in **Figure 4**.

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Source: Caltrans 2012

FIGURE 4. COMMON NOISE LEVELS

Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (FHWA 2011). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3 dB per doubling of distance is assumed (FHWA 2011).

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about 5 dBA (FHWA 2006), while a solid wall or berm generally reduces noise levels by 10 to 20 dBA (FHWA 2011). However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction 35 dBA or greater (WEAL 2000). To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the "line of sight" between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend length-wise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver.

The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL (Community Noise Equivalent Level) are measures of community noise. Each is applicable to this analysis and defined in **Table 1**.

The A weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Table 1. Common Acoustical Descriptors	
Descriptor	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, Leq	The average acoustic energy content of noise for a stated period of time. Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L _{max} , L _{min}	The maximum and minimum A-weighted noise level during the measurement period.
L ₀₁ , L ₁₀ , L ₅₀ , L ₉₀	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L _{dn} or DNL	A 24-hour average Leq with a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.4 dBA Ldn.
Community Noise Equivalent Level, CNEL	A 24-hour average Leq with a 5 dBA “weighting” during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5-dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Effects of Noise on People

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. For ground vehicles, a noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance.

2.2 Fundamentals of Environmental Groundborne Vibration

Vibration Sources and Characteristics

Sources of earthborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions).

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Vibration Sources and Characteristics

Table 2 displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. For instance, heavy-duty trucks generally generate groundborne vibration velocity levels of 0.006 PPV at 50 feet under typical circumstances, which as identified in **Table 2** is considered very unlikely to cause damage to buildings of any type. Common sources for groundborne vibration are planes, trains,

and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment.

For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

Peak Particle Velocity (inches/second)	Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
0.006–0.019	64–74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
0.08	87	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
0.1	92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings
0.2	94	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
0.4–0.6	98–104	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Architectural damage and possibly minor structural damage

Source: Caltrans 2004

3.0 EXISTING ENVIRONMENTAL NOISE SETTING

Noise Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as hospitals, historic sites, cemeteries, and certain recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The nearest noise-sensitive land uses to the Project site consist of a single-family residential neighborhood located adjacent to the eastern boundary of the Project, within the City of Baldwin Park. These sensitive receptors are located approximately 0.13 mile to the east.

Existing Ambient Noise Environment

The noise environment in the Proposed Project area is impacted by various noise sources. Mobile sources of noise, especially cars and trucks traveling on I-605 and Los Angeles Street, are the most common and significant sources of noise in Project area. Other sources of noise are the various land uses (i.e., residential, commercial and institutional) throughout the area that generate stationary-source noise. The Project site is located outside of any airport land use plan. Furthermore, the Project site is located beyond two miles from any airport (the San Gabriel Airport is the nearest airport to the Project site located approximately three miles to the southwest).

Existing Ambient Noise Measurements

The Project site does not currently support operations yet is covered in concrete and occupied by numerous buildings at the southern portion of the site. The site is flat, concreted and was previously developed for industrial use. It is surrounded by a mix of residential, commercial, industrial and undeveloped land uses. In order to quantify existing ambient noise levels in the Project area, ECORP Consulting conducted four short-term noise measurements on June 11, 2019. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the Project site (see **Attachment A** for a visual depiction of the Noise Measurement Locations). The 10-minute measurements were taken between 2:01 p.m. and 3:13 p.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in in **Table 3**.

Table 3. Existing (Baseline) Noise Measurements					
Location Number	Location	L_{eq} dBA	L_{min} dBA	L_{max} dBA	Time
1	On Los Angeles Street, adjacent to the Project site.	77.8	58.2	94.2	2:01 p.m.-2:11 p.m.
2	On Los Angeles Street, south of the nearest residence.	71.2	53.3	87.4	2:23 p.m.-2:33 p.m.
3	In neighborhood east of the Project site along Hornbrook Avenue	63.4	48.8	87.2	2:42 p.m.-2:52 p.m.
4	Along Center Street just north of Los Angeles Street, within the neighborhoods adjacent to the Project site.	61.6	48.3	81.3	3:03 p.m.-3:13 p.m.

Source: Measurements were taken by ECORP Consulting with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute (ANSI) for general environmental noise measurement instrumentation. Prior to the measurements, the SoundExpert LxT sound level meter was calibrated according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator. See **Attachment A** for noise measurement outputs.

As shown in **Table 3**, the ambient recorded noise levels range from 61.6 dBA to 77.8 dBA near the Project site. The most common noise in the Project vicinity is produced by automotive vehicles (cars, trucks, buses, motorcycles). Traffic moving along I-605 and Los Angeles Street produces a sound level that remains relatively constant and is part of the Project area's minimum ambient noise level. Vehicular noise

varies with the volume, speed and type of traffic. Slower traffic produces less noise than fast moving traffic. Trucks typically generate more noise than cars. Infrequent or intermittent noise also is associated with vehicles, including sirens, vehicle alarms, slamming of doors, trains, garbage and construction vehicle activity and honking of horns. These noises add to urban noise and are regulated by a variety of agencies.

Existing Roadway Noise Levels

Existing roadway noise levels were calculated for the roadway segments in the Project vicinity. This task was accomplished using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) (see **Attachment B**) and traffic volumes from the Project transportation impact analysis (KOA 2019). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by the California Department of Transportation (Caltrans). The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along these roadway segments are presented in **Table 4**.

Table 4. Existing (Baseline) Traffic Noise Levels		
Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway
Los Angeles Street		
Los Angeles Street to Lower Azul Road	Residential	65.2
Little John Street to Los Angeles Street	Residential	64.6

*Source: Traffic noise levels were calculated by ECORP Consulting using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by KOA Traffic Engineers (2019). Refer to **Attachment B** for traffic noise modeling assumptions and results.*

As shown, the existing traffic-generated noise level on Project-vicinity roadways currently ranges from 64.6 to 65.2 dBA CNEL. As previously described, CNEL is 24-hour average noise level with a 5 dBA “weighting” during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. It should be noted that the modeled noise levels depicted in **Table 4** may differ from measured levels in **Table 3** because the measurements represent noise levels at different locations around the Project site and are also reported in different noise metrics (e.g., noise measurements are the L_{eq} values and traffic noise levels are reported in CNEL).

4.0 REGULATORY FRAMEWORK

Federal

Occupational Safety and Health Act of 1970

The Federal Occupational Safety and Health Administration (OSHA) regulates on-site noise levels and protects workers from occupational noise exposure. To protect hearing, worker noise exposure is limited to 90 decibels with A-weighting (dBA) over an 8-hour work shift (29 Code of Regulations [CFR] 1910.95). Employers are required to develop a hearing conservation program when employees are exposed to noise levels exceeding 85 dBA. These programs include provision of hearing protection devices and testing employees for hearing loss on a periodic basis.

