Appendix C Noise Analysis

Fundamentals of Noise

NOISE

Noise is most often defined as unwanted sound; whether it is loud, unpleasant, unexpected, or otherwise undesirable. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness."

Noise Descriptors

The following are brief definitions of terminology used in this chapter:

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.

- **Decibel (dB).** A unitless measure of sound, expressed on a logarithmic scale and with respect to a defined reference sound pressure. The standard reference pressure is 20 micropascals (20 μPa).

- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second ($1x10^{-6}$ in/sec).

- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

- **Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.

- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

- **Maximum Sound Level (L_{max})**. The highest RMS sound level measured during the measurement period.
- **Root Mean Square Sound Level (RMS).** The square root of the average of the square of the sound pressure over the measurement period.
- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 PM to 10:00 PM and 10 dB from 10:00 PM to 7:00 AM. NOTE: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive – that is, higher than the L_{dn} value). As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.
- **Peak Particle Velocity (PPV).** The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.
- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

Characteristics of Sound

When an object vibrates, it radiates part of its energy in the form of a pressure wave. Sound is that pressure wave transmitted through the air. Technically, airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure that creates sound waves.

Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). Loudness or amplitude is measured in dB, frequency or pitch is measured in Hertz [Hz] or cycles per second, and duration or time variations is measured in seconds or minutes.

Amplitude

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 1 presents the subjective effect of changes in sound pressure levels. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Changes of 1 to 3 dB are detectable under quiet, controlled conditions, and changes of less than 1 dB are usually not discernible (even under ideal conditions). A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dB is readily discernible to most people in an exterior environment, and a 10 dB change is perceived as a doubling (or halving) of the sound.

Table 1 Noise Perceptibility

Change in dB	Noise Level
± 3 dB	Barely perceptible increase
± 5 dB	Readily perceptible increase
± 10 dB	Twice or half as loud
± 20 dB	Four times or one-quarter as loud

Source: California Department of Transportation (Caltrans). 2013, September. Technical Noise Supplement ("TeNS").

Frequency

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all, but are "felt" more as a vibration. Similarly, though people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz.

When describing sound and its effect on a human population, A-weighted (dBA) sound levels are typically used to approximate the response of the human ear. The A-weighted noise level has been found to correlate well with people's judgments of the "noisiness" of different sounds and has been used for many years as a measure of community and industrial noise. Although the A-weighted scale and the energy-equivalent metric are commonly used to quantify the range of human response to individual events or general community sound levels, the degree of annoyance or other response also depends on several other perceptibility factors, including:

- Ambient (background) sound level
- General nature of the existing conditions (e.g., quiet rural or busy urban)
- Difference between the magnitude of the sound event level and the ambient condition
- Duration of the sound event
- Number of event occurrences and their repetitiveness
- Time of day that the event occurs

Duration

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time; half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2, L_8 and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour, respectively. These "n" values are typically used to demonstrate compliance for stationary noise sources with many cities' noise ordinances. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period, respectively.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and many local jurisdictions use an adjusted 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment (or "penalty") of 5 dBA be added to the actual noise level for the hours from 7:00 PM to 10:00

PM and 10 dBA for the hours from 10:00 PM to 7:00 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 PM and 10:00 PM. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher). The CNEL or L_{dn} metrics are commonly applied to the assessment of roadway and airport-related noise sources.

Sound Propagation

Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single-point source, sound levels decrease by approximately 6 dB for each doubling of distance from the source (conservatively neglecting ground attenuation effects, air absorption factors, and barrier shielding). For example, if a backhoe at 50 feet generates 84 dBA, at 100 feet the noise level would be 79 dBA, and at 200 feet it would be 73 dBA. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance over a reflective ("hard site") surface such as concrete or asphalt. Line source noise in a relatively flat environment with ground-level absorptive vegetation decreases by an additional 1.5 dB for each doubling of distance.

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread, through generally worse in urban areas than in outlying, less-developed areas. Elevated ambient noise levels can result in noise interference (e.g., speech interruption/masking, sleep disturbance, disturbance of concentration) and cause annoyance. Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level number means. To help relate noise level values to common experience, Table 2 shows typical noise levels from familiar sources.

Table 2 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation (Caltrans). 2013, September. Technical Noise Supplement ("TeNS").

Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. As with noise, vibration can be described by both its amplitude and frequency. Vibration displacement is the distance that a point on a surface moves away from its original static position; velocity is the instantaneous speed that a point on a surface moves; and acceleration is the rate of change of the speed. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During construction, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure.

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the root mean square (RMS) velocity. PPV is the maximum instantaneous peak of the vibration signal and RMS is the

square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage and RMS is typically more suitable for evaluating human response.

As with airborne sound, annoyance with vibrational energy is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 3 displays the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

Table 3 Human Reaction to Typical Vibration Levels

Vibration Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e. not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: California Department of Transportation (Caltrans). 2020, April. *Transportation and Construction Vibration Guidance Manual.* Prepared by ICF International.

LOCAL REGULATIONS AND STANDARDS

General Plan

Noise Element

Adopted December 15, 1993
Amended November 9, 2011
Amended December 13, 2017
Amended December 13, 2022

County of Sacramento
Office of Planning and Environmental Review

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Table of Contents

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SACRAMENTO COUNTY GENERAL PLAN
NOISE ELEMENT

SECTION I

INTRODUCTION

Purpose of the Noise Element

The Noise Element of the Sacramento County General Plan provides a basis for comprehensive local policies to control and abate environmental noise and to protect the citizens of Sacramento County from excessive noise exposure. The fundamental goals of the Noise Element are as follows:

- To provide sufficient information concerning the community noise environment so that noise may be effectively considered in the land use planning process.

- To develop strategies for abating excessive noise exposure through cost-effective mitigation measures in combination with appropriate zoning to avoid incompatible land uses.

- To protect those existing regions of the planning area whose noise environments are deemed acceptable and also those locations throughout the community deemed "noise sensitive".

- To protect existing noise-producing commercial and industrial uses in Sacramento County from encroachment by noise-sensitive land uses.

Noise Element Requirements

The noise element requirements contained in California Government Code Section 65302(f) are summarized as follows:

- A noise element shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control in the State Department of Health Services and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all major sources of noise within the County.

- Noise contours shall be shown for major noise sources and stated in terms of the day/night average level (Ldn) or other appropriate noise descriptors. The noise contours shall be prepared on the basis of noise monitoring or following generally accepted noise modeling techniques for the various sources identified above.

- The noise contours shall be used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise. The noise element shall include policies, implementation measures and possible solutions that address existing and foreseeable noise problems, if any.

Acoustical Terminology

Acoustics The science of sound.

Ambient Noise The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.

Attenuation The reduction of noise.

A-Weighting A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response. All noise level measurements and noise standards associated with this Noise Element are provided in terms of A-weighted sound levels.

Capacity Enhancing A roadway project which would increase roadway capacity. Examples include new roadway construction projects or widening projects. Projects which only re-stripe or otherwise alter roadway configuration without increasing capacity are not included in this definition

CNEL Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.

Decibel or dB Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.

Frequency The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.

Infill Project A project which is consistent with the General Plan Land Use Map designations, zoning, and community plan for the property in which at least 50% of the project site is bounded by similar uses and a project which would not expand the perimeter of the development area.

Ldn Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.

Leq Equivalent or energy-averaged sound level.

L50 Median noise level, or level exceeded 50% of time.

Lmax The highest root-mean-square (RMS) sound level measured over a given period of time.

Loudness A subjective term for the sensation of the magnitude of sound.

Noise Unwanted sound.

Noise Reducing Pavement

Pavement types for which local studies have identified noise-reducing benefits.

Sensitive Outdoor Areas

The primary outdoor activity area associated with any given land use at which noise-sensitivity exists and the location at which the County's exterior noise level standards are applied.

Single-Family Residential Uses: Normally considered to be back yard spaces, or distinct rear patio/deck areas of single-family residential uses. Front yard spaces, elevated balconies front courtyards, front decks, side yards, etc., are not commonly considered to be sensitive outdoor activity areas. Where the location of outdoor activity areas for large lot residential properties cannot be determined, the County's exterior noise level standards shall be applied within 50 feet of the rear of the residence.

Multi-family Residential Uses: Common outdoor recreation areas, such as pools, tot-lots, tennis courts, etc., of multi-family uses are considered to be the sensitive outdoor area. Individual patios and balconies of multi-family developments are not considered to be sensitive outdoor areas.

Residential Component of Mixed-Use Developments: Mixed use developments will commonly consist of residential units on elevated floors above office or commercial uses. As a result, such uses may not include a clearly delineated sensitive outdoor area, in which case satisfaction with the County's interior noise level standards will be considered adequate.

Small Lot Detached Single Family Developments: In higher density detached single family residential developments (RD-10 or greater density), outdoor activity areas may be small patios or courtyards, or the development may not propose outdoor areas. If small lot developments provide a common outdoor recreation area for the residents of the community (much like an apartment complex), the standards of the Noise Element shall be applied at that location. Otherwise, the standards shall be applied at individual patio/courtyard areas of these developments.

Fundamentals of Noise

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second) they can be heard and hence are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness. Figure 1 shows examples of noise levels for several common noise sources and environments.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighing network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this document are in terms of A-weighted levels.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise.

The Day-Night Average Level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

TABLE 1

TYPICAL A-WEIGHTED SOUND LEVELS OF COMMON NOISE SOURCES

Loudness Ratio Level	A-Weighted Sound Level (dBA)	
128	130	Threshold of pain
64	120	Jet aircraft take-off at 100 feet
32	110	Riveting machine at operators position
16	100	Cut-off saw at operators position
8	90	Bulldozer at 50 feet
4	80	Diesel locomotive at 300 feet
2	70	Commercial jet aircraft interior during flight
1	60	Normal conversation speech at 5-10 feet
1/2	50	Open office background level
1/4	40	Background level within a residence
1/8	30	soft whisper at 2 feet
1/16	20	Interior of recording studio

Noise in the community has been characterized as a health problem, not in terms of actual physiological damages 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 such as sleep, speech, recreation and tasks demanding concentration or coordination. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases, the acceptability of the environment for people decreases. This decrease in acceptability and the threat to public well-being are the bases for land use planning policies preventing exposures to excessive community noise levels.

To control noise from fixed sources which have developed from processes other than zoning or land use planning, many jurisdictions have adopted community noise control ordinances. Such ordinances are intended to abate noise nuisances and to control noise from existing sources. They may also be used as performance standards to judge the creation of a potential nuisance, or potential encroachment of sensitive uses upon noise-producing facilities. Community noise control ordinances are generally designed to resolve noise problems on a short-term basis (usually by means of hourly noise level criteria), rather than on the basis of 24-hour or annual cumulative noise exposures.

In addition to the A-weighted noise level, other factors should be considered in establishing criteria for noise sensitive land uses. For example, sounds with noticeable tonal content such as whistles, horns, droning or high-pitched sounds may be more annoying than the A-weighted sound level alone suggests. Many noise standards apply a penalty, or correction, of 5 dBA to such sounds. The effects of unusual tonal content are generally more of a concern at nighttime, when residents may notice the sound in contrast to low levels of background noise.

Because many rural residential areas experience very low noise levels, residents may express concern about the loss of "peace and quiet" due to the introduction of a sound which was not audible previously. In very quiet environments, the introduction of virtually any change in local activities will cause an increase in noise levels. A change in noise level and the loss of "peace and quiet" is the inevitable result of land use or activity changes in such areas. Audibility of a new noise source and/or increases in noise levels within recognized acceptable limits are not usually considered to be significant noise impacts, but these concerns should be addressed and considered in the planning and environmental review processes.

Background on Criteria for Acceptable Noise Exposure

The State Office of Planning and Research (OPR) 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 OPR guidelines contain a land use compatibility table which describes the compatibility of different land uses with a range of environmental noise levels in terms of Ldn. A noise environment of 60 dB Ldn or less is considered to be normally acceptable for residential uses according to those guidelines.

The U.S. Environmental Protection Agency (EPA) also offers guidelines for community noise exposure in the publication "Information on the Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety". These guidelines consider occupational noise exposure as well as noise exposure in the home. The "Levels Document" recognizes an exterior noise level of 55 dB Ldn as a goal to protect the public from hearing loss, activity interference, sleep disturbance and annoyance. The EPA notes, however, that this level is not a regulatory goal, but is a level defined by a negotiated scientific consensus without concern for economic and technological feasibility or the needs and desires of any particular community. The EPA and other Federal agencies have suggested land use compatibility guidelines which indicate that residential noise exposures of 55 to 65 dB Ldn are acceptable.

