

Appendix G Noise Background and Modeling

Appendix

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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 μ Pa).
- **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



CHAPTER 4 NOISE ELEMENT

1.0 INTRODUCTION

The purpose of the Noise Element is to provide a framework to limit noise exposure within the City. Existing and future noise environments and the compatibility of land uses are considered in the Element, as well as sensitive receptors and generators of stationary noise. Projected noise levels are included to help guide future land use policy and prevent high noise levels in sensitive areas at buildout.

Various measures are described in order to mitigate potential noise conflicts. These measures are designed to lessen impacts from unavoidable noise conflicts within the City of Glendora. The Noise Element also serves as a guideline for compliance with the State's Noise Insulation Standards.

2.0 AUTHORITY FOR ELEMENT

California Government Code Section 65302(f) requires that a General Plan include:

"...a noise element which 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...current and projected noise levels for all of the following sources: (1) highways and freeways; (2) primary arterials and major local streets; (3) passenger and freight on-line railroad operations and ground rapid transit systems; (4) commercial, general aviation, heliport, and military airport operations, aircraft over flights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation; (5) local industrial plants, including but not limited to, railroad classification yards; (6) other ground stationary noise sources identified by local agencies as contributing to the community noise environment."

3.0 SUMMARY OF EXISTING CONDITIONS

The following section outlines existing noise resources within the City of Glendora.

3.1 NOISE SCALES AND DEFINITIONS

Sound pressure level is a measure of the sound pressure of a given noise source relative to a standard reference value. The reference pressure is typical of the quietest sound that a young person with good hearing is able to detect. Sound pressure levels are measured in decibels (dB). Decibels are logarithmic quantities, relating the sound pressure level of a noise source to the reference pressure level.



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An important characteristic of sound is frequency. This is the rate of repetition of sound pressure oscillations (waves) as they reach our ears; frequency is expressed in hertz (Hz). When analyzing the total noise of any source, the frequency components are sometimes analyzed to determine the relative amounts of low-frequency, middle-frequency, and high-frequency noise. This breakdown is important for two reasons:

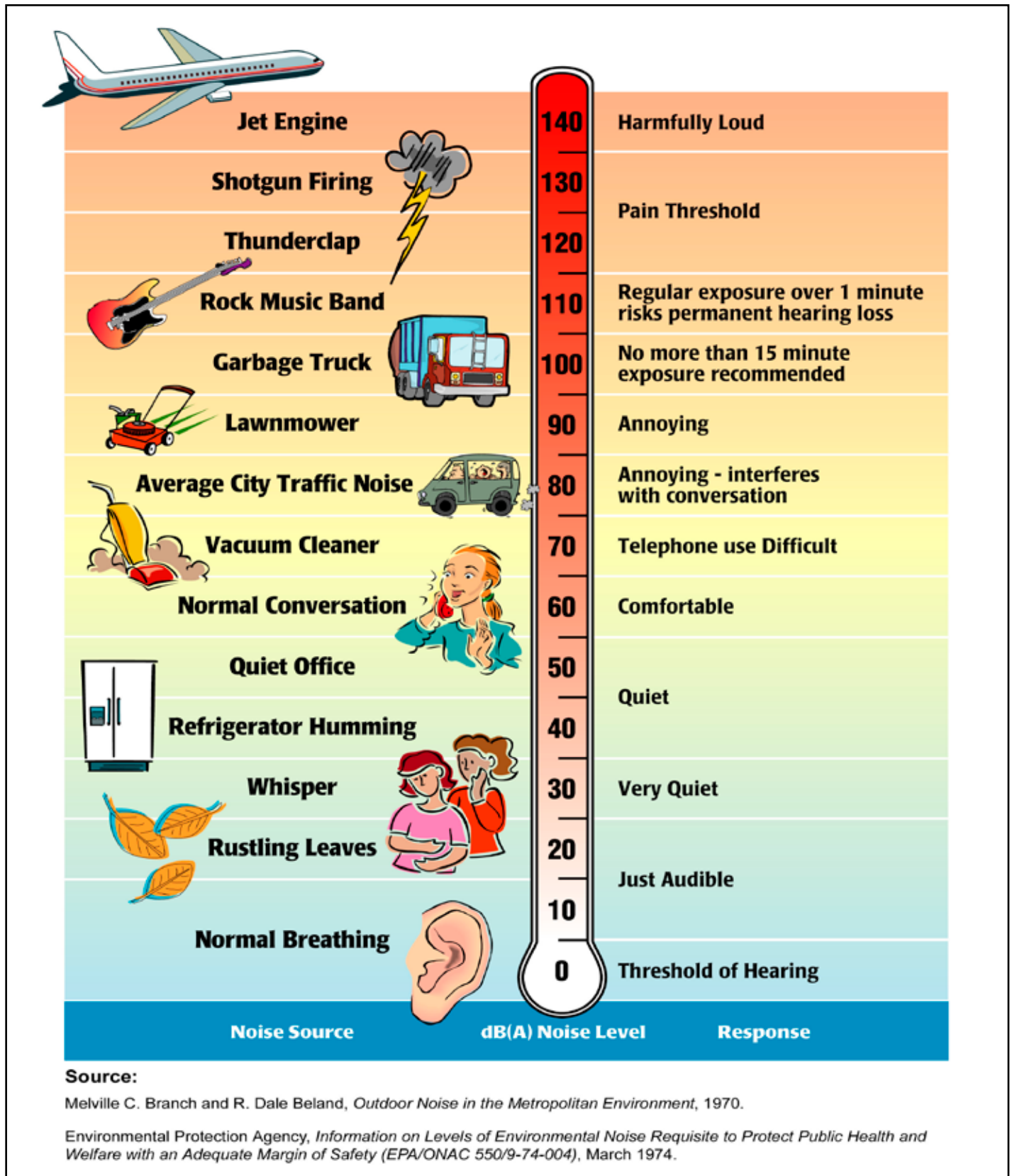
- ▶ Our ear is better equipped to hear mid- and high-range frequencies than lower frequencies. Thus, we find mid- and high-frequency noise to be more annoying. High-frequency noise is also more capable of producing hearing loss.
- ▶ Engineering solutions to a noise problem are different for different frequency ranges. Low-frequency noise is generally harder to control.

The normal frequency range of hearing for most people extends from a low frequency of about 20 Hz to a high frequency of about 10,000 to 15,000 Hz. People respond to sound most readily when the predominant frequency is in the range of normal conversation, typically around 1,000 to 2,000 Hz. Several filters have been developed that match the sensitivity of our ear and thus help us to judge the relative loudness of various sounds made up of many different frequencies. The so-called “A” filter is the best measure for most environmental noise sources. Sound pressure levels measured through this filter are referred to as A-weighted levels, and are measured in A-weighted decibels or (dBA). *Exhibit N-1, Common Environmental Noise Levels*, provides examples of common environmental noise levels.

The A-weighted filter significantly de-emphasizes those parts of the total noise that occur at lower frequencies (those below about 500 Hz) and also those at very high frequencies (above 10,000 Hz) the frequencies that we do not hear as well. The filter has very little effect, or is nearly “flat,” in the middle range of frequencies (between 500 and 10,000 Hz), where our ears are most sensitive. Because this filter generally matches our ears’ sensitivity, sounds having a higher A-weighted sound level are usually judged to be louder than those with lower A-weighted sound levels, a relationship that otherwise might not be true.

3.1.1 Community Noise Equivalent Level (CNEL)

Cumulative noise metrics were developed to assess community response to noise. They are useful because they attempt to take into account the loudness and duration of the noise, the total number of noise events, and the time of day these events occur in one single-number rating scale. They are designed to account for the known health effects of noise on people. The community noise equivalent level (CNEL) is a 24-hour, time-weighted energy-average noise level based on dBA that measures the overall noise during an entire day. Noise that occurs during certain sensitive time periods is penalized for occurring at these times (by adding decibels to its Leq measurement). On the CNEL scale, noise between 7:00 AM and 10:00 PM is penalized by approximately five dB, to account for the greater potential for noise to interfere during these hours, as well as the typically lower ambient (background) noise levels during these hours. Noise during the night (from 10:00 PM to 7:00 AM) is penalized by 10 dB to attempt to account for our higher sensitivity to noise in the nighttime and the expected further decrease in ambient noise levels that typically occur in the night.



Common Environmental Noise Levels



3.1.2 Equivalent Noise Level (L_{eq})

The equivalent sound level, abbreviated L_{eq} , is a measure of the exposure resulting from the accumulation of A-weighted sound levels over a particular time period (e.g., 1-hour, 8-hour, a school day, nighttime, or a full 24-hour day). However, because the length of the period can be different depending on the time frame of interest, the applicable period should always be identified or clearly understood when discussing the metric. Such durations are often identified through a subscript, for example, " $L_{eq}(24)$."

Conceptually, L_{eq} may be thought of as a constant sound level over the period of interest that contains as much sound energy as the actual time-varying sound level with its normal peaks and valleys. It is important to realize, however, that the two signals (the constant one and the time-varying one) would sound very different from each other if compared in real life. Variations in the "average" sound level suggested by L_{eq} is not an arithmetic value, but a logarithmic ("energy-averaged") sound level. Thus, loud events clearly dominate any noise environment described by the metric.

3.1.3 Day Night Average (L_{dn})

Another commonly used noise metric is the day/night average noise level (L_{dn}). The L_{dn} is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria to evaluate community noise exposure. L_{dn} is based on a measure of the average noise level over a given time period. The L_{dn} is calculated by averaging the L_{eq} for each hour of the day at a given location after penalizing the sleeping hours (from 10:00 PM to 7:00 AM) by 10 dBA to take into account the increased sensitivity of people to noises that occur at night. The sound level exceeded over a specified time frame can be expressed as L_n (i.e., L_{90} , L_{50} , L_{10} , etc.). L_{50} equals the level exceeded 50 percent of the time; L_{10} , 10 percent of the time; etc.

3.1.4 Other Noise Matrices

People tend to respond to changes in sound pressure in a logarithmic manner. In general, a 1 dBA change in the sound pressure levels of a given sound is detectable only under laboratory conditions. A 3 dBA change in sound pressure level is considered a detectable difference in most situations. A 5 dBA change is readily noticeable and a 10 dBA change is considered a doubling (or halving) of the subjective loudness. It should be noted that a 3 dBA increase or decrease in the average traffic noise level is realized by a doubling or halving of the traffic volume; or by about a 7 mile per hour (mph) increase or decrease in speed.