State

State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California General Plan Guidelines (State of California 2003), published by the Governor's Office of Planning and Research (OPR), also provides guidance for the acceptability of projects within specific CNEL/L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

State Office of Planning and Research Noise Element Guidelines

The State Office of Planning and Research Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the CNEL.

Local

City of Irwindale General Plan

The City of Irwindale General Plan uses the concept of land use compatibility to identifying noise-sensitive land uses. Noise considerations influence the general distribution, location, and intensity of future land uses. The result is that effective land use planning and mitigation can alleviate the majority of noise problems. The City has established the state's General Plan Guidelines for land use and noises. These provide a guide for compatibility of noise sensitive land uses in areas subject to noise. For instance, single-family residential uses are normally unacceptable in areas exceeding 70 dBA CNEL; though conditionally acceptable in areas experiencing noise levels between 55-70 dBA CNEL and always acceptable in areas experience noise levels less than 55 dBA CNEL. Commercial/professional office

buildings and industrial land uses are normally unacceptable in areas exceeding 75 dBA CNEL; conditionally acceptable in areas experiencing noise levels within 67 to 78 dBA CNEL, and acceptable in areas with noise levels less than 67 dBA CNEL.

City of Irwindale Municipal Code

The City’s Municipal Code (Chapter 9.28) regulates noise from all sources, both stationary and mobile. These regulations, shown in **Table 5**, gauge the compatibility of developments on the ambient noise environment. Any noise which exceeds the ambient or the ambient base level set forth in **Table 5**, whichever is greater, by more than ten dB when measured at the property line will constitute an impact.

Table 5. City of Irwindale Ambient Base Noise Levels - Proof of Impact		
Zone	Ambient Base Noise Level	
	10:00 p.m. to 7:00 a.m.	7:00 a.m. to 10:00 p.m.
Residential	45	50
Commercial	50	55
Industrial	60	70

Source: City of Irwindale Municipal Code

The City’s Municipal Code exempts construction noise from all noise standards provided that construction is limited between the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday and is conducted with City permit. Construction noise occurring on Sundays or federal holidays is prohibited. Construction-related noise that occurs as a result of construction activities adhering to these daytime restrictions is deemed to comply with the City Municipal Code.

City of Baldwin Park Municipal Code

The City of Baldwin Park city limits is located directly across Little John Street, east of the Project site. As previously described, there are sensitive noise receptors consisting of single-family residences located within the City of Baldwin Park near the Project site. Baldwin Park Municipal Code Chapter 153, *Noise*, regulates noise. Baldwin Park Noise regulations are shown in **Table 6**.

Table 6. City of Baldwin Park Exterior Noise Standards			
Zone	Allowable Noise Level (dBA)		
	7:00 a.m. – 7:00 p.m. (Day)	7:00 p.m. – 10:00 p.m. (Evening)	10:00 p.m. – 7:00 a.m. (Night)
Residential	55	50	45
	Nonresidential Uses		
Commercial	7:00 a.m. – 10:00 p.m. (Day and evening)	7:00 p.m. – 7:00 a.m. (Night)	
	65	55	
Industrial	Anytime	65	

Source: City of Baldwin Park Municipal Code

The City of Baldwin Park Municipal Code Section 130.37, *Special Noise Sources*, exempts noise from construction provided that construction is limited between the hours of 7:00 a.m. to 7:00 p.m.

City of Arcadia General Plan

The City of Arcadia’s General Plan Noise Element is intended to minimize adverse noise impacts on residence and to preserve a quality noise environment. The Noise Element recognizes that transportation is the dominant source of noise in the City and provides noise standards for new development impacted by transportation noise sources. These standards are presented in **Table 7**.

Table 7. City of Arcadia Interior/Exterior Noise Standards		
Land Use	Maximum Exterior Noise Level	Maximum Interior Noise Level
Residential: Rural, Single-family and Multifamily	65 dBA CNEL	45 dBA CNEL
Schools		
Classroom	70 dBA CNEL	45 dBA L_{eq}
Playground	70 dBA CNEL	-
Libraries	-	45 dBA
Hospitals/ Convalescent Facilities		
Sleeping Areas	65 dBA CNEL	45 dBA CNEL
Living Areas	-	50 dBA CNEL
Reception, Office	-	50 dBA L_{eq}
Hotels/Motels		
Sleeping Areas	-	45 dBA CNEL
Reception, Office	-	50 dBA L_{eq}
Places of Worship	65 dBA CNEL	45 dBA L_{eq}
Open Space/ Recreation		
Wildlife Habitat	60 dBA CNEL	-
Passive Recreation Areas	65 dBA CNEL	-
Active Recreation Areas	70 dBA CNEL	-
Commercial and Business Park		
Office	-	55 dBA L_{eq}
Restaurant, Retail, Service	-	65 dBA L_{eq}
Warehousing/ Industrial	-	70 dBA L_{eq}

Source: City of Arcadia General Plan

5.0 IMPACT ASSESSMENT

Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The Project would result in a significant noise-related impact if it would:

- 1) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- 2) Generation of excessive groundborne vibration or groundborne noise levels.

- 3) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

For purposes of this analysis and where applicable, the City of Irwindale, Baldwin Park and Arcadia numeric noise thresholds were used for evaluation of Project-related noise impacts. Consistent with the City of Irwindale standards, in the instance that the existing ambient noise levels already exceed the ambient base noise level (see **Table 5**), an increase of more than 10 dBA over the existing ambient noise level is considered significant. The cities of Baldwin Park and Arcadia do not provide guidance for determining a significant Project-related noise impact when the existing ambient noise levels already exceed the significance standard without the Project. As previously described, a change in level of at least 5 dBA is required before any noticeable change in community response would be expected. Therefore, in the case that the existing ambient noise levels already exceed the applicable numeric noise threshold within the cities of Baldwin Park and/or Arcadia, an increase of more than 5 dBA over the existing ambient noise level will be considered significant.

This impact discussion uses Caltrans (2002) recommended standard of 0.2 inches per second peak particle velocity with respect to the prevention of structural damage for normal buildings from construction-generated groundborne vibration.

Methodology

This analysis of the existing and future noise environments is based on noise prediction modeling and empirical observations. Predicted construction noise levels were calculated utilizing the Federal Highway Administration's Roadway Construction Model (2008). Transportation-source noise levels in the Project vicinity were calculated using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108). For Project operations the model was updated to reflect the anticipated amount of medium-duty and heavy-duty trucks generated by the Project, as supplied by KOA (2019), since these vehicles produce more noise than the average vehicle. On-site stationary source noise levels have been calculated with the SoundPLAN 3D noise model, which predicts noise propagation from a noise source based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings and barriers.

Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, taking into account the distance from construction activities to nearby structures and typically applied criteria for structural damage and human annoyance.

Impact Analysis

PROJECT CONSTRUCTION NOISE

Would the Project Result in Short-Term Construction-Generated Noise in Excess of Standards?

Construction noise associated with the Proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for on-site construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect residences in the vicinity of the construction site. As previously stated, the closest residences are located adjacent to the eastern boundary of the Project site, approximately 0.13 mile distant. It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to Project sensitive receptors.

Noise levels associated with individual construction equipment are summarized in **Table 8**.

Type of Equipment	Maximum Noise (L_{max}) at 50 Feet (dBA)	Maximum 8-Hour Noise (L_{eq}) at 50 Feet (dBA)
Crane	80.6	72.6
Dozer	81.7	77.7
Excavator	80.7	76.7
Generator	80.6	77.6
Grader	85.0	81.0
Other Equipment (greater than 5 horsepower)	85.0	82.0
Paver	77.2	74.2
Roller	80.0	73.0
Tractor	84.0	80.0
Dump Truck	76.5	72.5
Concrete Pump Truck	81.4	74.4
Welder	74.0	70.0

Source: Federal Highway Administration, Roadway Construction Noise Model (FHWA-HEP-05-054), dated January 2006.

Note: L_{eq} is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or night, L_{max} is the maximum and minimum A-weighted noise level during the measurement period.

The nearest noise-sensitive land uses consist of single-family residences 0.13 mile (686 feet) east of the Project site boundary. Based on the construction equipment noise levels listed in **Table 8** and assuming an average noise attenuation rate of 6 dB per doubling of distance from the source, predicted maximum 8-hour noise levels at the nearest sensitive receptor would range from approximately 59.3 dBA L_{eq} to 47.3 dBA L_{eq} . As identified in **Table 3**, the existing baseline measurements conducted within this residential community (Measurement Locations #2 and #3), experiences ambient noise levels that already exceed these values (63.4 dBA to 71.2 dBA). Thus, temporary Project construction noise would typically be lower than noise levels currently experienced at these receptors.

As previously discussed, Project would occur in the City of Irwindale, yet the nearest sensitive receptors are located in the City of Baldwin Park. Neither the City of Irwindale or the City of Baldwin Park promulgate a numeric threshold pertaining to noise associated with construction. Rather, both cities limit the time that construction can take place between the hours of 7:00 a.m. and 7:00 p.m. This is due to the fact that construction noise is temporary, short term, intermittent in nature, and would cease on completion of the Project. Furthermore, the cities of Irwindale and Baldwin Park are developing communities and construction noise is generally considered standard and accepted as a reality within the urban environment. Further, construction would occur throughout the Project site and would not be

concentrated at one point. Therefore, noise associated with construction activities, as long as conducted within the permitted hours, would not exceed any noise standards.

PROJECT OPERATIONAL NOISE

Would the Project Result in a Substantial Permanent Increase in Ambient Noise Levels in Excess of City Standards During Operations?

Project Operations

As previously described, noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise-sensitive and may warrant unique measures for protection from intruding noise. The nearest noise-sensitive land uses consist of single-family residences located 0.13 mile east of the Project site.

Operational noise sources associated with the Proposed Project include mobile and stationary (i.e., mechanical equipment, warehouse operations) sources.

Operational Traffic Noise

Future traffic noise levels throughout the Project vicinity (i.e., vicinity roadway segments that traverse noise sensitive residential land uses) were modeled based on the traffic volumes identified by KOA (2019) to determine the noise levels along Project vicinity roadways. **Table 9** shows the calculated off-site roadway noise levels under existing traffic levels compared to future buildout of the Project. The calculated noise levels as a result of the Project at affected sensitive land uses are compared to the noise standards in the City of Arcadia General Plan (see **Table 7**) for the segment of Lower Azul Road west of I-605, and the City of Baldwin Park Municipal Code Noise Standards (see **Table 6**) for the segment on of Los Angeles Street east of Little John Street. In the case that the existing ambient noise levels already exceed the applicable numeric noise threshold within the cities of Baldwin Park and/or Arcadia, an increase of more than 5 dBA over the existing ambient noise level is considered significant.

Table 9. Existing Plus Project Conditions - Predicted Traffic Noise Levels					
Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway		Noise Standard (dBA CNEL) ²	Exceed Standard / Significant Impact?
		Existing Conditions	Existing + Project Conditions ¹		
Los Angeles Street / Lower Azul Road					
West of I-605 Offramp / Lower Azul Road Intersection	Residential (in the City of Arcadia)	65.2	65.3	70.2 dBA	No
East of Little John Street / Los Angeles Street Intersection	Residential (in the City of Baldwin Park)	64.6	64.9	69.6 dBA	No

Source: Traffic noise levels were calculated by ECORP Consulting using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by KOA 2019. Refer to **Attachment B** for traffic noise modeling assumptions and results.

Note: ¹The percentage of medium-duty and heavy-duty trucks was updated to reflect the Project traffic fleet mix supplied by KOA, since medium-duty and heavy-duty trucks produce more noise than the average vehicle.

²Both Project roadway segments analyzed are in the Project vicinity and traverse noise sensitive residential land uses. These roadway segments already generate noise levels in excess of respective noise standards (65 dBA in Arcadia and 55 dBA in Baldwin Park), without the Project. Therefore, the Project significance threshold equates to an increase of more than 5 dBA over the existing ambient noise level.

As shown in **Table 9**, both Project roadway segments are already experiencing roadway noise that exceeds respective noise standards under existing conditions. Thus, Project-generated traffic noise is compared to a significance threshold of contribution of more than 5 dBA over the existing ambient noise level. As shown, the Project would not contribute to an increase of noise levels more than 5 dBA on either Project vicinity roadway segment that traverses noise-sensitive residential land uses. No applicable noise standards would be exceeded by Project traffic.

Operational Stationary Noise

The main stationary operational noise associated with the Project would be warehouse-related activity, such as trucks idling and maneuvering the site. On-site Project operations have been calculated using the SoundPLAN 3D noise model. The results of this model can be found in **Attachment B. Table 10** shows the predicted Project noise levels at the six locations in the Project vicinity, as predicted by SoundPLAN. Four of these locations (1 – 4) are where the existing baseline noise measurements were taken (see **Table 3**), while the additional two locations (5 & 6) are the nearest buildings to the Project site, which house industrial operations. Additionally, a noise contour graphic (**Figure 4**) has been prepared to depict the predicted noise levels in the Project vicinity from Project operations.