The U.S. Environmental Protection Agency has also prepared a Model Community Noise Control Ordinance, using Leq as the means of defining allowable residential noise level limits. The EPA model contains no specific recommendations for local noise level standards, but reports a range of Leq values as adopted by various local jurisdictions. The mean daytime residential noise standard reported by the EPA is 57 dBA (Leq); the mean nighttime residential noise standard is 52 dBA (Leq). Other state laws and regulations regarding noise control are directed towards aircraft, motor vehicles and noise in general.

The California Vehicle Code sets noise emission standards for new vehicles including autos, trucks, motorcycles and off-road vehicles. Performance standards also apply to all vehicles operated on public streets and roadways. Section 216 of the Streets and Highways Code regulates traffic noise received at schools near freeways.

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SACRAMENTO COUNTY GENERAL PLAN
NOISE ELEMENT

SECTION II

NOISE ELEMENT GOALS AND POLICIES

GOAL 1 **To protect the existing and future citizens of Sacramento County from the harmful effects of exposure to excessive noise. More specifically, to protect existing noise-sensitive land uses from new uses that would generate noise levels which are incompatible with those uses, and to discourage new noise-sensitive land uses from being developed near sources of high noise levels.**

GOAL 2 **To protect the economic base of Sacramento County by preventing the encroachment of noise-sensitive land uses into areas affected by existing noise-producing uses. More specifically, to recognize that noise is an inherent by-product of many land uses and to prevent new noise-sensitive land uses from being developed in areas affected by existing noise-producing uses.**

GOAL 3 **To provide the County with flexibility in the development of infill properties which may be located in elevated noise environments.**

GOAL 4 **To provide sufficient noise exposure information so that existing and potential future noise impacts may be effectively addressed in the land use planning and project review processes.**

Traffic And Railroad Noise Sources

NO-1. The noise level standards for noise-sensitive areas of ***new*** uses affected by traffic or railroad noise sources in Sacramento County are shown by Table 1. Where the noise level standards of Table 1 are predicted to be exceeded at new uses proposed within Sacramento County which are affected by traffic or railroad noise, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 1 standards.

Aircraft Noise Sources

NO-2. Proposals for new development within Sacramento County which may be affected by aircraft noise shall be evaluated relative to Table 4: *Land Use Compatibility for Aircraft Noise*, except in the following cases. Development proposals which may be affected by aircraft noise from Sacramento International Airport shall be evaluated relative to the Land Use Compatibility Plan prepared for Sacramento International Airport dated December 12, 2013, adopted herein by reference. Development proposals which may be affected by aircraft noise from Mather Airport shall be evaluated relative to the Land Use Compatibility Plan prepared for Mather airport dated February 2021, adopted herein reference, as well as applicable footnotes in Table 4.

NO-3. New residential development within the 60 CNEL noise contours adopted by the County for land use planning purposes at any airport or Helipad within Sacramento County shall be prohibited unless exceptions set forth in Table 4 below are found to be applicable. This policy is not applicable to Executive Airport.

NO-4. New residential development within adopted Airport Policy Area boundaries, but outside the 60 CNEL, shall be subject to the following conditions:

A. Provide minimum noise insulation to 45 dB CNEL within new residential dwellings, including detached single family dwellings, with windows closed in any habitable room.

B. Notification in the Public Report prepared by the California Department of Real Estate disclosing the fact to prospective buyers that the parcel is located within an Airport Policy Area.

C. An Avigation Easement prepared by the Sacramento County Counsel's Office granted to the County of Sacramento, recorded with the Sacramento County Recorder, and filed with Department of Airports. Such Avigation Easement shall acknowledge the property location within an Airport Planning Policy Area and shall grant the right of flight and unobstructed passage of all aircraft into and out of the subject Airport.

Exceptions: New accessory residential dwellings on parcels zoned Agricultural, Agricultural-Residential, Interim Agricultural, Interim General Agricultural, or Interim Limited Agricultural and between the 60 and 65 CNEL contours, shall be permitted within adopted Airport Policy Area boundaries, but would be subject to the conditions listed above.

Non-Transportation Noise Sources

NO-5. The interior and exterior noise level standards for noise-sensitive areas of new uses affected by existing non-transportation noise sources in Sacramento County are shown by Table 2. Where the noise level standards of Table 2 are predicted to be exceeded at a proposed noise-sensitive area due to existing non-transportation noise sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with the Table 2 standards within sensitive areas.

NO-6. Where a project would consist of or include non-transportation noise sources, the noise generation of those sources shall be mitigated so as not exceed the interior and exterior noise level standards of Table 2 at existing noise-sensitive areas in the project vicinity.

NO-7. The "last use there" shall be responsible for noise mitigation. However, if a noise-generating use is proposed adjacent to lands zoned for uses which may have sensitivity to noise, then the noise generating use shall be responsible for mitigating its noise generation to a state of compliance with the Table 2 standards at the property line of the generating use in anticipation of the future neighboring development.

Construction Noise

NO-8. Noise associated with construction activities shall adhere to the County Code requirements. Specifically, Section 6.68.090(e) addresses construction noise within the County.

Transportation Projects

NO-9. For capacity enhancing roadway or rail projects, or the construction of new roadways or railways, a noise analysis shall be prepared in accordance with the Table 3 requirements. If projected post-project traffic noise levels at existing uses exceed the noise standards of Table 1, then feasible methods of reducing noise to levels consistent with the Table 1 standards shall be analyzed as part of the noise analysis. In the case of existing residential uses, sensitive outdoor areas shall be mitigated to 60 dB, when possible, through the application of feasible methods to reduce noise. If 60 dB cannot be achieved after the application of all feasible methods of reducing noise, then noise levels up to 65 dB are allowed.

If pre-project traffic noise levels for existing uses already exceed the noise standards of Table 1 and the increase is significant as defined below, feasible methods of reducing noise to levels consistent with the Table 1 standards should be applied. In no case shall the long-term noise exposure for non-industrial uses be greater than 75 dB; long-term noise exposure above this level has the potential to result in hearing loss.

A significant increase is defined as follows:

Pre-Project Noise Environment (Ldn)	Significant Increase
Less than 60 dB	5+ dB
60 - 65 dB	3+ dB
Greater than 65 dB	1.5+ dB

NO-10. For interim capacity enhancing roadway or rail projects, or the construction of new interim roadways or railways, it may not be practical or feasible to provide mitigation if the ultimate roadway or railway design would render the interim improvements ineffective or obsolete. An example would be a noise barrier constructed for an interim project which would need to be removed to accommodate the ultimate project. The following factors should be considered in determining whether or not noise mitigation will be implemented for interim projects, but in general, noise mitigation for interim projects would not be provided:

a. The severity of the impact
b. The cost and effectiveness of the mitigation.
c. The number of properties which would benefit from the mitigation.
d. The foreseeable duration between interim and ultimate improvements.
e. Aesthetic, safety and engineering considerations.

NO-11. If noise-reducing pavement is to be utilized in conjunction with a roadway improvement project, of if such paving existing adjacent to a proposed new noise-sensitive land use, the acoustical benefits of such pavement shall be included in the noise analysis prepared for the project.

General Noise Policy

NO-12. All noise analyses prepared to determine compliance with the noise level standards contained within this Noise Element shall be prepared in accordance with Table 3.

NO-13. Where noise mitigation measures are required to satisfy the noise level standards of this Noise Element, emphasis shall be placed on the use of setbacks and site design to the extent feasible, prior to consideration of the use of noise barriers.

NO-14. Noise analyses prepared for multi-family residential projects, town homes, mixed-use, condominiums, or other residential projects where floor ceiling assemblies or party-walls shall be common to different owners/occupants, shall be consistent with the State of California Noise Insulation standards.

NO-15. The County shall have the flexibility to consider the application of 5 dB less

restrictive exterior noise standards than those prescribed in Tables 1 and 2 in cases where it is impractical or infeasible to reduce exterior noise levels within infill projects to a state of compliance with the Table 1 or 2 standards. In such cases, the rational for such consideration shall be clearly presented and disclosure statements and noise easements should be included as conditions of project approval. The interior noise level standards of Tables 1 and 2 would still apply. The maximum allowable long-term noise exposure permissible for non-industrial uses is 75 dB.

Exemptions

NO-16. The following sources of noise shall be exempt from the provisions of this Noise Element:

a. Emergency warning devices and equipment operated in conjunction with emergency situations, such as sirens and generators which are activated during power outages. The routine testing of such warning devices and equipment shall also be exempt provided such testing occurs during daytime hours.

b. Activities associated with events for which a permit has been obtained from the County.

Table 1
Noise Standards for New Uses Affected by Traffic and Railroad Noise
Sacramento County Noise Element

New Land Use	Sensitive[1] Outdoor Area - Ldn	Sensitive Interior[2] Area - Ldn	Notes
All Residential	65	45	5
Transient Lodging	65	45	3,5
Hospitals & Nursing Homes	65	45	3, 4, 5
Theaters & Auditoriums	---	35	3
Churches, Meeting Halls	65	40	3
Schools, Libraries, etc.	65	40	3
Office Buildings	65	45	3
Commercial Buildings	---	50	3
Playgrounds, Parks, etc.	70	---	
Industry	65	50	3

Notes:

1. Sensitive areas are defined in acoustic terminology section.
2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
3. Where there are no sensitive exterior spaces proposed for these uses, only the interior noise level standard shall apply.
4. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
5. If this use is affected by railroad noise, a maximum (Lmax) noise level standard of 70 dB shall be applied to all sleeping rooms to reduce the potential for sleep disturbance during nighttime train passages.

Table 2
Non-Transportation Noise Standards
Sacramento County Noise Element
Median (L50) / Maximum (Lmax)[1]

	Outdoor Area[2]		Interior[3]	
Receiving Land Use	Daytime	Nighttime	Day & Night	Notes
All Residential	55 / 75	50 / 70	35 / 55	
Transient Lodging	55 / 75	---	35 / 55	4
Hospitals & Nursing Homes	55 / 75	---	35 / 55	5, 6
Theaters & Auditoriums	---	---	30 / 50	6
Churches, Meeting Halls, Schools, Libraries, etc.	55 / 75	---	35 / 60	6
Office Buildings	60 / 75	---	45 / 65	6
Commercial Buildings	---	---	45 / 65	6
Playgrounds, Parks, etc.	65 / 75	---	---	6
Industry	60 / 80	---	50 / 70	6

Notes:

1. The Table 2 standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards of Table 2, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Sensitive areas are defined acoustic terminology section.
3. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
4. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
5. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
6. The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.
7. Where median (L50) noise level data is not available for a particular noise source, average (Leq) values may be substituted for the standards of this table provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown would apply.

Table 3
Requirements for Acoustical Analyses Prepared in Sacramento County

An acoustical analysis prepared pursuant to the Noise Element shall:

1. Be the responsibility of the applicant.
2. Be prepared by qualified persons experienced in the fields of environmental noise assessment and architectural acoustics.
3. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
4. Estimate projected future (20 year) noise levels in terms of the Standards of Tables 1 and 2, and compare those levels to the adopted policies of the Noise Element.
5. Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element.
6. Estimate interior and exterior noise exposure after the prescribed mitigation measures have been implemented.

Table 4

Land Use Compatibility for Airport Noise for all public use airports except for Sacramento International Airport. In the case of Sacramento International Airport, use the Land Use Compatibility Plan prepared for Sacramento International Airport dated December 12, 2013, adopted herein by reference. In the case of Mather Airport, use the Land Use Compatibility Plan prepared for Mather Airport dated February 2021, adopted herein by reference, and applicable footnotes below.