For each doubling of distance from a point noise source, the sound level will decrease by 6 dBA. In other words, if a person is 100 feet from a machine, and moves to 200 feet from that source, sound levels will drop approximately 6 dBA. For each doubling of distance from a line source, like a roadway, noise levels are reduced by 3 to 5 decibels, depending on the ground cover between the source and the receiver.

Noise barriers can provide approximately a 5 dBA CNEL noise reduction (additional reduction may be provided with a barrier of appropriate height, material, location and length). A row of buildings



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provides up to 5 dBA CNEL noise reduction with a 1.5 dBA CNEL reduction for each additional row up to a maximum reduction of approximately 10 dBA. The exact degree of noise attenuation depends on the nature and orientation of the structure and intervening barriers.

3.2 NOISE STANDARDS

3.2.1 Federal Noise Standards

The United States Noise Control Act of 1972 (NCA) recognized the role of the Federal government in dealing with major commercial noise sources in order to provide for uniform treatment of such sources. As Congress has the authority to regulate interstate and foreign commerce, regulation of noise generated by such commerce also falls under congressional authority. The Federal government specifically preempts local control of noise emissions from aircraft, railroad and interstate highways.

The EPA offers guidelines for community noise exposure in the publication *Noise Effects Handbook – A Desk Reference to Health and Welfare Effects of Noise*. These guidelines consider occupational noise exposure, as well as noise exposure in homes. The EPA recognizes an exterior noise level of 55 dB Ldn as a general goal to protect the public from hearing loss, activity interference, sleep disturbance, and annoyance. The EPA and other Federal agencies have adopted suggested land use compatibility guidelines that indicate that residential noise exposures of 55 to 65 dB Ldn are acceptable. The EPA notes, however, that these levels are not regulatory goals, but are levels defined by a negotiated scientific consensus, without concern for economic and technological feasibility or the needs and desires of any particular community.

3.2.2 State Noise Standards

The Office of Noise Control in the State Department of Health Services has developed criteria and guidelines for local governments to use when setting standards for human exposure to noise and preparing noise elements for General Plans. A noise environment of 50 to 60 CNEL is considered to be “normally acceptable” for residential uses. The State indicates that locating residential units, parks, and institutions (such as churches, schools, libraries, and hospitals) in areas where exterior ambient noise levels exceed 65 CNEL is undesirable. The Office of Planning and Research (OPR) recommendations also note that, under certain conditions, more restrictive standards than the maximum levels cited may be appropriate. As an example, the standards for quiet suburban and rural communities may be reduced by 5 to 10 dB to reflect their lower existing outdoor noise levels in comparison with urban environments.

In addition, Title 25, Section 1092 of the *California Code of Regulations*, sets forth requirements for the insulation of multiple-family residential dwelling units from excessive and potentially harmful noise. Whenever such units are to be located in such areas, the developer must incorporate into building design construction features that reduce interior noise levels to 45 dBA CNEL.



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Table N-1, Noise and Land Use Compatibility Matrix-California, illustrates the State guidelines established by the State Department of Health Services for acceptable noise levels for counties and cities. These standards and criteria will be incorporated into the land use planning process to reduce future noise and land use incompatibilities. This table is the primary tool that allows the City to ensure integrated planning for compatibility between land uses and outdoor noise.

3.2.3 CITY NOISE STANDARDS

The City of Glendora maintains a comprehensive Noise Ordinance within the *Glendora Municipal Code* that sets standards for noise levels citywide and provides the means to enforce the reduction of obnoxious or offensive noises.

City Noise Ordinance

Chapter 09.44.050 of the *Glendora Municipal Code* establishes noise standards and enforcement procedures. Section 09.44.050, establishes noise standards and enforcement procedures. *Table N-2, Glendora Noise Ordinance Standards*, summarizes noise standards established by the City.

The Ordinance is designed to control unnecessary, excessive and annoying sounds generated on one piece of property from impacting an adjacent property and to protect residential areas from noise sources, including noise generated by traffic. As shown in *Table N-2*, between the hours of 7:00 PM and 7:00 AM, the noise standards are more stringent than during the day hours of 7:00 AM to 7:00 PM.

The Noise environment in Glendora is dominated by vehicular traffic including vehicular generated noise along Interstate 210 (I-210) and primary and secondary arterials. In addition, a number of other sources contribute to the total noise environment. These noise sources include construction activities, power tools and gardening equipment, loudspeakers, auto repair, radios, children playing and dogs barking. In order to provide a description of the existing noise environment in Glendora, noise contours were quantified for highway and local street traffic.

3.3 EXISTING NOISE CONDITIONS

Human response to noise varies widely depending on the type of noise, time of day, and sensitivity of the receptor. The effects of noise on humans can range from temporary or permanent hearing loss to mild stress and annoyance due to such things as speech interference and sleep deprivation. Prolonged stress, regardless of the cause, is known to contribute to a variety of health disorders. Noise, or the lack of it, is a factor in the aesthetic perception of some settings, particularly those with religious or cultural significance.



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**Table N-1
Noise and Land Use Compatibility Matrix - California**

Land Use Category	Community Noise Exposure (L _{dn} or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Low Density, Single-Family, Duplex, Mobile Homes	50 - 60	55 - 70	70-75	75-85
Residential - Multiple Family	50 - 65	60 - 70	70 - 75	70 - 85
Transient Lodging - Motel, Hotels	50 - 65	60 - 70	70 - 80	80 - 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	80 - 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 - 70	NA	65 - 85
Sports Arenas, Outdoor Spectator Sports	NA	50 - 75	NA	70 - 85
Playgrounds, Neighborhood Parks	50 - 70	NA	67.5 - 75	72.5 - 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 - 70	NA	70 - 80	80 - 85
Office Buildings, Business Commercial and Professional	50 - 70	67.5 - 77.5	75 - 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	75 - 85	NA
NA: Not Applicable				
Source: <i>General Plan Guidelines</i> , Office of Planning and Research, California, October 2003.				
<p>Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.</p> <p>Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.</p> <p>Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.</p> <p>Clearly Unacceptable – New construction or development should generally not be undertaken.</p>				

**Table N-2
Glendora Noise Ordinance Standards**

Zone	Noise Level (dBA)		
	Day: 7AM – 7PM	Evening: 7PM- 10PM	Night: 10PM – 7AM
Single Family Residential (R-1)	55	50	45
Multiple Residential (R-3 and R-4)	55	55	50
Commercial	65	65	60
Industrial and Light Manufacturing	70	70	70
Special Zones (MS)	55	50	45
Source: <i>Glendora Municipal Code</i> , Chapter 9.44.040 (Ambient noise base levels)			



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Table N-3, *Sensitive Receptors* illustrate some of the sensitive receptors that are located within the City of Glendora and can be affected by excess noise levels.

Table N-3
Sensitive Receptors

RECEPTOR	LOCATION
Institutional:	
Hope Lutheran Church	1041 E. Foothill Blvd
Mar Thoma Church of Los Angeles	134 S. Vista Bonita Avenue
Grace Episcopal Church	555 E. Mountain View Avenue
Church of the Brethren	150 S. Vermont Avenue
Glendora Grace Lutheran Church	804 E. Foothill Blvd.
United Methodist Church	201 E. Bennett Avenue
Church of the Open Door	701 W. Sierra Madre Avenue
Reason to Believe	731 E. Arrow Highway
First Christian Church	300 N. Glendora Avenue
Cornerstone Bible Church	400 N. Glendora Avenue
Glendora Alliance Church	116 E. Carroll Avenue
The Church of Jesus Christ of Latter-Day Saints	955 W. Foothill Blvd.
Christian Science Church	151 N. Glendora Avenue
Grace Church of Glendora Preschool	1515 S. Glendora Avenue
Cullen Elementary School	440 N. Live Oak
La Fetra Elementary School	547 W. Bennett
Sellers Elementary School	500 N. Loraine Avenue
Stanton Elementary School	725 S. Vecino Avenue
Sutherland Elementary School	1330 N. Amelia
Williams Elementary School	301 S. Loraine Avenue
Goddard Middle School	859 E. Sierra Madre
Sandburg Middle School	819 W. Bennett
Glendora High School	1600 E. Foothill Blvd.
Whitcomb High School	350 W. Mauna Loa
Arrow High School	1505 S. Sunflower
Washington Elementary	325 W. Gladstone
Willow Elementary	1427 S. Willow
Citrus Community College	1000 West Foothill Boulevard
Glendora Public Library	140 S. Glendora Avenue
Foothill Presbyterian Hospital	250 S. Grand Avenue
Huntington East Valley Hospital	150 W. Route 66
Arbor Glen Care Center	1033 E. Arrow Highway
Emmanuel health Care & Rehabilitation Center	805 W. Arrow Highway
Foothill Nursing and Rehabilitation Center	401 W. Ada Avenue
YMCA: Glendora	505 N. Grand Avenue



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Table N-3
Sensitive Receptors (Continued)

RECEPTOR	LOCATION
PARKS:	
Dawson Avenue Park (5.44 acres)	201 Dawson Avenue
Sandburg School Park (12.19 acres)	Leadora Avenue & Wildwood Avenue
Big Tree Park (0.34 acres)	665 S. Santa Fe Avenue
Gladstone Park (8.37 acres)	600 E. Gladstone Avenue
Ole Hammer Park (1.74 acres)	362 N. Live Oak Avenue
Finkbiner Park	160 N. Wabash Avenue
George Manooshian School Park	E. Palm Drive & N. Loraine Avenue
Willow Springs Park (1.21 acres)	515 N. Willow springs Lane
South Hills Park (3.00 acres)	701 E. Mauna Loa Avenue
Rainbird Park (4.66 acres)	
C.E. Equestrian Park (2.11 acres)	1000 N. Glendora Mountain Road
Centennial Park (0.90 acres)	725 E. Mauna Loa Avenue

3.3.1 Traffic Noise

Existing Roadway Conditions

Interstate 210 (I-210) traverses the southern portion of the City in an east/west direction. City roadways are generally comprised of major north/south arterial roadways (i.e., Grand Avenue and Lone Hill Avenue) and major east/west arterial roadways (i.e., Route 66, Arrow Highway, and Base Line Road). Posted speed limits range from 35 to 40 miles per hour (mph). Secondary roadways and collector roads are located throughout the City in a grid pattern. Posted speed limits range from 25 to 40 mph along these roadways.

Traffic Noise Levels

Traffic noise levels can be reliably predicted using formulas that take into account traffic volume, speed, and percentage of trucks. Existing noise contours were calculated for all of the City’s primary and major arterials, as well as I-210 that traverse the City, roadways within residential and commercial uses. Noise generation for each roadway segment was calculated and the distance to the 60, 65, and 70 dBA CNEL contours was determined.