Table 10. Modeled Operational Noise Levels¹

Site Location	Location	Baseline Noise Measurements (L _{eq} dBA)	Modeled Operational Noise Attributable to Project (L _{eq} dBA)	City Standards (dBA) ²	Exceed Standard?
1	On Los Angeles Street, adjacent to the Project site. (Irwindale)	77.8	81.6	87.8	No
2	On Los Angeles Street, south of the nearest residence. (Baldwin Park)	71.2	56.0	76.2	No
3	In neighborhood east of the Project site along Hornbrook Avenue. (Baldwin Park)	63.4	55.8	68.4	No
4	Along Center Street just north of Los Angeles Street, within the neighborhoods adjacent to the Project site. (Baldwin Park)	61.6	48.5	66.6	No
5	Industrial use east of the Project site. (Irwindale)	N/A	73.8	80.0	No
6	Industrial use west of the Project site. (Irwindale)	N/A	73.8	80.0	No

Source: Stationary source noise levels were modeled by ECORP Consulting using SoundPLAN 3D noise model. Refer to **Attachment C** for noise modeling assumptions and results.

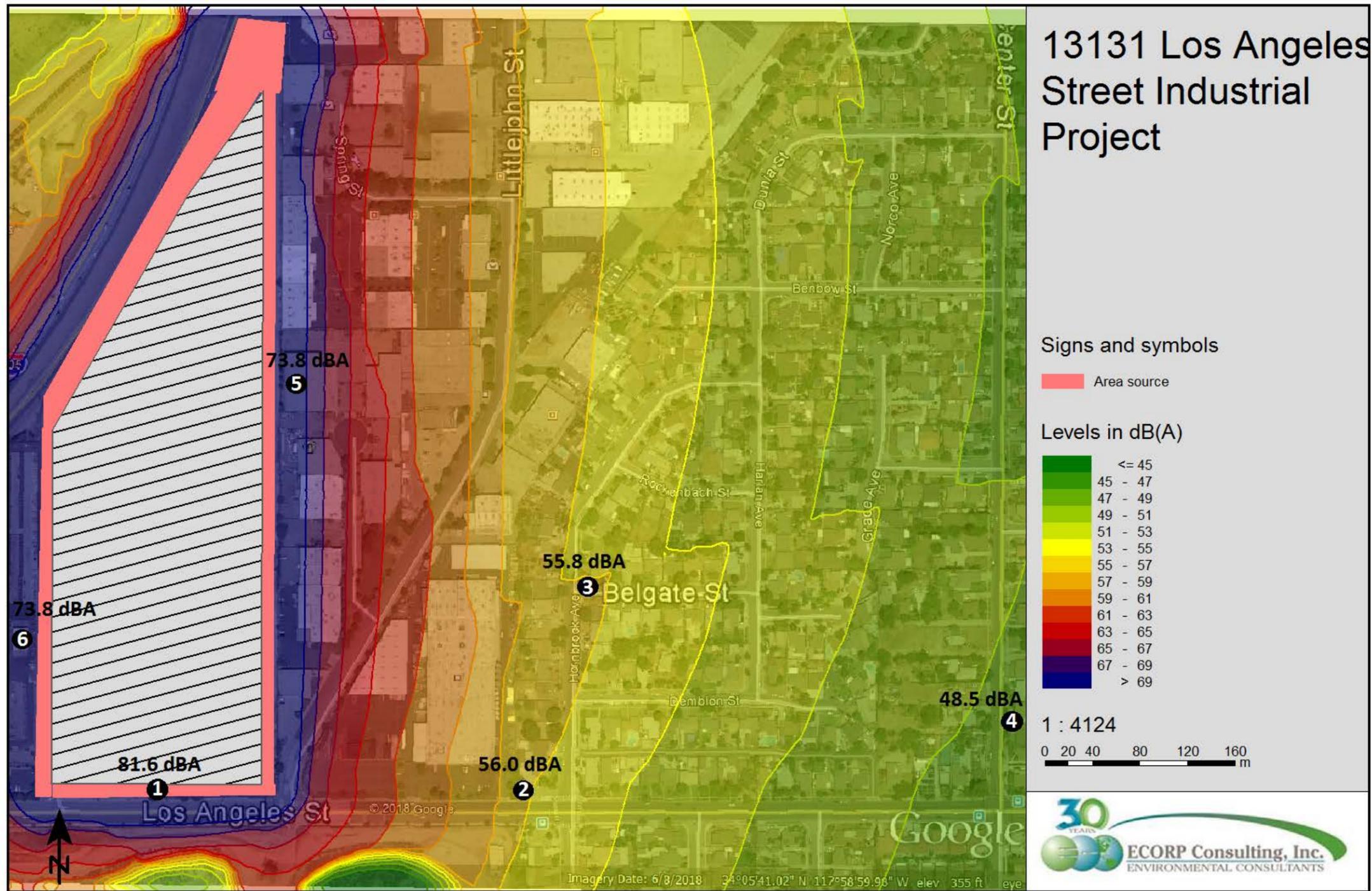
Notes: ¹Source noise measurements identify 79 dBA for heavy-duty truck maneuvering per the San Jose Loading Dock Noise Study 2014. This reference measurement informed the SoundPLAN model to predict Project noise propagation.

²Consistent with the City of Irwindale standards, in the instance that the existing ambient noise levels already exceed the ambient base noise level in Irwindale, an increase of more than 10 dBA over the existing ambient noise level is considered significant. The cities of Baldwin Park and Arcadia do not provide guidance for determining a significant Project-related noise impact when the existing ambient noise levels already exceed the significance standard without the Project. In the case that the existing ambient noise levels already exceed the applicable numeric noise threshold within the cities of Baldwin Park and/or Arcadia, an increase of more than 5 dBA over the existing ambient noise level will be considered significant.

The City of Irwindale’s regulations with respect to noise are included in Chapter 9.28 of the City’s Municipal Code. As depicted in **Table 5** above, the City ambient base noise level for land uses zoned for ‘Industrial’ land uses, like that of the Project and the areas directly adjacent to the Project site, is 60 dBA from 10:00 p.m. to 7:00 a.m. (nighttime) and 70 dBA from 7:00 a.m. to 10:00 p.m. (daytime). Any noise which exceeds the ambient base level, set forth in **Table 5**, by more than ten dB when measured at the property line is deemed unacceptable. Project operations would take place between 7:00 a.m. and 6:00 p.m. and are thus compared to the City of Irwindale’s daytime noise standard of ten dBA above the ambient base level of 70 dBA at the adjacent ‘Industrial’ land uses (i.e., 80 dBA). These nearby ‘Industrial’ land uses, located in the City of Irwindale, are represented as Location 5 and Location 6 in **Table 10**. As previously described, stationary source noise levels have been calculated with the SoundPLAN 3D noise model, which predicts noise propagation based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings and barriers. The primary Project stationary source would be the movement of trucks on the Project site. Truck movements include including truck approach, backup alarms, idling, air brake discharge, engine ignition, and truck pull away. As shown in **Table 10** above, Project noise levels at Location 5 and Location 6 have the potential to experience noise levels up to 73.8 dBA. Thus, Project operations would not exceed the ambient base level for ‘Industrial’ land uses, set forth in **Table 5**, by more than 10 dBA.