Land Use Designation	60-65 CNEL	65-70 CNEL	70-75 CNEL	75-80 CNEL	80-85 CNEL
RESIDENTIAL[1,7]					
• Single-family detached[2]	No[6]	No	No	No	No
• Two-family dwelling	No[6]	No	No	No	No
• Multi-family dwelling (3+ families)	No[6]	No	No	No	No
• Group Quarters & Rooming Houses	No[6]	No	No	No	No
• Mobile Home Parks or Courts	No[6]	No	No	No	No
• Agricultural/Residential (min. 2ac parcel size)	Yes[6,8]	Yes[6,8]	No	No	No
INDUSTRIAL MANUFACTURING					
• Food and kindred products	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Textiles and apparel	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Transportation equipment	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Lumber and wood products	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Furniture and fixtures	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Paper and allied products	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Printing and publishing	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Chemicals and allied products	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Asphalt paving and miscellaneous petroleum	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Petroleum refining	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Rubber and plastics	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Stone, glass, clay, and concrete products	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Primary and fabricated metals	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Electrical and electronic equipment	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Leather products	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Industrial, commercial, & computer equipment	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Photo, optical and medical equipment	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Miscellaneous manufacturing	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
TRANSPORTATION, COMMUNICATIONS, & UTILITIES					

Table 4

Land Use Compatibility for Airport Noise for all public use airports except for Sacramento International Airport. In the case of Sacramento International Airport, use the Land Use Compatibility Plan prepared for Sacramento International Airport dated December 12, 2013, adopted herein by reference. In the case of Mather Airport, use the Land Use Compatibility Plan prepared for Mather Airport dated February 2021, adopted herein by reference, and applicable footnotes below.

Land Use Designation	60-65 CNEL	65-70 CNEL	70-75 CNEL	75-80 CNEL	80-85 CNEL
• Streets, roads, and highways	Yes	Yes	Yes	Yes	Yes
• Heavy rail lines: freight and passenger	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Light rail lines: passenger	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Trucking and rail freight terminals	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Warehousing and storage	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Passenger terminals and stations	Yes	Yes	Yes[3]	Yes[3]	No
• Water transportation: freight and passenger	Yes	Yes	Yes[3]	Yes[3]	No
• Parking lots	Yes	Yes	Yes[3]	Yes[3]	Yes
• Transportation services	Yes	Yes	Yes[3]	Yes[3]	No
• Radio, television, and telephone	Yes	Yes	Yes[3]	Yes[3]	No
• Cellular radio transmission antenna	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Courier service	Yes	Yes	Yes[3]	Yes[3]	No
• Electrical and natural gas generation and switching	Yes	Yes	Yes[3]	Yes[3]	Yes[3],[7]
• Natural gas and petroleum pipelines and storage	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Water treatment plants	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Sewer treatment plants	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Sanitary landfills	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Recycling and transfer facilities	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Hazardous material facilities	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
WHOLESALE TRADE					
• Paints, varnishes, and supplies	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Chemicals and allied products	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Petroleum terminals and wholesalers	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Miscellaneous wholesale trade	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
RETAIL TRADE					
• Department and variety stores (single)	Yes	Yes	Yes[3]	Yes[3]	No
• Lumber, building materials, and nurseries	Yes	Yes	Yes[3]	No	No

Table 4

Land Use Compatibility for Airport Noise for all public use airports except for Sacramento International Airport. In the case of Sacramento International Airport, use the Land Use Compatibility Plan prepared for Sacramento International Airport dated December 12, 2013, adopted herein by reference. In the case of Mather Airport, use the Land Use Compatibility Plan prepared for Mather Airport dated February 2021, adopted herein by reference, and applicable footnotes below.

Land Use Designation	60-65 CNEL	65-70 CNEL	70-75 CNEL	75-80 CNEL	80-85 CNEL
• Grocery and drug stores	Yes	Yes	Yes[3]	Yes[3]	No
• Paint, glass, wallpaper, and hardware	Yes	Yes	Yes[3]	Yes[3]	No
• Auto, truck, boat, & recreational vehicle dealers	Yes	Yes	Yes[3]	Yes[3]	No
• Mobile home dealers	Yes	Yes	Yes[3]	Yes[3]	No
• Auto and truck service stations	Yes	Yes	Yes[3]	Yes[3]	No
• Fuel dealers	Yes	Yes	Yes[3]	Yes[3]	No
• Apparel and shoes	Yes	Yes	Yes[3]	Yes[3]	No
• Home furnishings	Yes	Yes	Yes[3]	Yes[3]	No
• Eating and drinking	Yes	Yes	Yes[3]	Yes[3]	No
• Miscellaneous retail trade	Yes	Yes	Yes[3]	Yes[3]	No
BUSINESS AND PERSONAL SERVICES					
• Auto, truck, boat, RV, and miscellaneous repair	Yes	Yes	Yes[3]	Yes[3]	No
• Mobile home repair	Yes	Yes	Yes[3]	Yes[3]	No
• Commercial laundries and cleaning	Yes	Yes	Yes[3]	Yes[3]	No
• Coin operated laundries	Yes	Yes	Yes[3]	Yes[3]	No
• Photographers, beauty and barber, shoe repair	Yes	Yes	Yes[3]	Yes[3]	No
• Funeral services	Yes	Yes	Yes[3]	Yes[3]	No
• Business Services	Yes	Yes	Yes[3]	Yes[3]	No
• Computer programming and data processing	Yes	Yes	Yes[3]	Yes[3]	No
• Travel agencies	Yes	Yes	Yes[3]	Yes[3]	No
• Legal and engineering	Yes	Yes	Yes[3]	Yes[3]	No
• Banks, credit unions, and financial	Yes	Yes	Yes[3]	Yes[3]	No
• Hotels, motels, inns, bed and breakfast	Yes	Yes	Yes[3]	Yes[3],[4]	No
• Business parks and industrial clusters	Yes	Yes	Yes[3]	Yes[3]	No
• Office (for rent or lease)	Yes	Yes	Yes[3]	Yes[3]	No
• Business and vocational schools	Yes	Yes	Yes[3]	Yes[3]	No
• Construction businesses	Yes	Yes	Yes[3]	Yes[3]	No
• Miscellaneous personal services	Yes	Yes	Yes[3]	Yes[3]	No

Table 4

Land Use Compatibility for Airport Noise for all public use airports except for Sacramento International Airport. In the case of Sacramento International Airport, use the Land Use Compatibility Plan prepared for Sacramento International Airport dated December 12, 2013, adopted herein by reference. In the case of Mather Airport, use the Land Use Compatibility Plan prepared for Mather Airport dated February 2021, adopted herein by reference, and applicable footnotes below.

Land Use Designation	60-65 CNEL	65-70 CNEL	70-75 CNEL	75-80 CNEL	80-85 CNEL
SHOPPING DISTRICTS					
• Neighborhood shopping centers	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Community shopping centers	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Regional shopping centers	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
PUBLIC AND QUASI-PUBLIC SERVICES					
• Post offices	Yes	Yes	Yes[3]	Yes[3]	No
• Government offices	Yes	Yes	Yes[3]	Yes[3]	No
• Government social services	Yes	Yes	Yes[3]	Yes[3]	No
• Elementary and Secondary schools	Yes	Yes[3,4]	No	No	No
• College and universities	Yes	Yes[3,4]	No	No	No
• Hospitals	Yes	Yes[3,4]	Yes[3,4]	No	No
• Medical and dental laboratories	Yes	Yes	Yes[3]	Yes[3]	No
• Doctor and dentist offices	Yes	Yes	Yes[3]	Yes[3]	No
• Museum and art galleries	Yes	Yes[3,4]	No	No	No
• Libraries	Yes	Yes[3,4]	No	No	No
• Churches	Yes	Yes[3,4]	No	No	No
• Cemeteries	Yes	Yes	Yes[3]	Yes[3]	No
• Jails and detention centers	Yes	Yes	Yes[3]	No	No
• Child care programs (six or more children)	Yes	Yes[3,4]	No	No	No
• Nursing care facilities	Yes	Yes[3,4]	No	No	No
RECREATION					
• Neighborhood parks	Yes	Yes	Yes[3]	No	No
• Community-wide and regional parks	Yes	Yes	Yes[3]	No	No
• Riding stables	Yes	Yes	Yes[3]	No	No
• Golf courses	Yes	Yes	Yes[3]	No	No

Table 4

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Land Use Designation	60-65 CNEL	65-70 CNEL	70-75 CNEL	75-80 CNEL	80-85 CNEL
• Open space and natural areas	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Natural water areas	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Recreation and amusement centers	Yes	Yes	Yes[3]	Yes[3]	No
• Physical fitness and gyms	Yes	Yes	Yes[3]	Yes[3]	No
• Camps, campgrounds, & recreational vehicle parks	Yes	Yes	No	No	No
• Dance halls, studios, and schools	Yes	Yes	Yes[3]	Yes[3]	No
• Theaters - live performance	Yes	Yes[3,5]	Yes[3,5]	No	No
• Motion picture theater - single or double	Yes	Yes[3]	Yes[3]	No	No
• Motion picture theater complex - three or more	Yes	Yes[3]	Yes[3]	No	No
• Professional sports	Yes	Yes	Yes	No	No
• Stadiums and arenas	Yes	Yes	Yes	No	No
• Auditoriums, concert halls, and amphitheaters	Yes	Yes[3,5]	Yes[3,5]	No	No
• Fairgrounds and expositions	Yes	Yes	Yes	No	No
• Racetracks	Yes	Yes	Yes	No	No
• Theme parks	Yes	Yes	Yes	No	No
AGRICULTURAL AND MINING					
• Row and field crops	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Tree crop	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Intensive livestock	Yes	Yes	Yes[3]	No	No
• Nursery products	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Poultry	Yes	Yes	Yes[3]	No	No
• Pasture and grazing	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Agricultural services	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Mining and quarrying	Yes	Yes	Yes[3]	Yes[3]	Yes[3]
• Oil and gas extraction	Yes	Yes	Yes[3]	Yes[3]	Yes[3]

Footnotes to Land Use Compatibility Table for Airport Noise:

A. This compatibility table does not apply to Borges-Clarksburg Airport, as no noise contours exist there. Also, it does not apply to Executive Airport, as the noise contours do not extend into the unincorporated area of Sacramento County.

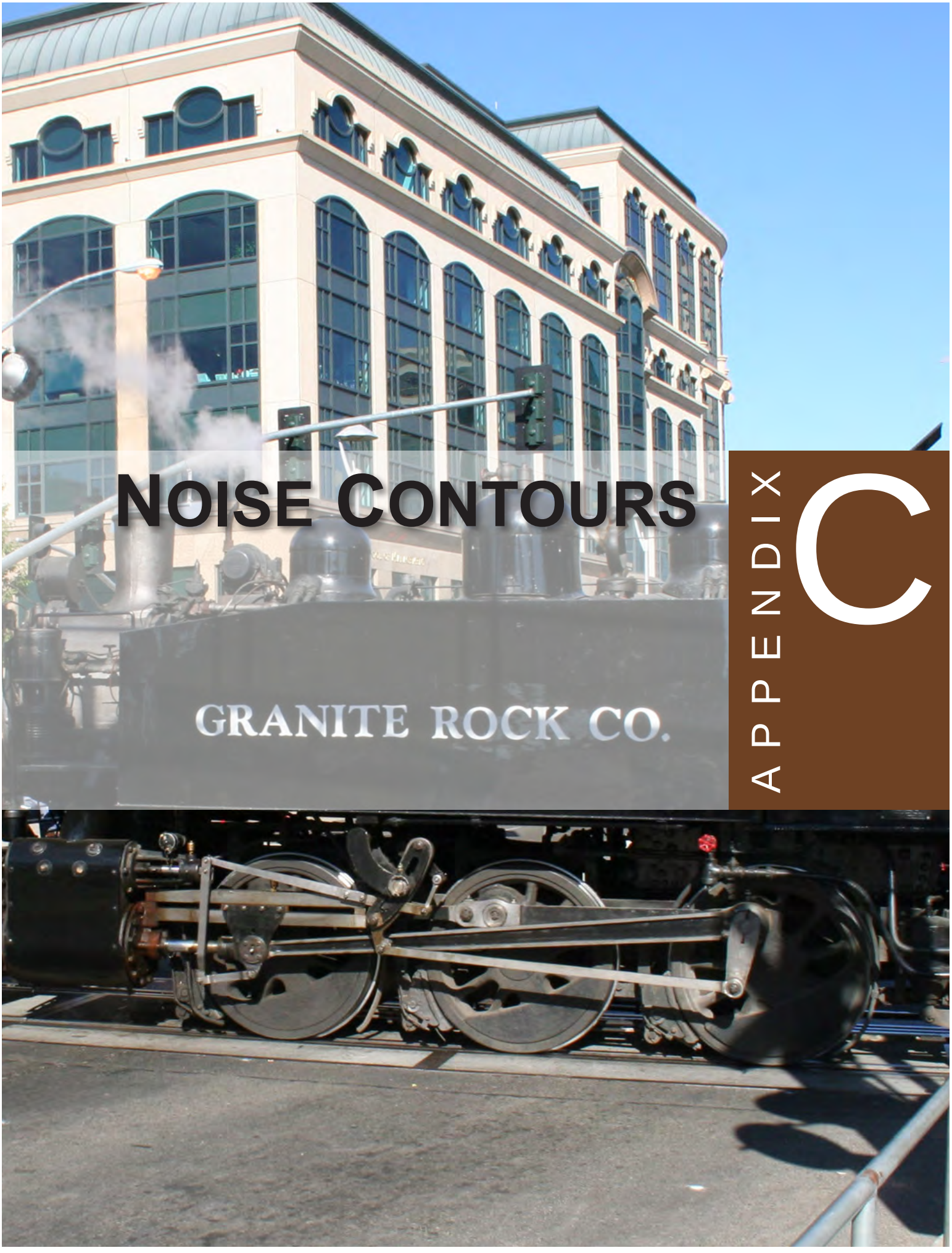
B. These guidelines define only compatible land uses within noise contours. Where proposed land uses fall within the established Safety Areas or may penetrate any of the imaginary height surfaces, additional restrictions do apply, which can be found in the safety and height policy sections of this Plan.