A noise contour is a line behind which the noise level does not exceed a certain value. For instance, the 60 dBA CNEL contour indicates that the CNEL between the street and the contour line is equal to, or greater than 60 dBA. This means that the CNEL beyond the contour line, away from the street, is less than 60 dBA.

Existing modeled traffic noise levels can be found in *Table N-4, Existing Traffic Noise Levels* for the approximate location of existing noise contours based on average daily traffic (ADT).



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**Table N-4
Existing Traffic Noise Levels**

Roadway Segment	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)		
			60 CNEL	65 CNEL	70 CNEL
Sierra Madre Avenue					
Between Live Oak Avenue and Loraine Avenue	5,030	53.3	38	18	8
Between Loraine Avenue and Valley Center Avenue	4,450	52.8	35	16	7
Foothill Boulevard					
Barranca Avenue and Grand Avenue	12,790	59.9	110	35	11
Grand Avenue and Vermont Avenue	19,250	65.8	451	143	45
Elwood Avenue and Loraine Avenue	11,328	56.4	65	30	14
Loraine Avenue and Valley Center Avenue	12,590	56.8	70	32	15
Valley Center Avenue and Lone Hill Avenue	13,810	57.2	74	34	16
Route 66					
Barranca Avenue and Grand Avenue	19,145	64.5	330	104	33
Grand Avenue and Vermont Avenue	20,130	64.7	347	110	35
Vermont Avenue and Glendora Avenue	19,950	64.6	344	109	34
Glendora Avenue and Pasadena Avenue	24,380	65.5	421	133	42
Pasadena Avenue and Elwood Avenue	24,100	65.5	416	132	42
Elwood Avenue and Loraine Avenue	23,820	65.4	410	130	41
Loraine Avenue and Compromise Line Road	24,945	65.6	430	136	43
Base Line Road					
Barranca Avenue and Grand Avenue	6,310	59.6	109	34	11
Grand Avenue and Glendora Avenue	11,285	62.2	195	62	19
Gladstone Street					
Barranca Avenue and Grand Avenue	11,290	60.4	126	59	27
Grand Avenue and Glendora Avenue	11,395	60.5	127	59	27



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**Table N-4 (Continued)
Existing Traffic Noise Levels**

Roadway Segment	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)		
			60 CNEL	65 CNEL	70 CNEL
Glendora Avenue and Bonnie Cove Avenue	14,530	61.5	150	69	32
Bonnie Cove Avenue and Sunflower Avenue	12,500	60.9	135	63	29
Sunflower Avenue and Valley Center Avenue	11,930	60.7	131	61	28
Valley Center Avenue and Lone Hill Avenue	14,410	61.5	149	69	32
Grand Avenue					
Leadora Avenue and Bennett Avenue	9,920	58.9	95	44	20
Bennett Avenue and Foothill Boulevard	12,500	59.5	110	51	24
Foothill Boulevard and Ada Avenue	18,870	64.4	325	103	33
Ada Avenue and Route 66	18,590	64.4	325	103	33
Route 66 and Mauna Loa Avenue	23,500	61.3	144	67	31
Mauna Loa Avenue and Base Line Road	24,310	65.5	419	132	42
Base Line Road and Gladstone Street	27,490	63.0	186	87	40
Gladstone Street and Juanita Avenue	26,420	62.8	182	84	39
Glendora Avenue					
Route 66 and Base Line Road	16,935	62.2	166	77	36
Base Line Road and Interstate 210	13,160	61.1	140	65	30
Interstate 210 and Gladstone Avenue	15,200	61.7	154	72	33
Gladstone Avenue and Juanita Avenue	11,760	60.6	130	60	28
Lorraine Avenue					
North of Sierra Madre Avenue	2,110	53.2	41	19	9
Sierra Madre Avenue and Leadora Avenue	2,790	54.4	50	23	11
Leadora Avenue and Bennett Avenue	4,820	56.7	72	33	15
Bennett Avenue and Foothill Boulevard	6,850	58.3	91	42	20
Foothill Boulevard and Route 66	6,395	58.0	87	40	19
Sunflower Avenue					
Interstate 210 and Gladstone Street	10,250	60.0	119	55	26
Gladstone Street and Juanita Avenue	9,040	59.5	109	51	23
Valley Center Avenue					
Bennett Avenue and Foothill Boulevard	5,180	53.4	38	18	8
Foothill Boulevard and Compromise Line Road	4,890	56.8	72	34	16
Lone Hill Avenue					
Foothill Boulevard and Route 66	14,580	57.5	77	36	17
Route 66 and Interstate 210	27,870	63.0	188	87	41
Interstate 210 and Gladstone Street	26,720	65.9	460	146	46
Amelia Avenue					
Foothill Boulevard and Route 66	5,260	53.5	39	18	8
Route 66 and Interstate 210	7,740	58.8	98	46	21

1. Traffic modeling based upon data contained within the *Traffic Impact Study* prepared by Kimley-Horn and Associates Inc. in April 2007.



3.3.2 Stationary Noise

Commercial and industrial land uses located near residential areas currently generate occasional noise impacts. The primary noise sources associated with these facilities are caused by delivery trucks, air compressors, generators, outdoor loudspeakers, and gas venting. Other significant stationary noise sources in the City include noise from construction activity, street sweepers, and gas-powered leaf blowers. Residential land uses and areas identified as noise-sensitive, must be protected from excessive stationary noise. Stationary sources include, among others, commercial and industrial centers. These impacts are best controlled through effective land use planning and application of the City Noise Ordinance.

3.3.3 Other Stationary Noise Sources

Ambient Noise

In atmospheric sound transmission or noise pollution, the ambient noise level is the sound pressure level at a given location, normally specified as a reference level to study a new intrusive sound source. Ambient sound levels are often measured in order to map sound conditions over a spatial regime to understand their variation with locale. In this case the product of the investigation is a sound level contour diagram. Alternatively ambient noise levels may be measured to provide a reference point for analyzing an intrusive sound to a given environment. For example, aircraft noise is studied by measuring ambient sound without the presence of any overflights, and then studying the noise addition by measurement or computer simulation of overflight events.

Ambient noise level is measured with a sound level meter. It is usually measured in dB above a reference pressure level of 0.00002 Pascals (Pa), in the International System of Units (SI). Most frequently ambient noise levels are measured using a frequency-weighting filter, the most common being the A-weighting scale, such that resulting measurements are denoted dBA, or decibels on the A-weighting scale.

Noise Measurement Methodology

Locations for noise measurements were selected utilizing aerial photographs flown by Eagle Aerial in 2006, as well as a land use map provided by the City of Glendora. RBF utilized the aerial photograph to divide the City into a grid, which was then further grouped into similar land uses to determine specific areas to be measured. RBF determined nine areas that would provide sufficient data to establish an acoustical baseline for the City. RBF conducted one short-term noise measurement (10 minutes in length) in each designated area on May 3, 2007.

Noise monitoring equipment used for the ambient short-term noise survey consisted of a Brüel & Kjær Hand-held Analyzer Type 2250 equipped with a 4189 microphone. The monitoring equipment complies with applicable requirements of the American National Standards Institute (ANSI) for Type I (precision) sound level meters.



Noise Measurement Results

Noise measurements were conducted by RBF Consulting on May 3, 2007 and are shown in *Table N-5, Noise Measurements*. The noise measurement sites were representative of typical existing noise exposure adjacent to major roadways as well as within residential and commercial uses. Meteorological conditions were typical, with light wind speeds (0 to 5 miles per hour), low humidity and clear skies. Existing measured short-term noise levels ranged from 49.0 dBA to 66.3 dBA.

**Table N-5
Noise Measurements**

Site No.	Location	Leq (dBA)	Time
1	Located at the intersection of Gladstone Street and Grand Avenue, north of Oakdale Memorial Park.	66.3	10:26 AM
2	Located north along Foothill Boulevard and west along Barranca Avenue.	65.3	10:59 AM
3	Located along Route 66, near Huntington East Valley Hospital.	64.4	11:28 AM
4	Located in the southwest corner of Finkbiner Park.	46.6	11:51 AM
5	Located at the intersection of East Sierra Madre and Loraine Avenue within residential uses and nearby a middle school.	59.2	12:13 PM
6	Located within a residential area along Lemon Avenue (east of Loraine Avenue).	49.0	1:14 PM
7	Located within a residential area, north of Route 66 and east of Lone Hill Avenue.	49.1	1:39 PM
8	Located within a commercial general area to the west of Lone Hill Avenue and south of Interstate-210.	60.2	2:08 PM
9	Located within a residential area (north of Arrow Highway) that adjoin commercial uses.	57.4	2:33 PM

Source: Noise Monitoring Survey conducted by RBF Consulting, May 3, 2007.

4.0 NOISE CONTOURS

Projected general plan buildout noise levels can be found in *Table N-6, General Plan Buildout Traffic Noise Levels*.

Exhibit N-2, Existing Noise Contours, and *Exhibit N-3, General Plan Buildout Noise Contours*, provide existing and expected 2025 noise contours along many of the city’s major and secondary arterials and the two freeways that traverse the City.