The City of Baldwin Park, located east of the Project site, promulgates noise standards in Chapter 153 its Municipal Code. As depicted in **Table 6**, the City of Baldwin Park regulates exterior noise standards for various land uses. Areas zoned 'Residential', like that of the land uses located east of the Project site, have a daytime standard of 55 dBA. As shown in **Table 10** above, Project-generated noise levels at the nearest residence, Location 2, have the potential to reach up to 56 dBA during Project operations. Project-generated noise levels at the neighborhood east of the Project site along Hornbrook Avenue (Location 3) have the potential to reach 55.8 dBA. These values exceed the day, evening and night noise standards for residences. However, the existing baseline noise levels at Location 2 were measured as 71.2 dBA and the existing baseline noise levels at Location 3 were measured at 63.4 dBA. As such, these residences already experience noise levels in excess of City of Baldwin Park standards. As previously described, in the case that the existing ambient noise levels already exceed the numeric noise threshold within Baldwin Park, an increase of more than 5 dBA over the existing ambient noise level will be considered significant. As shown in **Table 10**, on-site Project noise would not even surpass the noise levels that are already experienced in at Locations 2 and 3. The same is the case at the Baldwin Park residences represented at Location 4. Therefore, Project noise would not result in an increase of 5 dBA or more over the existing ambient noise level currently experienced.

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Map Date: 6/27/2019
Photo (or Base) Source: SoundPLAN

Figure 5. Project Noise Propagation

RESULT IN THE EXPOSURE OF PERSONS TO OR GENERATION OF EXCESSIVE GROUNDBORNE VIBRATION OR GROUNDBORNE NOISE LEVELS

Would the Project Expose Structures to Substantial Groundborne Vibration During Construction?

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the Proposed Project would be primarily associated with short-term construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is noted that pile drivers would not be necessary during Project construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with construction equipment are summarized in **Table 11**.

Equipment Type	Peak Particle Velocity at 20 Feet (inches per second)
Large Bulldozer	0.123
Caisson Drilling	0.123
Loaded Trucks	0.105
Rock Breaker	0.082
Jackhammer	0.048
Small Bulldozer/Tractor	0.004

Source: FTA 2018; Caltrans 2004

The City of Irwindale does not regulate vibrations associated with construction. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans's (2004) recommended standard of 0.2 inches per second peak particle velocity with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. The nearest structures of concern to the construction site are associated with an 'Industrial' use located approximately 20 feet to the east. Based on the vibration levels presented in **Table 11**, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.123 inches per second peak particle velocity at 20

feet. Thus, the structure located at 20 feet would not be negatively affected. Predicted vibration levels at the nearest structures would not exceed recommended criteria.

Would the Project Expose Structures to Substantial Groundborne Vibration During Operations?

Project operations would not include the use of any stationary equipment that would result in excessive vibration levels. While the Project would accommodate heavy-duty trucks, these vehicles can only generate groundborne vibration velocity levels of 0.006 PPV at 50 feet under typical circumstances. Therefore, the Project would result in negligible groundborne vibration impacts during operations.

Cumulative Construction Noise

Construction activities associated with the Proposed Project and other construction projects in the area may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to the construction site. Construction noise for the Proposed Project was determined to be less than significant following compliance with the City of Irwindale Municipal Code and the City of Baldwin Park's Municipal Code. Cumulative development in the vicinity of the Project site could result in elevated construction noise levels at sensitive receptors in the Project area. However, each project would be required to comply with the applicable city's Municipal Code limitations on construction. Therefore, the Project would not contribute to cumulative impacts during construction.

Cumulative Traffic Source Noise Impacts

According to the U.S. EPA, cumulative noise impacts represent the combined and incremental effects of human activities that accumulate over time. While the incremental impacts may be insignificant by themselves, the combined effect may result in a significant impact. Conversely, although there may be a significant noise increase due to the Proposed Project in combination with other related projects (combined effects), it must also be demonstrated that the Project has an incremental effect. In other words, a significant portion of the noise increase must be due to the Proposed Project.

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to operations of the Project and other projects in the vicinity. A project's contribution to a cumulative traffic noise increase could be considered significant when the combined effect exceeds the perception level (i.e., auditory level increase) threshold. The combined effect compares the "Cumulative Plus Project" condition to "Existing" conditions. This comparison accounts for the traffic noise increase generated by a project combined with the traffic noise increase generated by projects in the area. The incremental effect compares the "Cumulative Plus Project" condition to the "Cumulative No Project" condition.

The following combined effect and incremental effect criteria have been utilized to evaluate the overall effect of the cumulative noise increase.

- ***Combined Effect.*** The cumulative with Project noise level ("Cumulative Plus Project") would cause a significant cumulative impact if a 3.0 dB increase over Existing Conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use. Although there may be a significant noise increase due to the Proposed Project in combination with other related

projects (combined effects), it must also be demonstrated that the Project has an incremental effect. In other words, a significant portion of the noise increase must be due to the Proposed Project.

- *Incremental Effects.* The “Cumulative Plus Project” causes a 1.0 dBA increase in noise over the “Cumulative No Project” noise level.

A significant impact would result only if *both* the combined and incremental effects criteria have been exceeded at a single roadway segment, since such would indicate that there is a significant noise increase due to the Proposed Project in combination with other related projects AND a significant portion of the noise increase is due to the Proposed Project. Noise by definition is a localized phenomenon and reduces as distance from the source increases. Consequently, only the Proposed Project and growth due to occur in the Project site’s general vicinity would contribute to cumulative noise impacts. **Table 12** lists the traffic noise effects along roadway segments in the Project vicinity for “Existing,” “Cumulative No Project,” and “Cumulative Plus Project,” conditions, including incremental and net cumulative impacts.

Table 12. Cumulative Traffic Noise Scenario						
Roadway Segment	Existing	Cumulative No Project	Cumulative Plus Project	Combined Effects	Incremental Effects	Cumulatively Significant Impact?
	CNEL @ 100 Feet from Roadway Centerline	CNEL @ 100 Feet from Roadway Centerline	CNEL @ 100 Feet from Roadway Centerline	Difference in CNEL Between Existing and Cumulative + Project	Difference in CNEL Between Cumulative No Project and Cumulative + Project	
Los Angeles Street / Lower Azul Road						
West of I-605 Offramp / Lower Azul Road Intersection	65.2	65.4	65.5	0.3	0.1	No
East of Little John Street / Los Angeles Street Intersection	64.6	64.7	65.0	0.4	0.3	No

Source: Traffic noise levels were calculated by ECORP Consulting using the FHWA roadway noise prediction model in conjunction with the trip generation rate identified by KOA 2019. Refer to **Attachment B** for traffic noise modeling assumptions and results.