1. Caretaker residences are a compatible use within all CNEL ranges, provided that they are ancillary to the primary use of a property, intended for the purpose of property protection or maintenance, and subject to the condition that all residential units be designed to limit intruding noise such that interior levels do not exceed 45 CNEL, with windows closed, in any habitable room.
2. Single family detached residential units within the 60-65 dB CNEL noise contours of the Mather Airport Policy Area may be considered a compatible use if: (a) approved by the Board of Supervisors upon completion of Sacramento County's master plan process, including demonstration of compliance with LU-119 and LU-120; (b) an evaluation of potential noise and safety impacts pursuant to CEQA has occurred and appropriate noise mitigation measures to reduce interior noise levels to 45 dB have been included in the environmental document and adopted as conditions of approval; and (c) all of the requirements in Footnote 7 below are met. Second residential units are a compatible use within all CNEL ranges, subject to the condition that the proposed second unit be consistent with the provisions of Section 65852.1 and 65852.2 of the California Government Code.
3. Measures to achieve an interior noise level of 50 CNEL must be incorporated into the design and construction of portions where the public is received, office areas, and other areas where people work or congregate.
4. Measures to achieve an interior noise level of 45 CNEL must be incorporated into the design and construction of all noise sensitive areas including, but not limited to, rooms designed for the purpose of sleep, libraries, churches, and areas intended for indoor entertainment events.
5. Only indoor uses permitted.
6. Compatible at Sacramento International Airport and Franklin Field only if the residential use is directly related to agricultural uses, such as dwelling units for the land owner, the owner's immediate family, or for employees may be compatible at Mather Airport if approved by the Board of Supervisors as a component of a master plan and all criteria set forth in Footnote 2 above are satisfied. All residential units shall be designed to limit

intruding noise such that interior noise levels do not exceed 45 CNEL, with windows closed, in any habitable room.

7. New residential uses within 60 CNEL are not compatible, with the exception of accessory residential dwellings on parcels zoned Agricultural, Agricultural-Residential, Interim Agricultural, Interim General Agricultural, or Interim Limited Agricultural, or single family dwelling as set forth in Footnote 2 above. Except as provided in Footnotes 2 and 6 above, new residential development within the Mather Airport Policy Area boundaries but outside the 60 CNEL shall be subject to the following conditions:
   A. Provide minimum noise insulation to provide 45dB within new residential dwellings, including detached single family dwellings, with windows closed, in any habitable room.
   B. Notification in the Public Report prepared by the California Department of Real Estate disclosing the fact to prospective buyers that the parcel is located within the Mather Airport Policy Area.
   C. An Avigation Easement prepared by the Sacramento County Counsel's Office granted to the County of Sacramento and recorded with the Sacramento County Recorder and filed with Department of Airports. Such Avigation Easement shall acknowledge the property location within the Mather Airport Policy Area and shall grant the right of flight and unobstructed passage of all aircraft into and out of Mather Airport.

      New residential development within the Mather Airport Policy Area outside the 65dB CNEL but inside the 60dB CNEL shall be subject to Conditions A through C above and a County-approved noise analysis and mitigation to reduce interior noise impacts to 45 dB with windows closed, in any habitable room.
8. Compatible with McClellan Park and Mather Airfield only up to 70dB CNEL.



NOISE CONTOURS

APPENDIX C

Table 4.8-4 2035 General Plan Noise Levels and Contours

Roadway	From	To	CNEL dBA @ 50'		dBA	Distance to Contour from Centerline (feet)			
			Existing Conditions	2035 General Plan Conditions	Change (2035 GP-Existing)	70 dBA	65 dBA	60 dBA	55 dBA
El Centro Rd	Hankview Rd	Radio Rd	64.9	65.5	0.6	18	56	178	563
El Centro Rd/W El Camino Rd	Radio Rd	I-80	61.4	64.6	3.2	14	45	144	454
W Elkhorn Blvd	E Commerce Way	Natomas Blvd	68.5	70.6	2.1	57	181	571	1805
Del Paso Rd	Power Line Rd	I-5	68.4	69.3	0.9	43	135	428	1354
Del Paso Rd	I-5	Natomas Blvd	73	73	0	99	314	992	3138
Del Paso Rd	Natomas Blvd	Gateway Park Blvd	69.7	72.2	2.5	83	262	830	2624
San Juan Rd	El Centro Rd	Duckhorn Dr	61.1	62.6	1.5	9	28	90	285
Del Paso Rd	Gateway Park Blvd	Northgate Blvd	68.3	71	2.7	63	198	625	1977
Northgate Blvd	Main Ave	North Market Blvd	67	68.3	1.4	34	108	341	1077
Northgate Blvd	North Market Blvd	I-80	69.6	70.7	1.1	59	187	593	1874
Natomas Blvd	W Elkhorn Blvd	Del Paso Rd	68.4	69.8	1.4	48	153	483	1527
Truxel Rd	Arena Blvd	I-80	71.1	72.5	1.4	90	284	897	2836
Truxel Rd	Del Paso Rd	Arena Blvd	67.5	68.2	0.8	33	105	333	1053
North Market Blvd	Truxel Rd	Northgate Blvd	65.8	67.1	1.3	26	81	257	813
Arena Blvd	I-5	Truxel Rd	65.8	66.7	0.9	23	73	232	735
Arena Blvd	El Centro Rd	I-5	67.6	67.6	0	29	91	289	912
E Commerce Way	W Elkhorn Blvd	N Park Dr	61.9	65.8	3.9	19	59	188	594
E Commerce Way	N Park Dr	Del Paso Rd	68	70.5	2.5	56	177	559	1768
E Commerce Way	Del Paso Rd	Arena Blvd	65.1	69.5	4.4	44	140	444	1404
Del Paso Blvd	Globe Ave	El Camino Ave	57.4	60.5	3.1	6	18	57	179
Del Paso Blvd	El Camino Ave	Marysville Blvd	62.6	63.3	0.7	11	34	106	335
Del Paso Blvd	Marysville Blvd	Arcade Blvd	57	59.1	2.1	4	13	40	128
Rio Linda Blvd	Marysville Blvd	Norwood Ave	62.8	64.5	1.7	14	44	140	442
Rio Linda Blvd	Norwood Ave	Arcade Blvd	61.8	62.5	0.7	9	28	89	283
Rio Linda Blvd	Arcade Blvd	Lampasas Ave	63	63.6	0.7	12	37	116	366
Marysville Blvd	Rio Linda Blvd	Bell Ave	57.7	57.8	0.1	3	9	30	95
Marysville Blvd	I-80	Arcade Blvd	63.5	64	0.5	13	40	126	399
Marysville Blvd	Arcade Blvd	Del Paso Blvd	60	60.3	0.3	5	17	54	171
Norwood Ave	Main Ave	I-80	66.6	68	1.4	32	100	317	1003
Norwood Ave	Silver Eagle Rd	El Camino Ave	63.1	63.9	0.8	12	39	123	388

Table 4.8-4 2035 General Plan Noise Levels and Contours

Roadway	From	To	CNEL dBA @ 50'		dBA	Distance to Contour from Centerline (feet)			
			Existing Conditions	2035 General Plan Conditions	Change (2035 GP-Existing)	70 dBA	65 dBA	60 dBA	55 dBA
El Camino Ave	Grove Ave	Del Paso Blvd	63.6	65	1.4	16	50	160	504
El Camino Ave	Del Paso Blvd	I-80 Business	68.5	68.9	0.3	39	122	385	1218
Arden Way	Del Paso Blvd	Royal Oaks Dr	64.1	64.6	0.5	14	46	144	456
Arden Way	Royal Oaks Dr	I-80 Business	65.7	66.6	0.9	23	72	229	723
Grand Ave	Norwood Ave	Rio Linda Blvd	58.2	58.4	0.2	3	11	35	109
Silver Eagle Rd	Northgate Blvd	Norwood Ave	64.7	65.4	0.7	17	55	174	549
Main Ave	Northgate Blvd	Norwood Ave	67.2	69.4	2.1	43	137	432	1366
Main Ave	Norwood Ave	Rio Linda Blvd	64.4	69	4.6	40	126	398	1258
Main Ave	Marysville Blvd	Raley Blvd	52.4	59.6	7.2	5	14	46	144
W Elkhorn Blvd	Natomas Blvd	Rio Linda Blvd	68.2	69.9	1.7	49	156	494	1561
Arcade Blvd	Marysville Blvd	Roseville Rd	68	68.3	0.3	34	107	337	1067
RALEY BL	Ascot Ave	Bell Ave	67.2	70.9	3.7	61	192	608	1923
Bell Ave	Norwood Ave	Winters St	61.2	61.2	0	7	21	66	209
Roseville Rd	Arcade Blvd	Watt Ave	67.3	70.7	3.4	59	188	593	1875
Winters St	Bell Ave	I-80	60.2	61.6	1.4	7	23	72	228
Royal Oaks Dr	Arden Way	SR-160	58.8	59.5	0.7	4	14	45	141
Dry Creek Rd	Marysville Blvd	Grand Ave	54.7	54.7	0	1	5	15	46
Arden Garden Connector	Northgate Blvd	Del Paso Blvd	67.3	68	0.6	31	99	313	991
San Juan Rd	Truxel Rd	Northgate Blvd	66.4	67.6	1.2	28	90	285	900
W El Camino Ave	I-80	I-5	66.1	67.7	1.6	30	94	296	937
W El Camino Ave	I-5	Truxel Rd	67.7	67.7	0	29	93	294	929
W El Camino Ave	Truxel Rd	Northgate Blvd	66	67.3	1.3	27	85	270	855
W El Camino Ave	Northgate Blvd	Grove Ave	61.8	63.8	2	12	38	120	380
Garden Hwy	I-80	Orchard Ln	57.3	57.3	0	3	8	27	84
Garden Hwy	Gateway Oaks Dr	I-5	68.9	69	0.1	39	125	395	1248
Northgate Blvd	I-80	San Juan Rd	68.3	69.2	1	42	133	419	1325
Northgate Blvd	Silver Eagle Rd	Arden Garden Connector	69.3	70.2	0.8	52	164	519	1642
Truxel Rd	W El Camino Ave	Garden Hwy	65	68.5	3.5	36	113	356	1127
Truxel Rd	San Juan Rd	W El Camino Ave	67.6	68.7	1.1	37	117	369	1168
Truxel Rd	I-80	San Juan Rd	69.4	69.6	0.2	45	143	452	1428
I St	5th St	12th St	62.9	63.8	0.9	12	38	120	378
I St	21st St	29th St	55.7	56.8	1.1	2	8	24	76
L St	5th St	15th St	59.9	60.8	0.9	6	19	60	191