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**Table N-6
General Plan Buildout Traffic Noise Levels**

Roadway Segment	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)		
			60 CNEL	65 CNEL	70 CNEL
Sierra Madre Avenue					
Between Live Oak Avenue and Loraine Avenue	6,290	54.3	44	20	9
Between Loraine Avenue and Valley Center Avenue	5,870	54.0	42	19	9
Foothill Boulevard					
Barranca Avenue and Grand Avenue	13,700	60.2	118	37	12
Grand Avenue and Vermont Avenue	20,100	66.0	471	149	47
Elwood Avenue and Loraine Avenue	12,210	56.7	68	32	15
Loraine Avenue and Valley Center Avenue	14,060	57.3	75	35	16
Valley Center Avenue and Lone Hill Avenue	15,610	57.8	80	37	17
Route 66					
Barranca Avenue and Grand Avenue	12,255	62.5	211	67	21
Grand Avenue and Vermont Avenue	23,990	65.4	414	131	41
Vermont Avenue and Glendora Avenue	22,270	65.1	384	121	38
Glendora Avenue and Pasadena Avenue	27,320	6.0	471	149	47
Pasadena Avenue and Elwood Avenue	27,450	6.0	473	150	47
Elwood Avenue and Loraine Avenue	27,580	66.0	475	150	48
Loraine Avenue and Compromise Line Road	28,830	66.2	497	157	50
Base Line Road					
Barranca Avenue and Grand Avenue	10,280	61.8	177	56	18
Grand Avenue and Glendora Avenue	12,115	62.5	209	66	21
Gladstone Street					
Barranca Avenue and Grand Avenue	12,200	60.8	133	62	29
Grand Avenue and Glendora Avenue	12,465	60.9	135	63	29
Glendora Avenue and Bonnie Cove Avenue	16,270	62.0	161	75	35
Bonnie Cove Avenue and Sunflower Avenue	19,390	62.8	181	84	39
Sunflower Avenue and Valley Center Avenue	18,730	62.6	177	82	38
Valley Center Avenue and Lone Hill Avenue	19,480	62.8	182	84	39
Grand Avenue					
Leadora Avenue and Bennett Avenue	12,440	59.5	110	51	24
Bennett Avenue and Foothill Boulevard	15,220	60.4	126	58	27
Foothill Boulevard and Ada Avenue	21,570	65.0	372	118	37
Ada Avenue and Route 66	23,990	62.4	170	79	37
Route 66 and Mauna Loa Avenue	30,250	66.4	521	165	52
Mauna Loa Avenue and Base Line Road	32,750	66.8	565	179	56
Base Line Road and Gladstone Street	32,730	63.7	209	97	45
Gladstone Street and Juanita Avenue	28,900	63.2	193	89	42



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Table N-6 (Continued)
General Plan Buildout Traffic Noise Levels

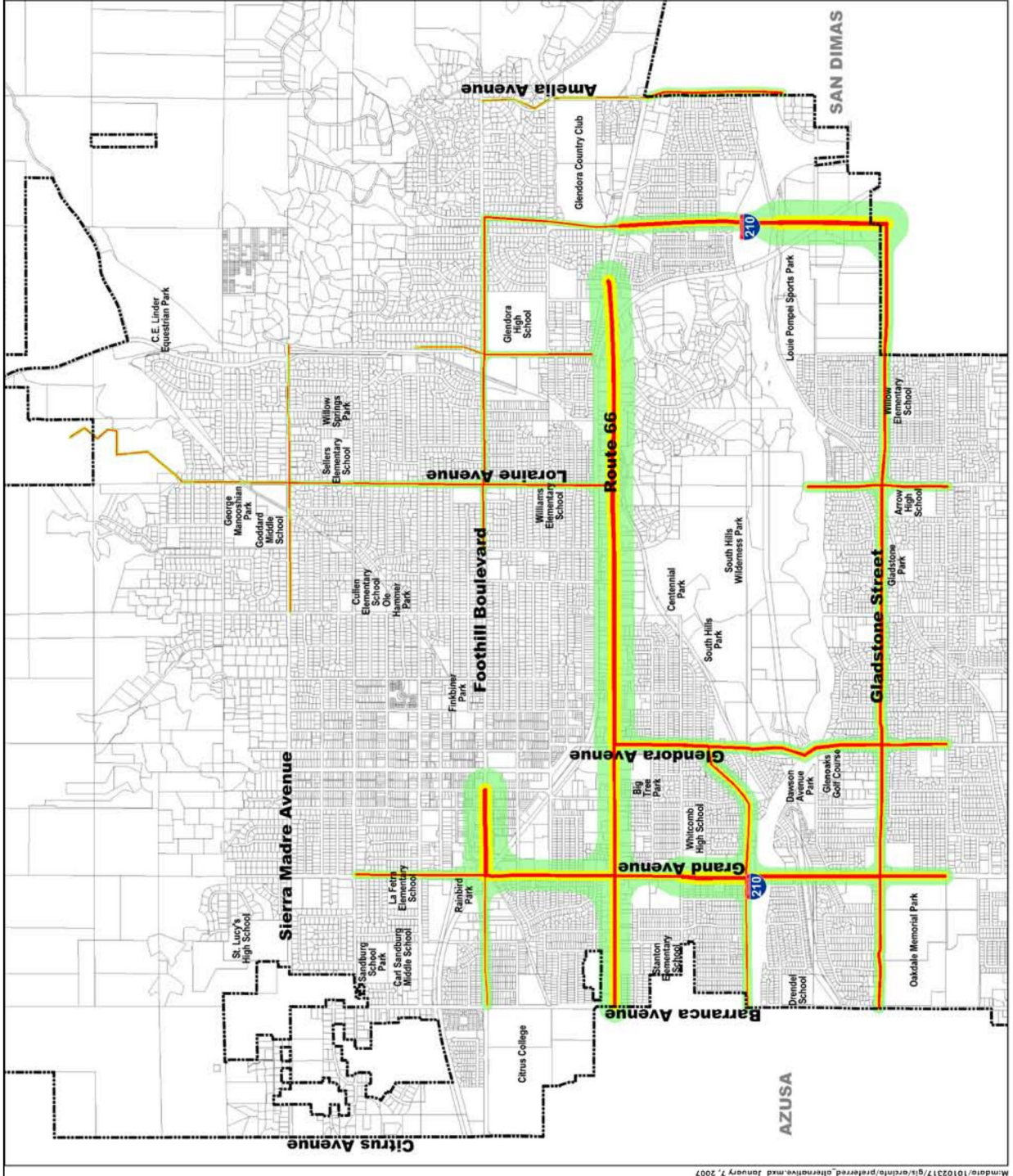
Roadway Segment	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)		
			60 CNEL	65 CNEL	70 CNEL
Glendora Avenue					
Route 66 and Base Line Road	20,920	63.1	191	89	41
Base Line Road and Interstate 210	17,040	62.2	166	77	36
Interstate 210 and Gladstone Avenue	19,150	62.7	180	83	39
Gladstone Avenue and Juanita Avenue	15,140	61.7	154	71	33
Loraine Avenue					
North of Sierra Madre Avenue	2,980	54.7	52	24	11
Sierra Madre Avenue and Leadora Avenue	3,360	55.2	56	26	12
Leadora Avenue and Bennett Avenue	5,525	57.3	79	36	17
Bennett Avenue and Foothill Boulevard	7,690	58.8	98	45	21
Foothill Boulevard and Route 66	6,855	58.3	91	42	20
Sunflower Avenue					
Interstate 210 and Gladstone Street	10,470	60.1	120	56	26
Gladstone Street and Juanita Avenue	9,530	59.7	113	52	24
Valley Center Avenue					
Bennett Avenue and Foothill Boulevard	6,590	54.5	45	21	10
Foothill Boulevard and Compromise Line Road	6,770	58.2	90	42	19
Lone Hill Avenue					
Foothill Boulevard and Route 66	18,250	58.4	89	41	19
Route 66 and Interstate 210	36,740	64.2	226	105	49
Interstate 210 and Gladstone Street	33,438	66.9	577	182	58
Amelia Avenue					
Foothill Boulevard and Route 66	5,560	53.7	40	19	9
Route 66 and Interstate 210	8,070	59.0	101	47	22
1. Traffic modeling based upon data contained within the <i>Traffic Impact Study</i> prepared by Kimley-Horn and Associates Inc. in April 2007.					



EXISTING NOISE CONTOURS

EXHIBIT N-2

- LEGEND**
- Noise Levels**
- 70 CNEL
 - 65 CNEL
 - 60 CNEL
 - CITY LIMITS



Sources: GIS Data, City of Glendora



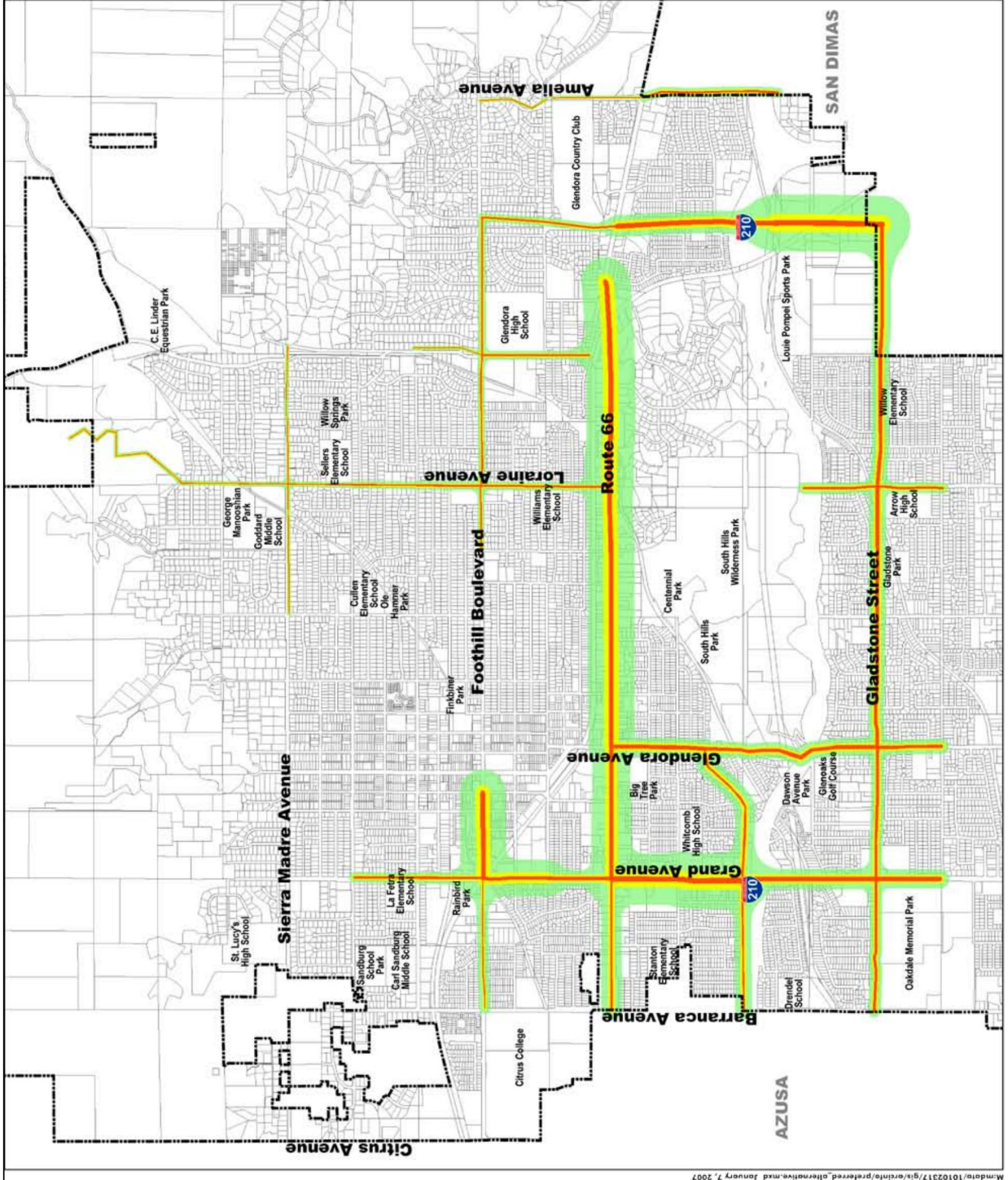
0 2,000 Feet



GENERAL PLAN BUILDOUT NOISE CONTOURS

EXHIBIT N-3

- LEGEND**
- Noise Levels**
- 70 CNEL
 - 65 CNEL
 - 60 CNEL
 - CITY LIMITS



0 2,000 Feet

Source: GIS Data, City of Glendora





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Exhibits N-2 and *N-3* display the average daily traffic (ADT) volume noise levels at 100 feet from the roadway centerline and the distance from the roadway centerline to the 70, 65, and 60 dBA CNEL contours. None of the roadways measured generated currently general noise levels at a distance of 100 feet from centerline that exceed 70 CNEL. Of the 48 roadway links modeled within the City planning area, seven roadway links generate noise levels at 65 CNEL or greater at 100 feet from centerline.