Note: The percentage of medium duty and heavy-duty trucks was updated to reflect that of the traffic report supplied by KOA. Medium duty and heavy-duty trucks produce more noise than the average vehicle. Both Project roadway segments analyzed are in the Project vicinity and traverse noise sensitive residential land uses.

As shown in **Table 12**, no significant cumulative traffic noise impact would result on any of the Project vicinity roadway segments traversing noise sensitive residential land uses. In neither case would Project-generated traffic noise surpass the incremental effect threshold of a 1.0 dBA increase over the Cumulative No Project scenario, or the combined effect threshold of a 3.0 dBA increase over Existing Conditions. Therefore, no perceptible increase of traffic noise would occur as a result of the Cumulative Plus Project scenario.

Cumulative Stationary Source Noise Impacts

Long-term stationary noise sources associated with the development at the Project, combined with other cumulative projects could cause local noise level increases. Noise levels associated with the Proposed Project and related cumulative projects together could result in higher noise levels than considered separately. As previously described, on-site noise sources associated with the Proposed Project would be found to be acceptable as the surrounding land uses are already experiencing levels above the City's noise standards. The Project would not be increasing noise levels above the current ambient noise environment and would not be increasing noise levels by more than 10 dBA in Irwindale or 5 dBA in either Arcadia or Baldwin Park. Therefore, the Project would not contribute to cumulative impacts during operations.

6.0 REFERENCES

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- KOA. 2019. *Traffic Impact Study: Irwindale Industrial Project 13131 Los Angeles Street*.
- San Jose Loading Dock Noise study. 2014.
- WEAL (Western Electro-Acoustic Laboratory, Inc.). 2000. Sound Transmission Sound Test Laboratory Report No. TL 96-186.

Baseline (Existing) Noise Measurements – Project Site and Vicinity

Site Number: 1			
Recorded By: Lindsay Liegler			
Job Number: 2019-030			
Date: 6/11/2019			
Time: 2:01 p.m.			
Location: Along Los Angeles Street adjacent to the Project site.			
Source of Peak Noise: Vehicles traveling along Los Angeles Street			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
77.8	58.2	94.2	113.5

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Larson Davis	LxT SE	0005120	6/04/2018	
	Microphone	Larson Davis	377B02	174464	5/31/2018	
	Preamp	Larson Davis	PRMLxT1L	042852	6/04/2018	
	Calibrator	Larson Davis	CAL200	14105	5/31/2018	
Weather Data						
Est.	Duration: 10 minutes			Sky: Partly Cloudy		
	Note: dBA Offset = 0.06			Sensor Height (ft): 3.5 ft		
	Wind Ave Speed (mph)		Temperature (degrees Fahrenheit)		Barometer Pressure (hPa)	
	8-10		98°		29.91	

Photo of Measurement Location



Summary

File Name on Meter	LxT_Data.124
File Name on PC	SLM_0005120_LxT_Data_124.00.ldbin
Serial Number	0005120
Model	SoundExpert® LxT
Firmware Version	2.302
User	Jerry Aguirre
Location	Irwindale/Baldwim Park
Job Description	2019-030 Industrial Spec Tilt-Up Project
Note	

Measurement

Description	
Start	2019-06-11 13:59:35
Stop	2019-06-11 14:09:35
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2019-06-11 13:48:15
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Fast		
Preamp	PRMLxT1L		
Microphone Correction	Off		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Freq. Weighting	Z Weighting		
OBA Max Spectrum	Bin Max		
Overload	122.7 dB		
	A	C	Z
Under Range Peak	79.0	76.0	81.0 dB
Under Range Limit	28.0	26.4	34.0 dB
Noise Floor	17.3	17.3	23.7 dB

Results

L_{Aeq}	77.8 dB		
L _{AE}	105.6 dB		
EA	4.015 mPa ² h		
L _Z peak (max)	2019-06-11 14:01:28	113.5 dB	

LAFmax 2019-06-11 14:08:51 94.2 dB
 LAFmin 2019-06-11 14:03:39 58.2 dB
 SEA -99.9 dB

LAF > 85.0 dB (Exceedance Counts / Duration) 15 21.2 s
 LAF > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZpeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZpeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZpeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

Community Noise Ldn LDay 07:00-22:00 LNight 22:00-07:00 Lden LDay 07:00-19:00 LEvening 19:00-22:00
 77.8 77.8 -99.9 77.8 77.8 -99.9

LCeq 84.9 dB
 LAeq 77.8 dB
 LCeq - LAeq 7.1 dB
 LAleq 79.6 dB
 LAeq 77.8 dB
 LAleq - LAeq 1.8 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	77.8		84.9			
LF(max)	94.2	2019/06/11 14:08:51				
LF(min)	58.2	2019/06/11 14:03:39				
LPeak(max)					113.5	2019/06/11 14:01:28

Overloads 0
 Overload Duration 0.0 s
 # OBA Overloads 0
 OBA Overload Duration 0.0 s

Statistics

LAF5.00 83.4 dB
 LAF10.00 81.4 dB
 LAF33.30 75.4 dB
 LAF50.00 72.1 dB
 LAF66.60 70.0 dB
 LAF90.00 64.8 dB

Site Number: 2			
Recorded By: Lindsay Liegler			
Job Number: 2019-030			
Date: 6/11/2019			
Time: 2:23 p.m.			
Location: Along Los Angeles Street, south of the nearest residence			
Source of Peak Noise: Vehicles traveling along Los Angeles Street			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
71.2	53.3	87.4	108.5

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Larson Davis	LxT SE	0005120	6/04/2018	
	Microphone	Larson Davis	377B02	174464	5/31/2018	
	Preamp	Larson Davis	PRMLxT1L	042852	6/04/2018	
	Calibrator	Larson Davis	CAL200	14105	5/31/2018	
Weather Data						
Est.	Duration: 10 minutes			Sky: Partly Cloudy		
	Note: dBA Offset = 0.06			Sensor Height (ft): 3.5 ft		
	Wind Ave Speed (mph)		Temperature (degrees Fahrenheit)		Barometer Pressure (hPa)	
	8-10		98°		29.91	

Photo of Measurement Location



Summary

File Name on Meter	LxT_Data.125
File Name on PC	SLM_0005120_LxT_Data_125.00.ldbin
Serial Number	0005120
Model	SoundExpert® LxT
Firmware Version	2.302
User	Jerry Aguirre
Location	Irwindale/Baldwim Park
Job Description	2019-030 Industrial Spec Tilt-Up Project
Note	