Table 4.8-4 2035 General Plan Noise Levels and Contours

Roadway	From	To	CNEL dBA @ 50'		dBA	Distance to Contour from Centerline (feet)			
			Existing Conditions	2035 General Plan Conditions	Change (2035 GP-Existing)	70 dBA	65 dBA	60 dBA	55 dBA
L St	15th St	29th St	59.3	59.3	0	4	14	43	135
P St	16th St	29th St	59.9	59.9	0	5	16	49	156
J St	3rd St	7th St	63.5	63.5	0	11	36	113	358
J St	21st St	29th St	62.2	64.2	2	13	41	131	413
Q St	3rd St	10th St	61.6	61.9	0.3	8	24	77	243
7th St	P St	J St	55.1	58.8	3.7	4	12	38	121
12th St	D St	I St	57.7	57.7	0	3	9	30	93
12th St	N St	P St	49.7	50	0.3	1	2	5	16
15th St	X St	Broadway	58.6	59.3	0.8	4	14	43	136
15th St	J St	P St	60.8	60.8	0	6	19	60	191
16th St	P St	W St	61.9	61.9	0	8	25	78	247
29th St	J St	P St	60.7	63.6	2.9	11	36	115	362
30th St	P St	J St	58.7	61.4	2.7	7	22	68	216
Alhambra Blvd	Stockton Blvd	Broadway	61.7	61.7	0	7	23	74	234
Broadway	3rd St	5th St	59.4	59.5	0.1	4	14	45	141
Broadway	Riverside Blvd	Franklin Blvd	61.7	63.3	1.6	11	34	107	337
Richards Blvd	Bercut Dr	N 7th St	65.7	65.8	0	19	60	188	596
Exposition Blvd	SR-160	I-80 Business	67.1	67.6	0.5	28	90	285	900
Exposition Blvd	I-80 Business	Arden Way	72.2	73.4	1.1	109	344	1088	3442
Arden Way	I-80 Business	Exposition Blvd	71.3	72	0.8	80	253	802	2535
El Camino Ave	I-80 Business	Howe Ave	70.9	71.3	0.4	67	212	671	2121
Marconi Ave	I-80 Business	Bell St	68.8	68.8	0	38	119	375	1186
Auburn Blvd	Howe Ave	Watt Ave	62.7	64.2	1.5	13	41	131	413
Auburn Blvd	Watt Ave	SR-244	68.5	68.9	0.4	39	122	387	1222
Auburn Blvd	El Camino Ave	Arcade Blvd	60.9	63	2.2	10	32	101	319
American River Dr	Howe Ave	Watt Ave	63.8	64.9	1.1	15	49	154	487
Heritage Ln	Arden Way	Exposition Blvd	59.8	61	1.2	6	20	63	200
Howe Ave	US-50	Fair Oaks Blvd	69.3	70.1	0.9	52	163	516	1632
Howe Ave	Fair Oaks Blvd	Hurley Way	69.3	70.5	1.2	56	177	558	1766
Howe Ave	Hurley Way	El Camino Ave	68.7	70	1.3	50	159	503	1589
Howe Ave	El Camino Ave	Auburn Blvd	67.2	70	2.8	50	159	502	1588
Alta Arden Ex	Howe Ave	Fulton Ave	67.3	68.3	1	34	107	339	1073
Fair Oaks Blvd	Howe Ave	Munroe St	69.9	69.9	0	49	154	488	1544
Fair Oaks Blvd	Munroe St	Watt Ave	71.3	71.6	0.4	73	230	728	2301
Fair Oaks Blvd	Watt Ave	Eastern Ave	73	73.6	0.6	115	364	1150	3636

Table 4.8-4 2035 General Plan Noise Levels and Contours

Roadway	From	To	CNEL dBA @ 50'		dBA	Distance to Contour from Centerline (feet)			
			Existing Conditions	2035 General Plan Conditions	Change (2035 GP-Existing)	70 dBA	65 dBA	60 dBA	55 dBA
Watt Ave	Fair Oaks Blvd	US-50	74.3	75	0.7	160	504	1595	5045
Elvas Ave/56th St	52nd St	H St	63	65.8	2.8	19	60	191	603
Elvas Ave	J ST	Folsom Blvd	66.4	66.9	0.5	25	78	247	780
H St	Alhambra Blvd	45th St	64.2	64.2	0	13	42	132	419
H St	45th St	Carlson Dr	64.4	65.7	1.3	19	59	188	593
J St	Alhambra Blvd	56th St	64.1	64.3	0.3	14	43	136	430
Folsom Blvd	47th St	65th St	68.3	69.3	1	43	135	428	1354
Folsom Blvd	Howe Ave	Jackson Hwy	69.6	70.5	0.9	57	179	565	1788
Howe Ave	US 50	14th Ave	71.1	72.1	1	82	259	819	2588
Stockton Blvd	Alhambra Blvd	US-50	60.5	63.1	2.6	10	32	101	320
Jackson Hwy	Folsom Blvd	S Watt Ave	66.9	69.3	2.4	43	135	428	1354
Hornet Dr	US-50 WB Ramps	Folsom Blvd	64	65.4	1.4	17	55	174	551
La Rivera Dr	Watt Ave	Folsom Blvd	66.7	66.8	0	24	75	238	751
Carlson Dr	Moddison Ave	H St	59.6	60.4	0.8	5	17	55	172
College Town Dr	Hornet Dr	La Rivera Dr	63.5	65.1	1.6	16	52	164	517
39th St	Folsom Blvd	J St	55.7	57.4	1.7	3	9	27	87
59th St	Folsom Blvd	Broadway	62.4	62.4	0	9	27	87	274
C St	33rd St	McKinley Blvd	61.2	64.3	3.2	14	43	136	429
Sutterville Rd	Riverside Blvd	Freeport Blvd	62.8	62.9	0.1	10	31	97	306
Sutterville Rd	24th St	Franklin Blvd	65.1	65.6	0.5	18	57	180	569
Seamas Ave	I-5	S Land Park Dr	64.3	64.8	0.6	15	48	152	479
Fruitridge Rd	S Land Park Dr	Freeport Blvd	64.3	64.3	0	13	42	133	421
Fruitridge Rd	Freeport Blvd	Franklin Blvd	66.2	66.5	0.3	22	71	223	707
Fruitridge Rd	Franklin Blvd	SR-99	65.8	65.9	0.1	19	61	193	612
Franklin Blvd	Broadway	5th Ave	61.8	65.1	3.3	16	52	163	516
Franklin Blvd	Sutterville Rd	Fruitridge Rd	67.9	68.7	0.8	37	118	373	1180
Freeport Blvd	Sutterville Rd (S)	Fruitridge Rd	68.3	68.7	0.4	37	117	369	1168
Riverside Blvd	Broadway	2nd Ave	59.6	60.2	0.6	5	16	52	165
Riverside Blvd	Sutterville Rd	Seamas Ave	58.5	58.5	0.1	4	11	36	113
Land Park Dr	Broadway	Vallejo Way	60.8	61.1	0.3	6	20	64	204
S Land Park Dr	Sutterville Rd	Seamas Ave	56.9	57	0.1	3	8	25	80
24th St	Sutterville Rd	Fruitridge Rd	62.2	63	0.8	10	32	100	316
Stockton Blvd	US-50	Broadway	66.3	66.9	0.6	25	78	247	782

Table 4.8-4 2035 General Plan Noise Levels and Contours

Roadway	From	To	CNEL dBA @ 50'		dBA	Distance to Contour from Centerline (feet)			
			Existing Conditions	2035 General Plan Conditions	Change (2035 GP-Existing)	70 dBA	65 dBA	60 dBA	55 dBA
Stockton Blvd	Broadway	Fruitridge Rd	67.6	67.9	0.2	31	97	305	966
Broadway	Alhambra Blvd	Stockton Blvd	66.3	67.2	0.9	27	84	265	838
Broadway	Stockton Blvd	65th St	66.1	66.5	0.5	22	71	225	710
65th St	Elvas Ave	14th Ave	68.5	69.4	0.9	43	137	433	1371
Power Inn Rd	14th Ave	Fruitridge Rd	70.8	71.6	0.8	73	229	726	2295
12th Ave	Martin Luther King Jr Blvd	SR-99	62.8	62.9	0.1	10	31	98	311
14th Ave	65th St	Power Inn Rd	64.4	66	1.6	20	63	198	627
Florin Perkins Rd	Folsom Blvd	Fruitridge Rd	66.9	66.9	0	25	78	247	780
Fruitridge Rd	SR-99	44th St	65.4	66.3	0.9	21	67	213	675
Fruitridge Rd	44th St	Stockton Blvd	70.5	70.9	0.4	61	193	610	1929
Fruitridge Rd	Stockton Blvd	65th St	65.6	66.2	0.6	21	66	208	657
Fruitridge Rd	65th St	Florin Perkins Rd	67.6	68.2	0.6	33	104	330	1043
Fruitridge Rd	Florin Perkins Rd	S Watt Ave	67.6	68.5	0.9	35	112	355	1122
Martin Luther King Jr Blvd	Broadway	Fruitridge Rd	60.3	61.1	0.9	7	21	65	206
T St	Stockton Blvd	59th St	53.5	54	0.5	1	4	12	40
33rd St	4th Ave	12th Ave	57.9	58.3	0.4	3	11	34	108
Raley Blvd	Bell Ave	I-80	68.4	70	1.6	50	157	497	1573
S Watt Ave	US-50	Kiefer Blvd	72.1	74.3	2.2	135	426	1347	4260
Florin Rd	Riverside Blvd	Havenside Dr	63.1	63.4	0.3	11	35	110	347
Florin Rd	Havenside Dr	I-5	67.9	68.6	0.7	36	114	361	1142
Riverside Blvd/ Pocket Rd	Florin Rd	Greenhaven dr	63.9	64	0	13	40	125	396
Pocket Rd	Greenhaven dr	Freeport Blvd	66.3	67.1	0.8	26	81	258	815
43rd Ave	Gloria Dr	13th St	58.8	58.8	0	4	12	38	120
S Land Park Dr	Windbridge Dr	Florin Rd	58.2	58.5	0.2	4	11	35	111
Gloria Dr	Florin Rd	43rd Ave	56.6	56.6	0	2	7	23	72
Greenhaven Dr	Gloria Dr	Florin Rd	60.6	60.7	0.1	6	19	59	186
Freeport Blvd	Pocket Rd	South City Limits	66.1	70.2	4	52	164	518	1638
Freeport Blvd	Florin Rd	Pocket Rd	68.2	68.7	0.6	37	118	373	1181
24th St	Fruitridge Rd	Florin Rd	67.2	67.9	0.7	31	98	309	977
24th St	Florin Rd	Meadowview Rd	63.8	65.4	1.5	17	55	173	546
Meadowview Rd	Freeport Blvd	Brookfield Dr	69.8	69.8	0	48	152	479	1516
Florin Rd	Freeport Blvd	Franklin Blvd	69.5	70	0.5	50	157	496	1569

Table 4.8-4 2035 General Plan Noise Levels and Contours

Roadway	From	To	CNEL dBA @ 50'		dBA	Distance to Contour from Centerline (feet)			
			Existing Conditions	2035 General Plan Conditions	Change (2035 GP-Existing)	70 dBA	65 dBA	60 dBA	55 dBA
43rd Ave/Blair Ave	13th St	Freeport Blvd	59.6	59.6	0.1	5	14	46	145
47th Ave	24th St	Franklin Blvd	69.3	70.1	0.8	51	162	512	1618
Franklin Blvd	Fruitridge Rd	47th Ave	67.3	68.1	0.8	33	103	326	1031
Stockon Blvd	Florin Rd	Mack Rd	70	71.2	1.2	66	209	659	2085
65th St	14th Ave	Fruitridge Rd	68	68.7	0.6	37	116	368	1164
65th Ex	Elder Creek Rd	Stockton Blvd	68.2	68.7	0.5	37	117	371	1174
Power Inn Rd	Fruitridge Rd	Florin Rd	69.8	70.4	0.6	55	173	546	1726
S Watt Ave	Kiefer Blvd	Jackson Hwy	70.8	73.9	3.2	124	392	1239	3919
Florin Rd	Franklin Blvd	SR-99	71.9	72.4	0.5	87	276	872	2756
Florin Rd	SR-99	65th St	73.2	73.9	0.7	122	385	1216	3847
Florin Rd	65th St	Stockton Blvd	70.5	71.7	1.2	74	234	741	2343
Florin Rd	Stockton Blvd	Power Inn Rd	69.5	70.3	0.8	53	168	531	1678
Florin Rd	Power Inn Rd	Florin Perkins Rd	69	70.1	1.1	51	162	513	1624
Elder Creek Rd	Stockton Blvd	Florin Perkins Rd	69.5	70.2	0.7	52	164	519	1642
Elder Creek Rd	Florin Perkins Rd	Hedge Ave	65.1	68.9	3.8	39	122	387	1223
Florin Perkins Rd	Fruitridge Rd	Elder Creek Rd	68.8	69.2	0.5	42	132	419	1324
Florin Perkins Rd	Elder Creek Rd	Florin Rd	68.6	68.6	0	36	115	364	1150
Mack Rd	Meadowview Rd	Franklin Blvd	69.6	69.6	0	46	144	457	1444
Mack Rd	Franklin Blvd	Center Pkwy	70.5	70.9	0.4	62	195	618	1953
Mack Rd	Center Pkwy	Stockton Blvd	69.9	70.4	0.5	55	174	551	1744
Center Pkwy	Tangerine Ave	Mack Rd	60.4	60.7	0.3	6	19	59	186
Center Pkwy	Mack Rd	Bruceville Rd	60.9	60.9	0	6	19	61	194
Valley Hi Dr	Franklin Blvd	Center Pkwy	64.1	64.8	0.7	15	48	151	479
Valley Hi Dr	Center Pkwy	Mack Rd	67.2	67.2	0	27	84	265	838
Bruceville Rd	Valley Hi Dr	Consumnes River Blvd	64.7	66.7	2	23	73	232	734
Bruceville Rd	Consumnes River Blvd	Calvine Rd	70.9	70.9	0	61	194	614	1941
Franklin Blvd	Village Wood Dr	Big Horn Blvd	66.9	66.9	0	25	78	247	780
Franklin Blvd	Mack Rd	Turnbridge Dr	69.3	69.7	0.4	47	147	466	1474
Franklin Blvd	47th Ave	Turnbridge Dr	70.1	70.5	0.4	56	176	557	1762
Stockton Blvd	Fruitridge Rd	Florin Rd	69.8	70.2	0.4	52	165	521	1648
65th Ex	Stockton Blvd	Florin Rd	68.5	69	0.5	40	126	398	1258
Power Inn Rd	Florin Rd	Elsie Ave	70.7	71	0.4	64	201	637	2013