Twenty-one of the roadway links modeled generate noise levels between 60 CNEL and 65 CNEL. These links include Route 66 between Barranca Avenue and Glendora Avenue, Base Line Road between Grand Avenue and Glendora Avenue, segments along Gladstone Street between Barranca Avenue and Lone Hill Avenue, segments along Grand Avenue from Foothill Boulevard and Gladstone Street and Juanita Avenue, Glendora Avenue between Route 66 and Juanita Avenue, a segment on Sunflower Avenue between Interstate 210 to Gladstone Street, and one on Lone Hill Avenue from Route 66 and Interstate 210.

Fourteen of the 48 roadway segments modeled generate noise levels between 55 CNEL and 60 CNEL. These segments are along Foothill Boulevard between Barranca and Grand Avenue and Elwood and Loraine Avenue, Base Line Road between Barranca and Grand Avenue, Grand Avenue between Leadora Avenue and Foothill, Loraine Avenue between Leadora Avenue and Route 66, a segment on Sunflower Avenue between Gladstone Street and Juanita Avenue, Valley Center Avenue at Foothill Boulevard and Compromise Line Road, Lone Hill Avenue between Foothill Boulevard and Route 66, and Amelia Avenue between Route 66 and Interstate 210.

Six modeled roadway links with noise levels below 55 CNEL at 100 feet from centerline are located along Sierra Madre Avenue between Live Oak Avenue and Valley Center Avenue, Loraine Avenue north of Sierra Madre and between Sierra Madre and Leadora Avenue, along Valley Center Avenue between Bennett Avenue and Foothill Boulevard, and Amelia Avenue between Foothill Boulevard and Route 66.

Tables in the Circulation Element indicated traffic volumes on designated street segments. Surface traffic noise has the greatest impact on the noise environment of Glendora's residential and sensitive-receptor properties. Contours between 55 and 60 dBA CNEL are common along City collector streets, 65 dBA CNEL or greater contours are common along major streets.

5.0 DESCRIPTION OF NOISE PLAN

Transportation noise is the most serious noise problem in Glendora. However, local government has little direct control of transportation noise at the source. State and federal agencies have the responsibility to control vehicle noise admission levels. The noise effective method the City has to mitigate transportation noise by reducing noise impact on the community. Mitigation through site planning and the design and construction of a noise barrier are the most common ways of alleviating traffic noise impacts in existing urban environments.



5.1 TYPICAL NOISE ATTENUATION TECHNIQUES

Noise impacts can be mitigated in three basic ways: by reducing the sound level of the noise generator, by increasing the distance between the source and receiver, and by insulating the receiver.

Noise reduction can be accomplished by placement of walls, landscaped berms, or a combination of the two, between the noise source and the receiver. Generally, effective noise shielding requires a solid barrier with a mass of at least four pounds per square-foot of surface area which is large enough to block the line of sight between source and receiver. Variations may be appropriate in individual cases based on distance, nature and orientation of buildings behind the barrier, and a number of other factors. Garages or other buildings may be used to shield dwelling units and outdoor living areas from traffic noise.

In addition to site design techniques, noise insulation can be accomplished through proper design of buildings. Nearby noise generators should be recognized in determining the location of doors, windows and vent openings. Sound-rated windows (extra thick or multi-paned) and wall insulation are also effective. None of these measures, however, can realize their full potential unless care is taken in actual construction: doors and windows fitted properly; openings sealed; joints caulked; plumbing adequately insulated from structural members. Sound-related doors and windows will have little effect if left open. This may require installation of air conditioning for adequate ventilation. This chain of design, construction and operation is only as effective as its weakest link.

Noise impacts can be reduced by insulating noise sensitive uses, such as residences, schools, libraries, hospitals, nursing and care homes and some types of commercial activities. But perhaps a more efficient approach involves limiting the level of noise generation at the source. State and Federal statutes have largely preempted local control over vehicular noise emissions but commercial and industrial operations and certain residential activities provide opportunities for local government to assist in noise abatement. Local ordinances may establish maximum levels for noise generated on-site. This usually takes the form of limiting the level of noise permitted to leave the property where it may impact other uses.

Although vehicular noise emissions standards are established at the State and Federal levels, local agencies can play a significant part in reducing traffic noise by controlling traffic volume and congestion. Traffic noise is greatest at intersections due to acceleration, deceleration and gear shifting. Measures such as sign synchronization can help to minimize this problem. Likewise, reduction of congestion aids in reduction of noise. This can be accomplished through the application of traffic engineering techniques such as channelization of turning movements, parking restrictions, separation of modes (bus, auto, bicycle, pedestrian) and restrictions on truck traffic.

Noise reduction through reduction of traffic volumes can also be accomplished with incentive programs for traffic volumes can also be accomplished with incentive programs for use of public transit facilities and high-occupancy vehicles, staggering of work hours and land use controls. Vehicle trips can be turned into pedestrian trips with integration of housing and employment into the same project or area, construction of high-density, affordable housing in proximity to employment, shopping and public transit facilities and other techniques.



5.2 NOISE AND LAND USE PLANNING INTEGRATION

Information relative to the existing and future noise environments within Glendora should be integrated into future land use planning decisions. The Element presents the existing and future noise environments so that the City will include noise impact considerations in development programs. Noise and land use compatibility guidelines are presented, as well as noise standards for new developments. Community noise considerations are to be incorporated into land use planning to the maximum extent feasible.

5.3 TRANSPORTATION NOISE CONTROL

The most efficient and effective means of controlling noise from transportation systems is to reduce noise at the source. However, since the City has little direct control over source noise levels because of State and federal preemption (for example, State motor vehicle noise standards and Federal air regulations), the City should focus on reducing the impact of the noise on the community.

5.4 NON-TRANSPORTATION NOISE CONTROL

People must be protected from excessive noise from non-transportation sources, including commercial and industrial centers. These impacts are most effectively controlled through the application of the City’s Noise Ordinance.

6.0 PLANNING FACTORS, GOALS, AND POLICIES

TRANSPORTATION NOISE IMPACTS

Planning Consideration: The most significant contributors to noise impacts are generated from transportation sources. The City of Glendora seeks to minimize the noise impacts associated with transportation to the greatest extent feasible. Minimizing these impacts requires the evaluation of existing noise sources and coordination of appropriate mitigation through design and policy considerations.

Goal	N-1:	Reduced noise impacts from transportation sources.
Policies	N-1.1	Ensure traffic noise mitigation measures are included and implemented in the design of new development.
	N-1.2	Encourage the State Department of Transportation (Caltrans) to continue programs that lead to the reduction of the noise levels on I-210.



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- N-1.3 Limit construction, delivery, and through truck traffic to designated routes.
- N-1.4 Mitigate transportation equipment impacts at construction sites.

NON-TRANSPORTATION NOISE IMPACTS

Planning Consideration: Non-transportation noise sources, including those generated from commercial/industrial activities, construction equipment and various community activities, have the potential of introducing undesirable impacts within the City. Development policy and regulatory standards should consider the reduction of these non-transportation noise impacts and mitigate them to a less than significant level.

- | | | |
|-----------------|-------|--|
| Goal | N-2: | Reduced noise impacts from non-transportation sources. |
| Policies | N-2.1 | Review and update the Noise Ordinance, on a regular basis, to ensure noise-generating uses are adequately addressed. |
| | N-2.2 | Strive to resolve existing and potential conflicts between noise generating uses and human activities. |
| | N-2.3 | Prohibit significant noise generating activities from locating adjacent to residential neighborhoods and near schools. |
| | N-2.4 | Ensure that construction noise does not cause an adverse impact to the residents of the City by requiring that noise mitigation techniques be incorporated into all construction-related activities. |
| | N-2.5 | Consider developing maximum noise standards for ventilation systems (i.e., air conditioning units) in residential areas. |

COORDINATION WITH LAND USE PLANNING

Planning Consideration: Land use planning has a direct relationship with objectionable noise. The location and type of land uses should consider the potential noise impacts generated. Therefore, the evaluation of potential noise generation should be a consideration in all land use decisions.

- | | | |
|-----------------|-------|--|
| Goal | N-3: | Coordinated land use planning and noise mitigation. |
| Policies | N-3.1 | Ensure Community Noise Equivalent Levels (CNEL) levels for noise sensitive land uses meet or exceed normally acceptable levels, as defined by State of California standards. |
| | N-3.2 | Enforce all noise standards as outlined in the City’s Noise Ordinance. |



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- N-3.3 Enforce limits set by the State of California to control noise levels, particularly those governing motor vehicles.
- N-3.4 Ensure that all new development is consistent with exterior and interior noise standards.
- N-3.5 Incorporate noise reduction measures into all development proposals, as necessary.
- N-3.6 Consider noise impacts associated with the development of non-residential uses in the vicinity of residential uses.
- N-3.7 Require acoustical materials in all new residential and commercial developments where noise levels exceed the compatibility standards outlined in the Noise Element.
- N-3.8 Encourage the use of double-paned windows for residential uses adjacent to the freeways and along major arterials.
- N-3.9 Encourage programs to retrofit existing homes to reduce noise impacts in the homes.

Glendora Municipal Code

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[Title 9 PUBLIC PEACE, MORALS AND SAFETY](#)

Chapter 9.44 NOISE REGULATION

9.44.010 Declaration of policy.

It is the policy of the city to prohibit unnecessary, excessive and annoying noises from all sources subject to its police power. At certain levels noises are detrimental to the health and welfare of the citizenry and in the public interests shall be proscribed. For example, public and private gatherings or parties that are loud and/or disorderly interfere with the public peace. Furthermore, gatherings that require repeated police responses increase the cost of public safety services and deter the police department and the city from addressing other public safety matters. (Ord. 1655 § 1, 1996; Ord. 1173 § 1, 1972)

9.44.020 Definitions.

As used in this chapter, unless the context otherwise clearly indicates, the words and phrases used in this chapter are defined as follows:

“Alcohol” means ethyl alcohol, hydrated oxide of ethyl, or spirits of wine, from whatever source or by whatever process produced.