Measurement

Description	
Start	2019-06-11 14:22:30
Stop	2019-06-11 14:32:30
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2019-06-11 13:48:11
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Fast		
Preamp	PRMLxT1L		
Microphone Correction	Off		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Freq. Weighting	Z Weighting		
OBA Max Spectrum	Bin Max		
Overload	122.7 dB		
	A	C	Z
Under Range Peak	79.0	76.0	81.0 dB
Under Range Limit	28.0	26.4	34.0 dB
Noise Floor	17.3	17.3	23.7 dB

Results

LAeq	71.2 dB		
LAE	99.0 dB		
EA	886.953 $\mu\text{Pa}^2\text{h}$		
LZpeak (max)	2019-06-11 14:27:28	108.5 dB	

LAFmax 2019-06-11 14:27:28 87.4 dB
 LAFmin 2019-06-11 14:30:59 53.3 dB
 SEA -99.9 dB

LAF > 85.0 dB (Exceedance Counts / Duration) 2 1.1 s
 LAF > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZpeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZpeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZpeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

Community Noise Ldn LDay 07:00-22:00 LNight 22:00-07:00 Lden LDay 07:00-19:00 LEvening 19:00-22:00
 71.2 71.2 -99.9 71.2 71.2 -99.9

LCeq 79.0 dB
 LAeq 71.2 dB
 LCeq - LAeq 7.7 dB
 LAleq 73.6 dB
 LAeq 71.2 dB
 LAleq - LAeq 2.4 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	71.2		79.0			
LF(max)	87.4	2019/06/11 14:27:28				
LF(min)	53.3	2019/06/11 14:30:59				
LPeak(max)					108.5	2019/06/11 14:27:28

Overloads 0
 Overload Duration 0.0 s
 # OBA Overloads 0
 OBA Overload Duration 0.0 s

Statistics

LAF5.00 76.8 dB
 LAF10.00 74.9 dB
 LAF33.30 70.3 dB
 LAF50.00 67.8 dB
 LAF66.60 64.8 dB
 LAF90.00 59.3 dB

Site Number: 3			
Recorded By: Lindsay Liegler			
Job Number: 2019-030			
Date: 6/11/2019			
Time: 2:42 p.m.			
Location: In neighborhood east of the Project site along Hornbrook Avenue			
Source of Peak Noise: Vehicles on nearby roadway and other urban sounds.			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
63.4	48.8	87.2	106.2

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Larson Davis	LxT SE	0005120	6/04/2018	
	Microphone	Larson Davis	377B02	174464	5/31/2018	
	Preamp	Larson Davis	PRMLxT1L	042852	6/04/2018	
	Calibrator	Larson Davis	CAL200	14105	5/31/2018	
Weather Data						
Est.	Duration: 10 minutes			Sky: Partly Cloudy		
	Note: dBA Offset = 0.06			Sensor Height (ft): 3.5 ft		
	Wind Ave Speed (mph)		Temperature (degrees Fahrenheit)		Barometer Pressure (hPa)	
	8-10		98°		29.91	

Photo of Measurement Location



Summary

File Name on Meter	LxT_Data.126
File Name on PC	SLM_0005120_LxT_Data_126.00.ldbin
Serial Number	0005120
Model	SoundExpert® LxT
Firmware Version	2.302
User	Jerry Aguirre
Location	Irwindale/Baldwim Park
Job Description	2019-030 Industrial Spec Tilt-Up Project
Note	

Measurement

Description	
Start	2019-06-11 14:41:48
Stop	2019-06-11 14:51:48
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2019-06-11 13:48:11
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Fast		
Preamp	PRMLxT1L		
Microphone Correction	Off		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Freq. Weighting	Z Weighting		
OBA Max Spectrum	Bin Max		
Overload	122.7 dB		
	A	C	Z
Under Range Peak	79.0	76.0	81.0 dB
Under Range Limit	28.0	26.4	34.0 dB
Noise Floor	17.3	17.3	23.7 dB

Results

L _{Aeq}	63.4 dB		
L _{AE}	91.2 dB		
E _A	144.978 μPa ² h		
L _Z peak (max)	2019-06-11 14:43:01	106.2 dB	

LAFmax 2019-06-11 14:43:01 87.2 dB
 LAFmin 2019-06-11 14:43:56 48.8 dB
 SEA -99.9 dB

LAF > 85.0 dB (Exceedance Counts / Duration) 1 0.9 s
 LAF > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZpeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZpeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZpeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

Community Noise Ldn LDay 07:00-22:00 LNight 22:00-07:00 Lden LDay 07:00-19:00 LEvening 19:00-22:00
 63.4 63.4 -99.9 63.4 63.4 -99.9

LCeq 73.6 dB
 LAeq 63.4 dB
 LCeq - LAeq 10.2 dB
 LAleq 66.1 dB
 LAeq 63.4 dB
 LAleq - LAeq 2.7 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	63.4		73.6			
LF(max)	87.2	2019/06/11 14:43:01				
LF(min)	48.8	2019/06/11 14:43:56				
LPeak(max)					106.2	2019/06/11 14:43:01

Overloads 0
 Overload Duration 0.0 s
 # OBA Overloads 0
 OBA Overload Duration 0.0 s

Statistics

LAF5.00 67.8 dB
 LAF10.00 64.5 dB
 LAF33.30 55.8 dB
 LAF50.00 53.1 dB
 LAF66.60 51.9 dB
 LAF90.00 50.8 dB

Site Number: 4			
Recorded By: Lindsay Liegler			
Job Number: 2019-030			
Date: 6/11/2019			
Time: 3:03 p.m.			
Location: On Center Street just north of Los Angeles Street in the neighborhood			
Source of Peak Noise: Vehicles traveling along Center Street			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
61.6	48.3	81.3	101.7

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Larson Davis	LxT SE	0005120	6/04/2018	
	Microphone	Larson Davis	377B02	174464	5/31/2018	
	Preamp	Larson Davis	PRMLxT1L	042852	6/04/2018	
	Calibrator	Larson Davis	CAL200	14105	5/31/2018	
Weather Data						
Est.	Duration: 10 minutes			Sky: Partly Cloudy		
	Note: dBA Offset = 0.06			Sensor Height (ft): 3.5 ft		
	Wind Ave Speed (mph)		Temperature (degrees Fahrenheit)		Barometer Pressure (hPa)	
	8-10		98°		29.91	

Photo of Measurement Location



Summary

File Name on Meter	LxT_Data.127
File Name on PC	SLM_0005120_LxT_Data_127.00.ldbin
Serial Number	0005120
Model	SoundExpert® LxT
Firmware Version	2.302
User	Jerry Aguirre
Location	Irwindale/Baldwim Park
Job Description	2019-030 Industrial Spec Tilt-Up Project
Note	