Table 4.8-4 2035 General Plan Noise Levels and Contours

Roadway	From	To	CNEL dBA @ 50'		dBA	Distance to Contour from Centerline (feet)			
			Existing Conditions	2035 General Plan Conditions	Change (2035 GP-Existing)	70 dBA	65 dBA	60 dBA	55 dBA
47th Ave	Franklin Blvd	SR-99	71.1	71.7	0.6	74	233	737	2331
47th Ave	SR-99	Stockton Blvd	71.1	71.4	0.3	69	217	686	2169
Franklin Blvd	Mack Rd	Village Wood Dr	69.3	69.5	0.2	44	140	441	1396
Elkhorn Blvd	SR-99	E Commerce Way	69.1	70.1	1	51	163	515	1628
Freeport Blvd	Sutterville Rd (N)	Sutterville Rd (S)	65.4	65.7	0.2	18	58	184	582
Folsom Blvd	US-50	Howe Ave	69.3	70.5	1.2	56	177	559	1768
Cosumnes River Blvd	Franklin Blvd	Center Pkwy	67.9	70.5	2.6	56	179	565	1786
Freeport Blvd	21st St	Sutterville Rd (N)	64.9	65.9	1	19	62	195	615
Freeport Blvd	Broadway	21st St	60.6	62.5	1.9	9	28	89	280
Land Park Dr	Vallejo Way	13th Ave (S)	61.4	61.4	0.1	7	22	69	219
Land Park Dr	13th Ave (S)	Sutterville Rd	59.2	59.4	0.2	4	14	44	139
Riverside Blvd	7th Ave	Sutterville Rd	63.9	65.2	1.3	17	52	166	524
Riverside Blvd	2nd Ave	7th Ave	61.1	61.6	0.5	7	23	72	228
24th St	Donner Way	Sutterville Rd	52.2	54.9	2.7	2	5	15	49
Sutterville Rd	Freeport Blvd	Sutterville Bypass	64.6	64.7	0	15	46	146	462
5th St	Broadway	Vallejo Way	55.4	56.4	1	2	7	22	70
Broadway	5th St	Riverside Blvd	60.6	60.6	0	6	18	57	182
Elder Creek Rd	Florin Perkins Rd	S Watt Ave	65.9	68.4	2.4	34	108	343	1084
Richards Blvd	N 7th St	N 12th St	63	66.5	3.6	23	71	226	714
12th St	Richards Blvd	D St	65.2	66.7	1.5	23	74	235	743
16th St	Richards Blvd	I St	69.6	70.2	0.6	52	165	523	1654
N 7th St	Richards Blvd	B St	60	63.9	3.9	12	39	124	391
Florin Rd	I-5	Freeport Blvd	69.4	69.8	0.4	48	150	475	1503
Cosumnes River Blvd	Center Pkwy	SR-99	66.3	68	1.7	32	100	316	999
Garden Hwy	Orchard Ln	Gateway Oaks Dr	69.4	69.4	0	44	138	437	1383
J St	7th St	10th St	62.9	62.9	0	10	31	98	310
J St	10th St	16th St	63.2	63.3	0	11	34	106	335
P St	16th St	9th St	59.7	59.7	0	5	15	46	146
P St	9th St	2nd St	59.8	59.8	0	5	15	48	152
Franklin Blvd	5th Ave	Sutterville Rd	65.2	67	1.8	25	80	252	797
J St/Fair Oaks Blvd	H St	Howe Ave	61.2	63.9	2.7	12	39	124	392
Folsom Blvd	Jackson Hwy	S Watt Ave	63.9	64.6	0.7	14	45	144	455

Table 4.8-4 2035 General Plan Noise Levels and Contours

Roadway	From	To	CNEL dBA @ 50'		dBA	Distance to Contour from Centerline (feet)			
			Existing Conditions	2035 General Plan Conditions	Change (2035 GP-Existing)	70 dBA	65 dBA	60 dBA	55 dBA
Riverside Blvd/43rd Ave	Florin Rd	Gloria Dr	67.9	68	0.1	31	99	315	995
Freeport Blvd	Fruitridge Rd	Florin Rd	67.9	68.7	0.8	37	117	369	1168
Garden Hwy	I-5	Truxel Rd	72.2	72.8	0.6	95	301	952	3012
Garden Hwy	Truxel Rd	Northgate Blvd	73.4	73.7	0.3	118	375	1184	3745
Norwood Ave	I-80	Silver Eagle Rd	66.2	67	0.8	25	80	252	797
SR-99	W Elkhorn Blvd	I-5/SR-99 Interchange	79.2	81.1	1.9	644	2035	6436	20352
I-5	I-5/SR-99 Interchange	Arena Blvd	83.3	84.3	1	1345	4255	13455	42547
I-5	Arena Blvd	I-5/I-80 Interchange	83.8	85	1.2	1595	5043	15948	50432
I-5	I-5/I-80 Interchange	W El Camino Ave	82.2	83.3	1	1064	3364	10637	33638
I-5	W El Camino Ave	Richards Blvd	84.6	85.2	0.5	1640	5187	16401	51866
I-5	Richards Blvd	J St	84.6	84.8	0.2	1518	4800	15179	48000
I-5	J St	I-5/I-80 Business & US 50 Interchange	84.5	84.4	-0.1	1384	4375	13835	43750
I-5	I-5/I-80 Business & US-50 Interchange	Sutterville Rd	82.5	82.6	0.1	912	2883	9115	28826
I-5	Sutterville Rd	43rd Ave	83.4	83.7	0.3	1173	3709	11730	37094
I-5	43rd Ave	Florin Rd	81.6	82.1	0.4	807	2552	8071	25523
I-5	Florin Rd	City Limits	80.9	81.6	0.7	716	2263	7156	22630
SR-99	SR-99/I-80 Business/US-50 Interchange	Fruitridge Rd	85.3	86.1	0.8	2027	6410	20271	64102
SR-99	Fruitridge Rd	47th Ave	83.9	85.2	1.4	1670	5281	16701	52813
SR-99	47th Ave	Mack Rd	84.4	85.7	1.2	1842	5824	18417	58240
SR-99	Mack Rd	Sheldon Rd	82	83.4	1.5	1103	3487	11026	34867
I-80	Garden Hwy	I-5/I-80 Interchange	81.2	81.6	0.5	731	2312	7310	23117
I-80	I-5/I-80 Interchange	Northgate Blvd	83.5	83.7	0.2	1167	3689	11666	36890
I-80	Northgate Blvd	Watt Ave	83.6	83.8	0.1	1187	3753	11868	37530
US-50/I-80 Business	I-5/US-50 & I-80 Business Interchange	SR-99/US-50/I-80 Business Interchange	86.1	86.6	0.5	2288	7235	22878	72346

Table 4.8-4 2035 General Plan Noise Levels and Contours

Roadway	From	To	CNEL dBA @ 50'		dBA	Distance to Contour from Centerline (feet)			
			Existing Conditions	2035 General Plan Conditions	Change (2035 GP-Existing)	70 dBA	65 dBA	60 dBA	55 dBA
US-50	SR-99/ US-50/I-80 Business Interchange	65th St	85.7	86	0.3	1974	6241	19737	62413
US-50	65th St	S Watt Ave	84.5	84.7	0.2	1464	4628	14637	46285
I-80 Business	SR-99/ US-50/I-80 Business Interchange	J St	82.7	83.4	0.7	1102	3484	11018	34842
I-80 Business	J St	SR-160 Interchange	84.3	84.1	-0.2	1286	4068	12864	40678
I-80 Business	SR-160 Interchange	El Camino Ave	84.1	84.7	0.6	1488	4705	14879	47053
I-80 Business	El Camino Ave	Marconi Ave	83.8	84.5	0.6	1402	4434	14021	44339
I-80 Business	Marconi Ave	Fulton Ave	83.3	83.6	0.3	1156	3656	11560	36557
I-80 Business	Fulton Ave	City Limits	83.5	83.7	0.2	1173	3709	11730	37094
SR-160	Richards Blvd	Business 80 Interchange	77.6	78.7	1.1	372	1175	3716	11750

Note: The yellow highlighted roadways would experience incremental noise increases that exceed standards shown in Table EC-2 in the proposed policies

Source: Modeled by Ascent Environmental 2014

Chapter 6.68 NOISE CONTROL

6.68.010 Findings.

The Sacramento County Board of Supervisors finds:

a. Excessive, unnecessary or offensive noise within the County is detrimental to the public heath, safety, welfare and the peace and quiet of the inhabitants of the County and therefore is declared a public nuisance; and

b. Every person in the County is entitled to live in an environment free from excessive, unnecessary or offensive noise levels; and

c. The establishment of maximum permissible noise levels will further the public health, safety, welfare and peace and quiet of county inhabitants. (SCC 254 § 1, 1976.)

6.68.020 Declaration of Policy.

It is declared to be the policy and purpose of this chapter of the Sacramento County Code to assess complaints of noises alleged to exceed the ambient noise levels. Further, it is declared to be the policy to contain sound levels in the County of Sacramento at their present levels with the ultimate goal of reducing such levels, when and where feasible and without causing undue burdens, to meet the noise standards set forth in this chapter. (SCC 254 § 1, 1976.)

6.68.030 Liberal Construction.

This chapter shall be liberally construed so as to effectuate its purposes. (SCC 254 § 1, 1976.)

6.68.040 Severability.

If any section, subsection, sentence, clause, phrase or portion of this chapter is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed as a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions thereof. (SCC 254 § 1, 1976.)

6.68.050 Definitions.

The following words, phrases and terms as used in this chapter shall have the following meanings:

a. “Ambient noise level” means the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding the alleged offensive noise, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

b. “County” means the unincorporated area of the County of Sacramento.

c. “Cumulative period” means an additive period of time composed of individual time segments which may be continuous or interrupted.

d. “Decibel” or “dB” means a unit which denotes the ratio between two quantities which are proportional to power; the number of decibels corresponding to the ratio of two amounts of power is ten times the logarithm to the base of ten of this ratio.

e. “Emergency work” means the use of any machinery, equipment, vehicle, manpower or other activity in an effort to protect, maintain, provide or restore safe conditions in the community or for citizenry, or work by private or public utilities when restoring utility service.

f. “Hertz” means a unit of measurement of frequency, numerically equal to cycles per second.

g. “Impulsive noise” mans a noise characterized by brief excursions of sound pressures whose peak levels are very much greater than the ambient noise level, such as might be produced by the impact of a pile driver, punch press or a drop hammer, typically with one second or less duration.

h. “Noise level” means the “A” weighted sound pressure level in decibels obtained by using a sound level meter at slow response with a reference pressure of twenty microPascals. The unit of measurement shall be designated as “dBA.”

i. “Person” means a person, firm, association, copartnership, joint venture, corporation, or any entity, public or private in nature.

j. “Residential property” means a parcel of real property which is developed and used either in part or in whole for residential purposes, other than transient uses such as hotels and motels.

k. “Simple tone noise” or “pure tone noise” means a noise characterized by the presence of a predominant frequency or frequencies such as might be produced by whistle or hum.

l. “Sound level meter” means an instrument meeting American National Standard Institute’s Standard S1.4-1971 for Type 2 sound level meters or an instrument and the associated recording and analyzing equipment which will provide equivalent data.

m. “Sound pressure level” means a sound pressure level of a sound, in decibels, as defined in ANSI Standards 51.2-1962 and 51.13-1921; that is, twenty times the logarithm to the base ten of the ratio of the pressure of the sound to a reference pressure, which reference pressure shall be explicitly stated.

n. “Zone” means any of the zones specified in Article 2 of Chapter 1 of the Zoning Code of Sacramento County as such zones are presently identified therein and as they may be subsequently modified or altered. (SCC 254 § 1, 1976.)