“Alcoholic beverage” includes alcohol, spirits, liquor, wine, beer, and every liquid or solid containing alcohol, spirits, wine, or beer, and which contains one-half of one percent or more of alcohol by volume and which is fit for beverage purposes either alone or when diluted, mixed, or combined with other substances.

“Ambient noise” means the all-encompassing noise associated with a given environment, being usually a composite of sounds from many sources near and far. For the purpose of this chapter, ambient noise level is the level obtained when the noise level is averaged over a period of fifteen minutes without inclusion of noise from isolated identifiable sources, at the location and time of day near that at which a comparison is to be made.

“Commercial purpose” means and includes the use, operation or maintenance of any sound amplifying equipment for the purpose of advertising any business, or any goods, or any services, or for the purpose of attracting the attention of the public to, or advertising for, or soliciting patronage or customers to or for any performance, show, entertainment, exhibition, or event, or for the purpose of demonstrating such sound equipment.

“Decibel (dB)” means a unit of level 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 ten of this ratio.

“Emergency work” means work made necessary to restore property to a safe condition following a public calamity or work required to protect persons or property from an imminent exposure to danger or work by private or public utilities when restoring utility service.

Frequency. “Frequency” of a function periodic in time means the reciprocal of the period. The unit is the hertz or cycle per second.

“Gathering or party” includes a gathering or party of two or more persons or activity attended by a group of persons on public or private property.

“Loud and/or disorderly gathering or party” includes a loud and/or disorderly activity attended by a group of persons on public or private property which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitivity. Loud and/or disorderly gathering or party shall not include any city sanctioned uses and/or functions.

“Microbar” means a unit of pressure commonly used in acoustics and is equal to one dyne per square centimeter.

“Noncommercial purpose” means the use, operation or maintenance of any sound equipment for other than a “commercial purpose.” “Noncommercial purpose” means and includes, but is not limited to, philanthropic, political, patriotic and charitable purposes.

“Period” of a periodic quantity means the smallest increment of time for which the function repeats itself.

“Periodic quantity” means oscillating quantity, the values of which recur for equal increments of time.

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

“Person responsible” means the person responsible for a loud and/or disorderly gathering or party or gathering and/or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age, shall be deemed to be, in order of priority:

- (1) The owner(s) of the premises where the loud and/or disorderly gathering or party, or gathering and/or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age, takes place, if the premises are owner-occupied property;
- (2) The tenant(s) of the premises where the loud and/or disorderly gathering or party or gathering and/or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age, takes place, if the premises are tenant-occupied property;
- (3) The person(s) who organized, sponsored or is hosting the loud and/or disorderly gathering or party or gathering and/or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age.
- (4) The parent or legal guardian of any person responsible who is a minor shall be liable for any public safety service expenses and fine(s) imposed upon the minor pursuant to the provisions of this chapter. Any such public safety service expenses and fine(s) may be collected from the minor, parent or guardian.

“Public address equipment” means any machine or device for the amplification of the human voice, music or any other sound, when used outdoors or indoors in places of public assembly.

Sound level. “Sound level” (noise level), in decibels (dB), is the sound measured with the “A” weighting and slow response by a sound level meter.

“Sound level meter” means an instrument including a microphone, or an amplifier, an output meter and frequency weighting networks for the measurement of sound levels which satisfies the pertinent requirements in American Standard Specifications for sound level meters S1 4-1971 or the most recent revision thereof.

“Sound truck” means any motor vehicle, or any other vehicle regardless of motive power, whether in motion or stationary, having mounted thereon, or attached thereto, any public address equipment.

“Special security assignment” means the assignment of police officers, equipment and other services during a second or subsequent call to a location within a twelve-month period to disband the loud and/or disorderly gathering or party, or gathering and/or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age, after providing a written warning that the loud and/or disorderly gathering or party violates the law. (Ord. 1936 § 2, 2010)

9.44.030 Sound level measurement criteria.

Any sound level measurement made pursuant to the provisions of this chapter shall be measured with a sound level meter using the “A” weighting. (Ord. 1173 § 1, 1972)

9.44.040 Ambient noise base level.

When “ambient noise level” is referred to in this chapter, it means the higher of the following:

- (1) Actual measured ambient noise level; or
- (2) Ambient base level (see chart below).

Zone	Time		
	7 a.m. to 7 p.m.	7 p.m. to 10 p.m.	10 p.m. to 7 a.m.
Single-Family Residential			
R-1	55 dBA	50 dBA	45 dBA

Zone	Time		
	7 a.m. to 7 p.m.	7 p.m. to 10 p.m.	10 p.m. to 7 a.m.
R-A	55 dBA	50 dBA	45 dBA
E-3	55 dBA	50 dBA	45 dBA
E-4	55 dBA	50 dBA	45 dBA
E-5	55 dBA	50 dBA	45 dBA
E-6	55 dBA	50 dBA	45 dBA
E-7	55 dBA	50 dBA	45 dBA
Multifamily Residential			
A-2	55 dBA	55 dBA	50 dBA
R-2	55 dBA	55 dBA	50 dBA
R-3	55 dBA	55 dBA	50 dBA
G-A	55 dBA	55 dBA	50 dBA
M.H.P.	55 dBA	55 dBA	50 dBA

Commercial			
C-1	65 dBA	65 dBA	60 dBA
C-2	65 dBA	65 dBA	60 dBA
C-3	65 dBA	65 dBA	60 dBA
C-M	65 dBA	65 dBA	60 dBA
Manufacturing			
M-1	70 dBA	70 dBA	70 dBA
M-1A	70 dBA	70 dBA	70 dBA
Special Zones			
MS	55 dBA	50 dBA	45 dBA

Wherever two different zones are contiguous, the lower ambient noise level at the common property line shall apply. (Ord. 1180 § 3, 1973; Ord. 1173 § 1, 1972)

9.44.050 Radios, television sets and similar devices.

- (a) Use Restricted. It is unlawful for any person within any residential zone of the city to use or operate any radio receiving set, musical instrument, phonograph, television set or other machine or device for the production or reproduction of sound in such a manner as to disturb the peace, quiet and comfort of neighboring residents or any reasonable person of normal sensitiveness residing in the area.
- (b) Prima Facie Violation. Any noise level exceeding the ambient level at the property line of any property (or, if a condominium or apartment house, within any adjoining apartment) by more than five decibels shall be deemed to be prima facie evidence of violation of the provisions of this section. (Ord. 1173 § 1, 1972)

9.44.060 Hawkers and peddlers.

It is unlawful for any person within the city to sell anything by outcry within any area of the city zoned for residential uses. The provisions of this section shall not be construed to prohibit the selling by outcry of merchandise, food and beverages at licensed sporting events, parades, fairs, circuses and other similar licensed public entertainment events. (Ord. 1173 § 1, 1972)

9.44.070 Drums.

It is unlawful for any person to use any drum or other instrument or device of any kind for the purpose of attracting attention by the creation of noise within the city. This section shall not apply to any person who is a participant in a school band or duly licensed parade or who has been otherwise duly authorized to engage in such conduct. (Ord. 1173 § 1, 1972)

9.44.080 Schools, hospitals and churches.

It is unlawful for any person to create any noise on any street, sidewalk or public place adjacent to any school, institution of learning or church while the same is in use or adjacent to any hospital, which noise unreasonably interferes with the workings of such institution or which disturbs or unduly annoys patients in the hospital, provided conspicuous signs are displayed in such streets, sidewalk or public place, as determined and specified by the public works department, indicating the presence of a school, church or hospital. (Ord. 1173 § 1, 1972)

9.44.090 Animals and fowl.

No person shall keep or maintain or permit the keeping of, upon any premises owned, occupied or controlled by such person, any animal or fowl otherwise permitted to be kept which, by any sound, cry or behavior, shall cause annoyance or discomfort to a reasonable person of normal sensitiveness in any residential neighborhood. (Ord. 1173 § 1, 1972)

9.44.100 Machinery, equipment, fans and air conditioning.

It is unlawful for any person to operate any machinery, equipment, pump, fan, air conditioning apparatus or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient noise level by more than five decibels. (Ord. 1173 § 1, 1972)

9.44.110 Construction of buildings and projects.

It is unlawful for any person within a residential zone, or within a radius of five hundred feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures or projects or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist or any other construction type device (between the hours of nine p.m. of one day and seven a.m. of the next day) in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefor has been duly obtained from the city. No permit shall be required to perform emergency work as defined in Section 9.44.020(c). (Ord. 1173 § 1, 1972)

9.44.120 Vehicle repairs.

It is unlawful for any person within any residential area of the city to repair, rebuild, or test any motor vehicle (between the hours of nine p.m. of one day and seven a.m. of the next day) in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance. (Ord. 1173 § 1, 1972)

9.44.130 Motor-driven vehicles.

It is unlawful for any person to operate any motor-driven vehicle within the city in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance; provided, however, any such vehicle

which is operated upon any public highway, street or right-of-way shall be excluded from the provisions of this section. (Ord. 1173 § 1, 1972)

9.44.140 Constitutional rights.

The council enacts this legislation for the sole purpose of securing and promoting the public health, comfort, safety and welfare of its citizenry. While recognizing that the use of public address equipment is protected by the constitutional rights of freedom of speech and assembly, the council nevertheless feels obligated to regulate reasonably the use of public address equipment in order to protect the correlative constitutional rights of the citizens of this community to privacy and freedom from public nuisance of loud and unnecessary noise. (Ord. 1173 § 1, 1972)

9.44.150 Registration required.

It is unlawful for any person, other than personnel of law enforcement or governmental agencies, to install, use or operate within the city a loudspeaker or public address equipment in a fixed or movable position or mounted upon any sound truck for the purposes of giving instructions, directions, talks, addresses, lectures or transmitting music to any persons or assemblages of persons in or upon any street, alley, sidewalk, park, place or public property without first filing a registration statement and obtaining approval thereof as set forth in Section 9.44.160. (Ord. 1173 § 1, 1973)