Measurement

Description	
Start	2019-06-11 15:02:59
Stop	2019-06-11 15:12:59
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2019-06-11 13:48:11
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Fast		
Preamp	PRMLxT1L		
Microphone Correction	Off		
Integration Method	Linear		
OBA Range	Normal		
OBA Bandwidth	1/1 and 1/3		
OBA Freq. Weighting	Z Weighting		
OBA Max Spectrum	Bin Max		
Overload	122.7 dB		
	A	C	Z
Under Range Peak	79.0	76.0	81.0 dB
Under Range Limit	28.0	26.4	34.0 dB
Noise Floor	17.3	17.3	23.7 dB

Results

LAeq	61.6 dB		
LAE	89.4 dB		
EA	96.466 $\mu\text{Pa}^2\text{h}$		
LZpeak (max)	2019-06-11 15:04:01	101.7 dB	

LAFmax 2019-06-11 15:04:41 81.3 dB
 LAFmin 2019-06-11 15:10:58 48.3 dB
 SEA -99.9 dB

LAF > 85.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LAF > 115.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZpeak > 135.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZpeak > 137.0 dB (Exceedance Counts / Duration) 0 0.0 s
 LZpeak > 140.0 dB (Exceedance Counts / Duration) 0 0.0 s

Community Noise Ldn LDay 07:00-22:00 LNight 22:00-07:00 Lden LDay 07:00-19:00 LEvening 19:00-22:00
 61.6 61.6 -99.9 61.6 61.6 -99.9

LCeq 69.4 dB
 LAeq 61.6 dB
 LCeq - LAeq 7.8 dB
 LAleq 64.4 dB
 LAeq 61.6 dB
 LAleq - LAeq 2.8 dB

	A		C		Z	
	dB	Time Stamp	dB	Time Stamp	dB	Time Stamp
Leq	61.6		69.4			
LF(max)	81.3	2019/06/11 15:04:41				
LF(min)	48.3	2019/06/11 15:10:58				
LPeak(max)					101.7	2019/06/11 15:04:01

Overloads 0
 Overload Duration 0.0 s
 # OBA Overloads 0
 OBA Overload Duration 0.0 s

Statistics

LAF5.00 67.4 dB
 LAF10.00 64.9 dB
 LAF33.30 59.0 dB
 LAF50.00 57.0 dB
 LAF66.60 54.9 dB
 LAF90.00 52.1 dB

Federal Highway Administration Highway Noise Prediction Model (FHWA-RD-77-108)

Outputs – Project Traffic Noise

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 2019-030
Project Name: **Irwindale Industrial**

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: **KOA**
Community Noise Descriptor: L_{dn}: _____ CNEL: x

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition	Roadway, Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway					Calc Dist	Traffic Volumes							
							Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL		Day	Eve	Night	MTd	HTd	MTe	HTe	MTn

Analysis Condition - Existing Conditions

Los Angeles Street

West of Lower Azul Road (Arcadia)	4	1	24,192	45	0.5	1.8%	0.7%	65.2	48	103	221	476	100	18,797	3,072	2,322	381	151	22	5	33	14
East of Little John St (Baldwin P)	4	1	21,384	45	0.5	1.8%	0.7%	64.6	-	95	204	439	100	16,615	2,716	2,053	337	133	19	4	29	12

**Irwindale Industrial
Existing Plus Project Conditions**

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 2019-030
Project Name: **Irwindale Industrial**

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: **KOA**
Community Noise Descriptor: L_{dn}: _____ CNEL: x

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition Roadway, Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway Distance to Contour					Calc Dist	Traffic Volumes								
						Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL		Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn
						Analysis Condition - Existing Plus Project Conditions																
Los Angeles Street																						
West of Lower Azul Road (Arcadia)	4	1	24,246	45	0.5	1.8%	0.8%	65.3	48	104	224	483	100	18,839	3,079	2,328	382	173	22	6	33	16
East of Little John St (Baldwin P)	4	1	21,492	45	0.5	1.9%	1.0%	64.9	46	99	214	460	100	16,699	2,729	2,063	357	191	21	6	31	17

**Irwindale Industrial
Cumulative No Project Conditions**

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 2019-030
Project Name: **Irwindale Industrial**

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: **KOA**
Community Noise Descriptor: L_{dn}: _____ CNEL: x

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition Roadway, Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway Distance to Contour					Calc Dist	Traffic Volumes								
						Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL		Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn
Los Angeles Street																						
West of Lower Azul Road (Arcadia)	4	1	25,353	45	0.5	1.8%	0.7%	65.4	49	106	228	491	100	19,699	3,220	2,434	399	158	23	5	34	14
East of Little John St (Baldwin P)	4	1	21,888	45	0.5	1.8%	0.7%	64.7	45	96	207	446	100	17,007	2,780	2,101	344	137	20	4	30	12

Analysis Condition - Cumulative No Project Conditions

**Irwindale Industrial
Cumulative Plus Project Conditions**

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 2019-030
Project Name: **Irwindale Industrial**

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: **KOA**
Community Noise Descriptor: L_{dn}: _____ CNEL: x

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition Roadway, Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix		Distance from Centerline of Roadway Distance to Contour					Calc Dist	Traffic Volumes								
						Medium Trucks	Heavy Trucks	CNEL at 100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL		Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn
Los Angeles Street																						
West of Lower Azul Road (Arcadia)	4	1	25,407	45	0.5	1.8%	0.8%	65.5	50	107	231	498	100	19,741	3,227	2,439	400	181	23	6	34	16
East of Little John St (Baldwin P)	4	1	21,969	45	0.5	1.9%	0.9%	65.0	46	99	214	461	100	17,070	2,790	2,109	365	176	21	6	31	16

Analysis Condition - Cumulative Plus Project Conditions

SoundPLAN Outputs – On-Site Project Noise

SoundPLAN
Output Source Information

Number	Receiver Name	Floor	Level at Receiver
1	On Los Angeles Street, adjacent to the Project site.	Ground Floor	81.6 dBA
2	On Los Angeles Street, south of the nearest residence.	Ground Floor	56.0 dBA
3	In neighborhood east of the Project site along Hornbrook Avenue	Ground Floor	55.8 dBA
4	Along Center Street just north of Los Angeles Street, within the neighborhoods adjacent to the Project site.	Ground Floor	48.5 dBA
5	Industrial use east of the Project site.	Ground Floor	73.8 dBA
6	Industrial use west of the Project site.	Ground Floor	73.8 dBA

Number	Noise Source Information	Citation	Level at Source
1	Truck Loading Dock - One Truck	City of San Jose 2014 Midpoint at 237 Loading Dock Noise Study	79.0 dBA