6.68.060 Sound Level Measurement Generally.

a. Any noise level measurements made pursuant to the provisions of this chapter shall be performed using a sound level meter as defined in Section 6.68.050.

b. The location selected for measuring exterior noise levels shall be at a point at least one foot inside the property line of the affected residential property. Where feasible, the microphone shall be at a height of three to five feet above ground level and shall be at least four feet from walls or similar reflecting surfaces. In the case of interior noise measurements, the windows shall be in normal seasonal configuration and the measurement shall be made at a point at least four feet from the wall, ceiling or floor nearest the affected occupied area. (SCC 254 § 1, 1976.)

6.68.070 Exterior Noise Standards.

a. The following noise standards, unless otherwise specifically indicated in this chapter, shall apply to all properties within a designated noise area.

Noise Area	County Zoning Districts	Time Period	Exterior Noise Standard
1	RE-1, RD-1, RE-2, RD-2, RE-3, RD-3, RD-4, R-1-A, RD-5, R-2, RD-10, R-2A, RD-20, R-3, R-D-30, RD-40, RM-1, RM-2, A-1-B, AR-1, A-2, AR-2, A-5, AR-5	7 a.m.—10 p.m.	55 dBA
		10 p.m.—7 a.m.	50dBA

b. It is unlawful for any person at any location within the County to create any noise which causes the noise levels on an affected property, when measured in the designated noise area, to exceed for the duration of time set forth following, the specified exterior noise standards in any one hour by:

Cumulative Duration of the Intrusive Sound	Allowance Decibels
1. Cumulative period of 30 minutes per hour	0
2. Cumulative period of 15 minutes per hour	+ 5
3. Cumulative period of 5 minutes per hour	+10
4. Cumulative period of 1 minute per hour	+15
5. Level not to be exceeded for any time per hour	+20

c. Each of the noise limits specified in subdivision (b) of this section shall be reduced by five dBA for impulsive or simple tone noises, or for noises consisting of speech or music.

d. If the ambient noise level exceeds that permitted by any of the first four noise-limit categories specified in subdivision (b), the allowable noise limit shall be increased in five dBA increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category. (SCC 490 § 2, 1981; SCC 254 § 1, 1976.)

6.68.080 Interior Noise Standards.

a. In any apartment, condominium, townhouse, duplex or multiple dwelling unit it is unlawful for any person to create any noise from inside his unit that causes the noise level when measured in a neighboring unit during the periods ten p.m. to seven a.m. to exceed:

1. Forty-five dBA for a cumulative period of more than 5 minutes in any hour;

2. Fifty dBA for a cumulative period of more than 1 minute in any hour;

3. Fifty-five dBA for any period of time.

b. If the ambient noise level exceeds that permitted by any of the noise level categories specified in subdivision (a) of this section, the allowable noise limit shall be increased in five-dBA increments in each category to encompass the ambient noise level. (SCC 254 § 1, 1976.)

6.68.090 Exemptions.

The following activities shall be exempted from the provisions of this chapter:

a. School bands, school athletic and school entertainment events;

b. Outdoor gatherings, public dances, shows and sporting and entertainment events, provided said events are conducted pursuant to a license or permit by the County;

c. Activities conducted on parks, public playgrounds and school grounds, provided such parks, playgrounds and school grounds are owned and operated by a public entity or private school;

d. Any mechanical device, apparatus or equipment related to or connected with emergency activities or emergency work;

e. Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property, provided said activities do not take place between the hours of eight p.m. and six a.m. on weekdays and Friday commencing at eight p.m. through and including seven a.m. on Saturday; Saturdays commencing at eight p.m. through and including seven a.m. on the next following Sunday and on each Sunday after the hour of eight p.m. Provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after eight p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner;

f. Noise sources associated with agricultural operations, provided such operations do not take place between the hours of eight p.m. and six a.m.;

g. All mechanical devices, apparatus or equipment which are utilized for the protection or salvage of agricultural crops during periods of adverse weather conditions or when the use of mobile noise sources is necessary for pest control;

h. Noise sources associated with maintenance of residential area property, provided said activities take place between the hours of six a.m. and eight p.m. on any day except Saturday or Sunday, or between the hours of seven a.m. and eight p.m. on Saturday or Sunday;

i. Any activity, to the extent provisions of Chapter 65 of Title 42 of the United States Code, and Articles 3 and 3.5 of Chapter 4 of Division 9 of the Public Utilities Code of the State of California preempt local control of noise regulations and land use regulations related to noise control of airports and their surrounding geographical areas, any noise source associated with the construction, development, manufacture, maintenance, testing or operation of any aircraft engine, or of any weapons system or subsystems which are owned, operated or under the jurisdiction of the United States, or any other activity to the extent regulation thereof has been preempted by state or federal law or regulation;

j. Any noise sources associated with the maintenance and operation of aircraft or airports which are owned or operated by the United States. (SCC 254 § 1, 1976.)

6.68.100 Pre-Existing Industrial or Commercial Facilities—Transition Period.

a. Any industrial or commercial facility in existence prior to July 1, 1976 shall be allowed a one-year period commencing on said date within which to comply with this chapter.

b. During said one-year period, all such facilities shall make reasonable efforts to be in compliance and to reduce noise which exceeds the standards specified in this chapter. Commencing at the end of one year after July 1, 1976, any such facility shall be subject to all applicable requirements of this chapter.

c. If any facility which is not in compliance by the end of said one-year period applies for a variance pursuant to Section 6.68.200, in deciding whether to grant a variance the Hearing Board shall take into account the extent to which the applicant has endeavored to reduce noise during said one-year period to meet the standards specified in this chapter.

d. This section applies only to a commercial or industrial facility already in existence or for which the work of improvement has commenced prior to July 1, 1976.

e. As used in this section “industrial facility” means any building, structure, factory, plant, premises or portion thereof used for manufacturing or industrial purposes, and “commercial facility” means any building, structure, premises or portion thereof used for wholesale or retail commercial purposes. (SCC 254 § 1, 1976.)

6.68.110 Schools, Hospitals and Churches.

It is unlawful for any person to create any noise which causes the noise level at any school, hospital or church, while the same is in use, to exceed the noise standards specified in Section 6.68.070 or to create any noise which unreasonably interferes with the use of such institution or unreasonably disturbs or annoys patients in the hospital. In any disputed case, interfering noise which is ten dBA or more, greater than the ambient noise level at the building, shall be deemed excessive and unlawful. (SCC 254 § 1, 1976.)

6.68.120 Machinery, Equipment, Fans and Air Conditioning.

a. It is unlawful for any person to operate any mechanical equipment, pump, fan, air conditioning apparatus, stationary pumps, stationary cooling towers, stationary compressors, similar mechanical devices, or any combination thereof installed after July 1, 1976 in any manner so as to create any noise which would cause the maximum noise level to exceed:

1. Sixty dBA at any point at least one foot inside the property line of the affected residential property and three to five feet above ground level;

2. Fifty-five dBA in the center of a neighboring patio three to five feet above ground level;

3. Fifty-five dBA outside of the neighboring living area window nearest the equipment location. Measurements shall be taken with the microphone not more than three feet from the window opening but at least three feet from any other surface.

b. Equipment installed five years after July 1, 1976 must comply with a maximum limit of fifty-five dBA at any point at least one foot inside the property line of the affected residential property and three to five feet above ground level.

c. Equipment installed before December 17, 1970 must comply with a limit of sixty-five dBA maximum in sound level at any point at least one foot inside the affected property line and three to five feet above ground level by January 1, 1977. Equipment installed between December 16, 1970 and July 1, 1976 must comply with a limit of sixty-five dBA maximum sound level at any point at least one foot inside the property line of the affected residential property and three to five feet above ground level. (SCC 254 § 1, 1976.)

6.68.130 Off-Road Vehicles.

It is unlawful for any person to operate any motorcycle or recreational off-road vehicle within the County in such a manner that the noise level exceeds the exterior noise standards specified in Section 6.68.070. (SCC 254 § 1, 1976.)

6.68.140 Waste Disposal Vehicles.

It is unlawful for any person authorized to engage in waste disposal service or garbage collection to operate any truck-mounted waste or garbage loading and/or composting equipment or similar mechanical device in any manner so as to create any noise exceeding the following level, when measured at a distance of fifty feet from the equipment in an open area.

a. New equipment purchased or leased on or after a date six months from July 1, 1976 shall not exceed a noise level of eighty dBA.

b. New equipment purchased or leased on or after forty-two months from July 1, 1976 shall not exceed a noise level of seventy-five dBA.

c. Present equipment shall not exceed a noise level of eighty dBA on or after five years from July 1, 1976.

The provisions of this section shall not abridge or conflict with the powers of the state over motor vehicle control. (SCC 254 § 1, 1976.)

6.68.145 Radios, Tape Players on Publicly Owned Property.

Notwithstanding any other provision of this Code and in addition thereto, it is unlawful for any person to permit or cause any noise, sound, music or program to be emitted from any radio, tape player, tape recorder, record player or television outdoors on or in any publicly owned property, park or place when such noise, sound, music or program is audible to a person of normal hearing sensitivity one hundred feet from said radio, tape player, tape recorder, record player or television.

a. As used herein, “a person or normal hearing sensitivity” means a person who has a hearing threshold level of between zero (0) decibels and twenty-five (25) decibels HL averaged over the frequencies 500, 1,000 and 2,000 Hertz.

b. Notwithstanding any other provision of this Code, any person violating this section shall be guilty of an infraction and upon conviction thereof, is punishable by a fine not exceeding fifty dollars for a first violation; a fine not exceeding one hundred dollars for a second violation of this section within one year; a fine not exceeding two hundred fifty dollars for each additional violation of this section within one year. A person who violates the provisions of this section shall be deemed to be guilty of a separate offense for each day, or portion thereof, during which the violation continues or is repeated.

c. Notwithstanding Sections 6.60.010 and 6.68.230 or any other provision of this Code, no citation or notice to appear shall be issued or criminal complaint shall be filed for a violation of this section unless the offending party is first given a verbal or written notification of violation by any peace officer, public officer, park ranger or other person charged with enforcing this section and the offending party given an opportunity to correct said violation.

d. This section shall not apply to broadcasting from any aircraft, vehicle or stationary sound amplifying equipment as defined and regulated in Chapter 5.56 or to the use of radios, tape players, tape recorders, record players or televisions in the course of an assembly or festival for which a license has been issued pursuant to Section 9.36.072 or a parade for which a permit has been issued pursuant to Section 10.32.020 or any other activity, assembly or function for which a permit or license has been duly issued pursuant to any provision of the Code. (SCC 490 § 1, 1981.)

6.68.150 General Noise Regulations.

Notwithstanding any other provisions of this chapter and in addition thereto, it is unlawful for any person to wilfully make or continue or cause to be made or continued any loud, unnecessary or unusual noise which disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.

The standards which shall be considered in determining whether a violation of the provisions of this section exists shall include, but not be limited to, the following:

a. The sound level of the objectionable noise;

b. The sound level of the ambient noise;

c. The proximity of the noise to residential sleeping facilities;

d. The nature and zoning of the area within which the noise emanates;

e. The density of the inhabitation of the area within which the noise emanates;

f. The time of day or night the noise occurs;

g. The duration of the noise and its tonal informational or musical content;

h. Whether the noise is continuous, recurrent or intermittent;

i. Whether the noise is produced by a commercial or noncommercial activity. (SCC 254 § 1, 1976.)