9.44.160 Registration—Requirements and duties.

- (a) Registration Statements—Filing. Every user of public address equipment shall file a registration statement with the police chief five days prior to the date on which the public address equipment is intended to be used, which statement shall contain the following information:
- (1) The name, address and telephone number of both the owner and the user of the public address equipment;
 - (2) The maximum sound producing power of the public address equipment which shall include the wattage to be used, the volume in decibels of sound which will be produced, and the approximate distance for which sound will be audible from the public address equipment;
 - (3) The license and motor number if a sound truck is to be used;
 - (4) A general description of the public address equipment which is to be used; and
 - (5) Whether the public address equipment will be used for commercial or noncommercial purposes.
- (b) Registration Statements—Approval. The police chief shall return to the applicant an approved certified copy of the registration statement unless he or she finds that:
- (1) The conditions of the motor vehicle movement are such that in the opinion of the police chief use of the equipment would constitute a detriment to traffic safety; or
 - (2) The conditions of pedestrian movement are such that use of the equipment would constitute a detriment to traffic safety; or
 - (3) The registration statement required reveals that the applicant would violate the provisions set forth in Section 9.44.190, or any other provision of this code.
- (c) Disapproval. In the event the registration statement is disapproved, the police chief shall endorse upon the statement his or her reasons for disapproval and return it forthwith to applicant. (Ord. 1173 § 1, 1972)

9.44.170 Appeals.

Any person aggrieved by disapproval of a registration statement may appeal to the city council by filing with the city clerk a written notice of appeal within ten days from the date of the disapproval. If such an appeal is filed within the required time, the city council shall, within a reasonable time, review the matter at a public hearing. At the conclusion of said hearing the city council shall determine whether or not the registration statement complies with the provisions of Section 9.44.190 and other provisions of this code, and its decision shall be final. (Ord. 1173 § 1, 1972)

9.44.180 Fees.

Prior to the issuance of the registration statement, a fee in the amount of ten dollars per day, or any portion thereof, shall be paid to the city, if the loudspeaker or public address equipment is to be used for commercial purposes. No fee shall be required for the operation of a loudspeaker or public address equipment for noncommercial purposes. (Ord. 1173 § 1, 1972)

9.44.190 Regulations.

The commercial and noncommercial use of public address equipment shall be subject to the following regulations:

- (1) The only sounds permitted shall be either music or human speech, or both;
- (2) The operation of public address equipment shall only occur between the hours of seven a.m. and nine p.m. each day except on Sundays and legal holidays. No operation of public address equipment for commercial purposes shall be permitted on Sundays or legal holidays. The operation of public address equipment for noncommercial purposes on Sundays and legal holidays shall only occur between the hours of seven a.m. and nine p.m.;
- (3) Sound level emanating from public address equipment shall not exceed fifteen decibels above the ambient noise level;
- (4) Notwithstanding the provisions of subsection (3) of this section, public address equipment shall not be operated within two hundred feet of churches, schools, hospitals or city or county buildings;
- (5) In any event, the volume of sound shall be so controlled that it will not be unreasonably loud, raucous, jarring, disturbing or a nuisance to reasonable persons of normal sensitiveness within the area of audibility. (Ord. 1173 § 1, 1972)

9.44.195 Duty to maintain public peace.

Each person who organizes, hosts, or sponsors a gathering or party, or allows his or her property to be utilized for a gathering or party, shall maintain such a gathering in a quiet and orderly fashion so as to protect the public peace. Any loud and/or disorderly gathering or party which necessitates more than one police response within a twelve-month period to disband the loud and/or disorderly gathering or party is a violation of this duty and constitutes a public nuisance in accordance with Section 9.44.220 of this chapter. Any gathering or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age which necessitates more than one police response within a twelve-month period to disband the gathering or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age is a violation of this duty and constitutes a public nuisance in accordance with Section 9.44.220 of this chapter. (Ord. 1936 § 4, 2010)

9.44.196 Procedure for purposes of cost recovery.

- (a) A police officer appearing at a loud and/or disorderly gathering or party or gathering or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age shall take such actions and give such direction as necessary to abate the loud and/or disorderly gathering or party or gathering or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age. The officer shall advise the responsible party in a written notice that:
 - (1) The loud and/or disorderly gathering or party or gathering or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age, violates the law;
 - (2) That if a second or subsequent law enforcement response is required to abate the condition within a twelve-month period, the responsible party shall be cited for a violation of Section 9.44.195 of this chapter and such second or subsequent response shall be deemed a special security assignment; and
 - (3) The responsible party shall be assessed a civil fine and held responsible for the costs of providing such special security assignment pursuant to Sections 9.44.197, 9.44.198 and 9.44.199 of this chapter.

(b) The police chief or designee shall mail a notice to the property owner as the owner's name and address are recorded by the county assessor stating in substance that should any response to provide police services, whether for a first or subsequent response, be required as a result of a loud and/or disorderly gathering or party or gathering or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age on the property designated in the notice, the property owner to whom notice is mailed shall be liable to pay to the city the cost of police services required for any such response. The property owner shall, ten days after mailing of said notice, be liable to the city for the cost of police services on any first or subsequent response occasioned by a party, gathering or event occurring on the subject property.

(c) Should a second or subsequent law enforcement response be required to abate the condition at a loud and/or disorderly gathering or party or gathering or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age within a twelve-month period, the responsible party shall be cited for a violation of Section 9.44.195 of this chapter and such second or subsequent response shall be deemed a special security assignment, and the responsible party shall be assessed a civil fine and the costs of providing law enforcement services for any police responses to the location for loud and/or disorderly gatherings or parties, or gathering or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age pursuant to Sections 9.44.197, 9.44.198 and 9.44.199 of this chapter, within the twelve-month period following the issuance of the written notice. (Ord. 1936 § 6, 2010)

9.44.197 Cost of police response.

When a loud and/or disorderly gathering or party or gathering or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age occurs, the person(s) responsible will be held jointly and severally liable for payment of the public safety service expenses for any special security assignments. (Ord. 1936 § 8, 2010)

9.44.198 Billing of public safety expenses.

(a) For the purposes of this chapter, the city's finance department shall cause the person responsible for a loud and/or disorderly gathering or party or gathering or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age to be billed the actual cost for the public safety service expenses for special security assignments provided in responding to the loud and/or disorderly gathering or party or gathering or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age and any other city and/or public safety expenses incurred. These costs shall include, but shall not be limited to, damages to city property and/or injuries to city personnel, and city administrative costs. The police officer issuing the citation to the person responsible shall accumulate the costs of all services provided in responding to the disturbance and forward same to the finance department within fifteen days of the issuance of the citation for billing. Such bills shall be due and payable within thirty days after the billing date.

(b) Additionally, the city's finance department shall include in any bill sent pursuant to subsection (a) the cost of the following fines:

- (1) One hundred fifty dollars for a second response required within a twelve-month period, after written notice as described in Section 9.44.196 of this chapter has been provided;
- (2) Three hundred dollars for a third response required within a twelve-month period, after written notice as described in Section 9.44.196 of this chapter has been provided;
- (3) Four hundred fifty dollars for a fourth response required within a twelve-month period, after written notice as described in Section 9.44.196 of this chapter has been provided.

(c) Money due to the city pursuant to this section and Section 9.44.199 of this chapter shall be a debt to the city by all persons responsible for the loud and/or disorderly gathering or party or gathering or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age and may be collected in an appropriate civil action. Alternatively, once a responsible party has exhausted the administrative procedures provided in Section 9.44.199 of this chapter, any costs still owing may be collected as a special assessment against the respective lot or parcel of land to which those costs relate, as described in Section 9.36.170 of this title. (Ord. 1936 § 10, 2010)

9.44.199 Appeal process for loud and/or disorderly gathering or party assessments.

- (a) Any person receiving a bill for public safety expenses and civil fines, as described in Section 9.44.198 of this chapter, may, within fifteen days after the billing date, file a written request appealing the imposition of such charges with the city clerk. Any billing sent pursuant to said Section 9.44.198 shall inform the billed party of the right to appeal said billing. All appeals shall be made in writing, shall state the ground for such appeal, shall specify the factual basis for the appeal and shall contain a signature verifying the truth of all matters asserted.
- (b) Any appeal regarding such billing shall be heard by the chief of police, or by designee. Notice of the hearing shall be sent by certified mail to the appellant (unless such mail is refused or unclaimed, then the city shall subsequently send the mail via first class postage prepaid mail and such mailing shall be deemed actual service). Within ten days after the hearing, the chief of police, or designee, shall give written notice of the decision to the appellant by certified mail to the appellant (unless such mail is refused or unclaimed, then the city shall subsequently send the mail via first class postage prepaid mail and such mailing shall be deemed actual service).
- (c) Upon the filing of a request for an appeal, payment of the bill for the police and other public safety services rendered shall be suspended until notice of the decision of the hearing officer is sent as described above. If the appeal is denied in part or in full, all amounts due to the city shall be paid within thirty days after notice of the decision of the hearing officer is sent.
- (d) The decision of the chief of police, or designee, may be appealed to a hearing officer by filing a written appeal stating the grounds therefor with the city clerk within fifteen days of the mailing of the police chief's, or designee's, notice. The appeal of the decision of the police chief, or designee, shall be conducted within a reasonable time, but not less than thirty days, at a de novo public hearing before a neutral hearing officer designated by the city manager. The hearing officer shall demonstrate those qualifications, training, and objectivity prescribed by the city manager as are necessary and which are consistent with the duties and responsibilities of such hearing officer. Not less than five days prior to the hearing, the city clerk shall give notice of the time and place of the hearing. The hearing officer may affirm, modify or reverse the decision of the police chief and shall state the reasons therefor. The decision of the hearing officer shall be final when rendered. Within thirty days of the public hearing, the hearing officer shall notify the appellant of the decision, which shall be final, in writing in the manner prescribed above. If the hearing officer denies the appeal in part or in full, all amounts due to the city shall be paid within thirty days of the hearing officer's decision being sent. If the hearing officer's decision is not appealed, it shall be final. Any appeal of the hearing officer's decision to the Superior Court shall require the appellant to deposit the full payment of the bill for the police and other public safety services rendered and fine(s) assessed with the city prior to filing the court action. If the court grants the appeal in part or in full, all amounts due to the appellant shall be refunded by the city within thirty days of notice of the court decision. Any person aggrieved by the decision of the hearing officer may seek judicial review of the hearing officer's decision by filing an appeal with a court of competent jurisdiction in accordance with the timelines and provisions set forth in California Government Code Section 53069.4. The aggrieved person filing the appeal shall be responsible for paying the statutory filing fee to the Superior Court when the appeal is filed. The person or responsible person shall serve upon the city clerk either in person or by first class mail a copy of the notice of appeal. If the person or responsible person fails to timely file a notice of appeal with the court, the hearing officer's decision shall be deemed confirmed. (Ord. 1936 § 12, 2010)

9.44.200 General noise and party regulations.

- (a) Notwithstanding any other provisions of this chapter, and in addition thereto, it is unlawful for any person willfully to make or continue, or cause to be made or continued, any loud, unnecessary or unusual noise which disturbs the peace or 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:

- (1) The level of the noise;
- (2) The intensity of the noise;
- (3) Whether the nature of the noise is usual or unusual;
- (4) Whether the origin of the noise is natural or unnatural;

- (5) The level and intensity of the background noise, if any;
- (6) The proximity of the noise to residential sleeping facilities;
- (7) The nature and zoning of the area within which the noise emanates;
- (8) The density of the inhabitation of the area within which the noise emanates;
- (9) The time of the day or night the noise occurs;
- (10) The duration of the noise;
- (11) Whether the noise is recurrent, intermittent, or constant; and
- (12) Whether the noise is produced by a commercial or noncommercial activity.