6.68.160 Administration.

The administration of this chapter is vested in the Sacramento County Health Officer. The health officer shall be responsible for:

a. Employing individuals trained in acoustical engineering or an equivalent field to assist the health officer in the administration of this chapter;

b. Training field inspectors;

c. Procuring measuring instruments and training inspectors in their calibration and operation;

d. Conducting a public education program in all aspects of noise control;

e. Coordinating the noise control program with other governmental agencies. (SCC 254 § 1, 1976.)

6.68.170 Noise Control Program—Recommendations.

At least every third year following July 1, 1976, the health officer shall evaluate the effectiveness of the noise control program in Sacramento County and shall make recommendations to the Board of Supervisors for its improvement. (SCC 254 § 1, 1976.)

6.68.180 Rules and Standards.

Within one year after July 1, 1976, the health officer, with the advice and assistance of other appropriate governmental agencies, shall investigate and recommend to the Board of Supervisors the following:

a. Rules and procedures to be used in measuring noise;

b. Noise standards for motor vehicle operation within the County. However, nothing within this ordinance shall be deemed to abridge or conflict with the powers of the state over motor vehicle control;

c. Noise standards governing the construction, repair or demolition of a structure, including streets and other thoroughfares;

d. Recommendations, if appropriate, for the establishment of sound level standards for nonresidentially zoned areas within the County. (SCC 254 § 1, 1976.)

6.68.190 Special Condition Permits.

Notwithstanding any provision of this chapter, the County Health Officer may grant special condition permits for a period not exceeding three days when the general purpose and intent of this chapter can be carried out by the granting of the special condition permit. Said special condition permits may be renewed for periods not exceeding three days at the discretion of the health officer. (SCC 254 § 1, 1976.)

6.68.200 Variance Procedure.

a. The owner or operator of a noise source which violates any of the provisions of this chapter may file an application with the health officer for a variance from the provisions thereof. The application shall set forth all actions taken to comply with this chapter, the reasons why immediate compliance cannot be achieved, a proposed method for achieving compliance, and a proposed time schedule for its accomplishment. Said application shall be accompanied by a fee in the amount of seventy-five dollars. A separate application shall be filed for each noise source; provided, however, that several mobile sources under common ownership or several fixed sources on a single property may be combined into one application. Upon receipt of said application and fee, the health officer shall refer the application, with his recommendation thereon, within ten days to the Hearing Board.

b. Upon receipt of an application for a variance, the Hearing Board shall schedule a public hearing, to be conducted within sixty days of receipt of the application. During the public hearing the applicant and the health officer may submit oral and documentary evidence relative to their respective contentions.

c. The Hearing Board may deny the application for a variance or may grant a variance. A variance may be for a limited period and may be subject to any other terms, conditions and requirements as the Hearing Board may deem reasonable to achieve maximum compliance with the provisions of this chapter. Such terms, conditions and requirements may include, but shall not be limited to, limitations on noise levels and operating hours.

d. Each variance shall set forth the approved method of achieving maximum compliance and a time schedule for its accomplishment. In its determinations, the Hearing Board shall consider the magnitude of nuisance caused by the offensive noise, the uses of property within the area of impingement by the noise, the time factors related to study, design, financing and construction of remedial work, the economic factors related to age and useful life of equipment, and the general public interest and welfare.

e. In deciding whether to grant a variance, the Hearing Board shall consider all facts relating to whether strict compliance with the requirement of this chapter will cause practical difficulties, unnecessary hardship or unreasonable expense and any other relevant considerations including, but not limited to, the fact that a commercial or industrial facility as defined in Section 6.68.100 commenced development prior to the existence of a residence affected by noise from such facility.

f. The Hearing Board shall render a decision within thirty days of completion of the hearing. The decision of the Hearing Board shall be transmitted to the applicant and to the health officer. (SCC 254 § 1, 1976.)

6.68.210 Hearing Board.

a. There is created a joint City-County Hearing Board consisting of nine members.

b. Four members of the Hearing Board shall be appointed by the Mayor of the City of Sacramento with the approval of the City Council. One member shall be an acoustical consultant with a background in engineering and with a demonstrated knowledge and experience in the field of acoustics; one member shall have been admitted to the practice of law in the State of California; one member shall be a mechanical contractor holding a current active State of California C-20 or SC-20 license; and one member shall be representative of the general public.

c. Four members shall be appointed by the Board of Supervisors of the County of Sacramento. One member shall be a licensed professional mechanical engineer; one member shall be a physician licensed in the State of California, qualified in the field of physiological effects of noise; one member shall be a general contractor engaged in general building or engineering construction holding a current active State of California A or B license; and one member shall be a representative of the general public.

d. One member shall be appointed by the members of the Board who have been appointed by the City of Sacramento and the County of Sacramento pursuant to subsections (b) and (c) of this section. This member shall be a representative of business and industry.

e. The term of office of each member shall be for three years and until the appointment and qualifications of a successor. The first members of the Hearing Board shall classify themselves by lot so that the term of three members is for one year, three members is for two years, and three members is for three years.

f. Any member may be removed by the appointing authority or authorities. Vacancies occurring during a term, whether by removal, resignation or other cause, shall be filled for the unexpired term by the appointing authority or authorities.

g. The Health Officer of the County of Sacramento, or his appointing representative, shall be a nonvoting ex officio member of the Hearing Board and shall act as secretary of the Board.

h. The Hearing Board shall adopt rules and regulations for its own procedures in carrying out its functions under the provisions of this chapter.

i. Five members of the Hearing Board shall constitute a quorum. If five or more members of the Hearing Board conduct a hearing, concurrence of the majority of those present shall be necessary for decision.

j. Meetings of the Hearing Board shall be held at the call of the secretary and at such times and locations as said board shall determine. All such meetings shall be open to the public. (SCC 360 § 1, 1978; SCC 351 § 1, 1978; SCC 273 § 1, 1976; SCC 254 § 1, 1976.)

6.68.220 Appeals.

a. Within ten (10) days following the decision of the Hearing Board on an application for a variance, the applicant or the Health Officer may appeal the decision to the Board of Supervisors by filing a notice of appeal with the secretary of the Hearing Board.

b. Within ten (10) days following receipt of a notice of appeal, the secretary of the Hearing Board shall forward to the Board of Supervisors copies of the application for variance and all papers and exhibits concerning said application received by the Hearing Board and its decision thereon. Any person may file with the Board of Supervisors written arguments in favor of or against said decision.

c. The Clerk of the Board of Supervisors shall mail to the applicant, Health Officer and other individuals or entities so requesting a notice of the date set for hearing of the appeal. The notice shall be mailed at least ten (10) days prior to the hearing date.

d. Within thirty (30) days following conduct of the hearing before the Board of Supervisors, the Board shall either affirm, modify or reverse the decision of the Hearing Board. In deciding the appeal, the Board of Supervisors shall have the same powers as are conferred on the Hearing Board. The Board of Supervisors may also direct the Hearing Board to conduct further proceedings on said application. Failure of the Board of Supervisors to affirm, modify or reverse a decision of the Hearing Board, or to direct the Hearing Board to conduct further proceedings within a thirty-day period from the date of the hearing, shall constitute an affirmation of the decision of the Hearing Board. (SCC 254 § 1, 1976.)

6.68.230 Violation.

Upon the receipt of a complaint from any person, the Sacramento County Sheriff, the County Health Officer, or their duly authorized representatives may investigate and assess whether the alleged noise levels exceed the noise standards set forth in this chapter. If such officers have reason to believe that any provision(s) of this chapter has been violated, they may cause written notice to be served upon the alleged violator. Such notice shall specify the provision(s) of this chapter alleged to have been violated and the facts alleged to constitute a violation, including dBA readings noted and the time and place of their detection, and may include an order that corrective action be taken within a specified time. If corrective action is not taken within such specified time or any extension thereof approved by the County Health Officer, upon conviction, the violation shall constitute an infraction. Each day such violation is committed or permitted to continue shall constitute a separate offense and shall be punishable as such. (SCC 576 § 6, 1983; SCC 254 § 1, 1976.)

6.68.240 Other Remedies.

a. Provisions of this chapter are to be construed as an added remedy of abatement of the public nuisance declared and not in conflict or derogation of any other action, proceedings or remedies provided by law.

b. Any violation of the provisions of this chapter shall be, and the same is declared to be unlawful and a public nuisance, and the duly constituted authorities of the County shall, upon order of the Board of Supervisors, immediately commence actions or proceedings for the abatement or enjoinment thereof in the manner provided by law and shall take such steps and shall apply to such court or courts as may have jurisdiction to grant such relief as will abate such nuisance. (SCC 254 § 1, 1976.)

Contact:

Sacramento County

CONSTRUCTION NOISE MODELING

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/23/2023
Case Description: SCUS-04

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Architectural Coating	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	50.0	0.0

Results

Equipment	Calculated (dBA) Lmax	Leq	Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Noise Limit Exceedance (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Compressor (air)	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/23/2023
Case Description: SCUS-04

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Building Construction	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	50.0	0.0
Generator	No	50		80.6	50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	80.6	77.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.6	85.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/23/2023
Case Description: SCUS-04

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Demolition	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Concrete Saw	No	20	89.6	50.0		0.0
Dozer	No	40	81.7	50.0		0.0
Excavator	No	40	80.7	50.0		0.0

Results

	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.6	84.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 03/23/2023
Case Description: SCUS-04

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Grading	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Grader	No	40	85.0		50.0	0.0
Dozer	No	40	81.7		50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	84.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Paving	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Paver	No	50	77.2	50.0	0.0	
Pavement Scarafier	No	20	89.5	50.0	0.0	
Roller	No	20	80.0	50.0	0.0	

Results

	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pavement Scarafier	89.5	82.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	80.0	73.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.5	83.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Site Preparation	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Tractor	No	40	84.0		50.0	0.0
Front End Loader	No	40		79.1	50.0	0.0
Dozer	No	40		81.7	50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84.0	82.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCUS-04 - Construction Noise Modeling Attenuation Calculations

Levels in dBA Leq

Phase	RCNM Reference Noise Level	Receptor to North	Receptor to East	Receptor to South	Receptor to West
Distance in feet	*50*	*295*	*465*	*220*	*340*
Demolition	85	69	65	72	68
Site Prep	83	67	63	70	66
Grading	85	69	65	72	68
Distance in feet	*50*	*210*	*125*	*25*	*100*
Building Construction	85	73	77	91	79
Architectural Coating	74	61	66	80	68
Distance in feet	*50*	*145*	*65*	*205*	*80*
Paving	84	74	81	71	79

Attenuation calculated through Inverse Square Law: Lp(R2) = Lp(R1) - 20Log(R2/R1)

SCUS-04 - Vibration Damage Attenuation Calculations

Levels in in/sec PPV

Distance in feet	**Vibration Reference Level at *25 feet***	**Receptor to North** *40*	**Receptor to East** *61*	**Receptor to South** *6*	**Receptor to West** *63*
Vibratory Roller	0.21	0.104	0.055	1.786	0.052
Static Roller	0.05	0.025	0.013	0.425	0.012
Large Bulldozer	0.089	NA	0.023	NA	0.022
Loaded Trucks	0.076	NA	0.020	NA	0.019
Jackhammer	0.035	0.017	0.009	NA	0.009
Small Bulldozer	0.003	NA	0.001	NA	0.001

SCUS-04 - Vibration Annoyance Attenuation Calculations

Levels in VdB

Equipment	Vibration @ 25 ft	Receptor to North	Receptor to East	Receptor to South	Receptor to West
Distance in feet		*60*	*80*	*130*	*80*
Vibratory Roller	94.0	82.6	78.8	72.5	78.8
Large Bulldozer	87.0	75.6	71.8	65.5	71.8
Loaded Trucks	86.0	74.6	70.8	64.5	70.8
Static Roller	82.0	70.6	66.8	60.5	66.8
Jackhammer	79.0	67.6	63.8	57.5	63.8
Small Bulldozer	58.0	46.6	42.8	36.5	42.8

STATIONARY NOISE MODELING

SCUS-04 - Stationary Noise Modeling Attenuation Calculations

Phase	HVAC Reference Level	Receptor to South
Distance in feet	*50*	*35*
HVAC	52.0	55

Phase	Playfield Reference Level	Receptor to North
Distance in feet	*15*	*65*
Soccer Field	53.8	41