(b) Notwithstanding any other provisions of this chapter, and in addition thereto, it is unlawful for any person willfully to host, conduct or allow, or cause to host, conduct or allow, any gathering and/or party where alcoholic beverages are furnished, given, obtained, possessed, or consumed by any person under twenty-one years of age. (Ord. 1936 § 14, 2010)

9.44.205 Vibration.

In the CM Zone or in any C zone or in any M zone, no activity shall cause or create a steady state of impact vibration on the lot line or on a boundary line between any of such zones and a residential zone with a vibration displacement by frequency bands in excess of that indicated in the table below as measured by the vibration measuring device standardized by the American Standards Association:

Frequency (Cycles Per Second)	Vibration Displacement (In Inches)	
	Steady State	Impact
Under 10	0.0005	0.0010
10—19	0.0004	0.0008
20—29	0.0003	0.0006
30—39	0.0002	0.0004
40 and over	0.0001	0.0002

This section shall not apply to railroads. (Ord. 1180 § 4, 1973)

9.44.210 Violations—Misdemeanors.

Any person violating any of the provisions of this chapter is guilty of a misdemeanor and upon conviction thereof shall be punishable as set forth in Section 1.01.110 of this code. (Ord. 1173 § 1, 1972)

9.44.220 Violations—Additional remedies—Injunctions.

As an additional remedy, the operation or maintenance of any device, instrument, vehicle or machinery in violation of any provision of this chapter, which operation or maintenance causes discomfort or annoyance to reasonable persons of normal sensitiveness or endangers the comfort, repose, health or peace of residents in the area, is a public nuisance, and may be subject to abatement summarily by a restraining order or injunction issued by a court of competent jurisdiction. (Ord. 1173 § 1, 1972)

9.44.230 Severability.

If any provision, clause, sentence or paragraph of this chapter or the application thereof to any person or circumstances shall be held invalid, such invalidity shall not affect the other provisions or applications of the provisions of this chapter

which can be given effect without the invalid provisions or application, and to this end the provisions of this chapter are severable. (Ord. 1173 § 1, 1972)

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CONSTRUCTION NOISE MODELING

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/12/2021
 Case Description: COG-08

**** Receptor #1 ****

Description	Baselines (dBA)			
	Land Use	Daytime	Evening	Night
Modular Buildign Removal	Residential	60.0	55.0	50.0

Description	Impact Device	Spec Usage (%)	Equipment			Estimated Shielding (dBA)
			Actual Lmax (dBA)	Receptor Lmax (dBA)	Distance (feet)	
Crane	No	16	80.6	50.0	0.0	
Crane	No	16	80.6	50.0	0.0	

Equipment Lmax Leq	Results												
	Noise Limits (dBA)						Noise Limit Exceedance (dBA)						
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night
Crane N/A	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane N/A	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total N/A	80.6	75.6	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: 08/12/2021
 Case Description: COG-08

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Asphalt Dmolition	Residential	60.0	55.0	50.0

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	
Tractor	No	40	84.0	50.0	0.0	

Equipment Lmax Leq	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw N/A	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 N/A	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 N/A	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 N/A	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: 08/12/2021
 Case Description: COG-08

**** 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)
Grader	No	40	85.0	50.0	0.0	
Tractor	No	40	84.0	50.0	0.0	

Results

Equipment Lmax Leq	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader N/A	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
Tractor N/A	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 N/A	85.0	83.6	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: 08/12/2021
 Case Description: COG-08

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Rough 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

Equipment Lmax Leq	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader N/A	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 N/A	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 N/A	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 N/A	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

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/12/2021
 Case Description: COG-08

**** Receptor #1 ****

Description	Baselines (dBA)				
	Land Use	Daytime	Evening	Night	
Church Building Construction	Residential		60.0	55.0	50.0

Description	Equipment					
	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Man Lift	No	20	74.7	50.0	0.0	
Tractor	No	40	84.0	50.0	0.0	
Backhoe	No	40	77.6	50.0	0.0	

Equipment	Results												
	Noise Limits (dBA)						Noise Limit Exceedance (dBA)						
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Man Lift	74.7	67.7	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													
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A													
Total	84.0	81.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A													

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/12/2021

Case Description: COG-08

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Fine Grading	Residential	60.0	55.0	50.0

Equipment

Description	Impact	Spec Usage Device	Actual Lmax (%)	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

Equipment Lmax Leq	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader N/A	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 N/A	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 N/A	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 N/A	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

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/12/2021

Case Description: COG-08

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Utility Trenching	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Excavator	No	40	80.7	50.0	0.0	

Results

Equipment Lmax Leq	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
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	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

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/12/2021
 Case Description: COG-08

**** Receptor #1 ****

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

Description	Impact Device	Spec Usage (%)	Equipment			Estimated Shielding (dBA)
			Actual Lmax (dBA)	Receptor Lmax (dBA)	Distance (feet)	
Drum Mixer	No	50	80.0	50.0	0.0	
Paver	No	50	77.2	50.0	0.0	
Tractor	No	40	84.0	50.0	0.0	

Equipment Lmax Leq	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Drum Mixer N/A	80.0	77.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver N/A	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
Tractor N/A	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 N/A	84.0	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

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/12/2021
 Case Description: COG-08

**** Receptor #1 ****

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

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

Equipment Lmax Leq	Results													
	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	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: 08/12/2021
 Case Description: COG-08

**** Receptor #1 ****

Description	Baselines (dBA)			
	Land Use	Daytime	Evening	Night
Finishing&Landscaping	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)

Results

Equipment Lmax Leq	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
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	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

COG-08 Construction Noise Modeling Attenuation Calculations

Levels in dBA Leq

Phase 1 Construction	RCNM			
	Reference Noise Level	Residence to North	Residence to East	Residence to South
<i>Distance in feet</i>	50	100	125	150
Site Preparation	84	78	76	74
Rough Grading	85	79	77	75
Fine Grading	85	79	77	75
Utility Trenching	77	71	69	67
Finish & Landscaping	77	71	69	67
Paving	83	76	75	73
Modular Building Removal	76	70	68	66
Asphalt Demolition	85	79	77	76
Church Building Construction	81	75	73	72
Architectural Coating	74	68	66	64

Attenuation calculated through Inverse Square Law: $L_p(R2) = L_p(R1) - 20\text{Log}(R2/R1)$

COG-08 Vibration Damage Attenuation Calculations

Levels in in/sec PPV

<i>Distance in feet</i>	Vibration Reference Level	Residential to east	On-site Historical Building
	at 25 feet	20	5
Vibratory Roller	0.21	0.293	2.348
Static Roller	0.05	0.070	0.559
Large Bulldozer	0.089	0.124	0.995
Caisson Drilling	0.089	0.124	0.995
Loaded Trucks	0.076	0.106	0.850
Jackhammer	0.035	0.049	0.391
Small Bulldozer	0.003	0.004	0.034

TRAFFIC NOISE INCREASE CALCULATIONS

City of Glendora - 2017 Citywide Traffic Counts

ID	Street	From	To	ADT	Peak Hour	Peak Total	K-Factor	D-Factor
1	ADA AVE	GRAND AVE	VERMONT AVE	3,647	14:15	325	8.9%	55.3%
2	ADA AVE	VERMONT AVE	GLENDORA AVE	3,574	14:15	343	9.6%	58.6%
3	ADA AVE	GLENDORA AVE	CULLEN AVE	3,932	7:30	369	9.4%	63.0%
4	AMELIA AVE	COUNTRY CLUB	ROUTE 66	5,454	16:45	576	10.6%	51.7%
5	AMELIA AVE	DUELL ST	AUTO CENTRE DR	7,751	16:45	841	10.9%	55.5%
6	AMELIA AVE	FOOTHILL BLVD	COUNTRY CLUB	5,230	17:00	576	11.0%	58.6%
7	AMELIA AVE	ROUTE 66	DUELL ST	7,586	7:30	919	12.1%	56.2%
8	ARROW HWY	BARRANCA AVE	GRAND AVE	23,768	17:00	1792	7.5%	52.4%
9	ARROW HWY	BONNIE COVE AVE	SUNFLOWER AVE	25,637	7:15	1979	7.7%	52.3%
10	ARROW HWY	GLENDORA AVE	BONNIE COVE AVE	24,931	17:00	1964	7.9%	53.4%
11	ARROW HWY	GRAND AVE	GLENDORA AVE	23,887	16:45	1839	7.7%	52.2%
12	ARROW HWY	SUNFLOWER AVE	VALLEY CENTER AVE	27,407	7:15	2013	7.3%	50.6%
13	AUTO CENTRE DR	57 FWY	AMELIA AVE	12,699	16:30	1390	10.9%	58.3%
14	AUTO CENTRE DR	LONE HILL	57 FWY	23,652	7:45	1786	7.6%	51.8%
15	BARRANCA AVE	BASELINE RD	GLADSTONE ST	17,812	7:15	1519	8.5%	55.2%
16	BARRANCA AVE	BENNETT AVE	FOOTHILL BLVD	7,425	7:30	1083	14.6%	52.6%
17	BARRANCA AVE	FOOTHILL BLVD	ROUTE 66	11,057	7:30	1059	9.6%	50.0%
18	BARRANCA AVE	GLADSTONE ST	ARROW HWY	17,842	7:15	1508	8.5%	53.8%
19	BARRANCA AVE	LEADORA AVE	BENNETT AVE	5,237	7:30	616	11.8%	53.8%
20	BARRANCA AVE	MAUNA LOA AVE	BASELINE RD	16,314	17:00	1383	8.5%	50.2%
21	BARRANCA AVE	SIERRA MADRE AVE	LEADORA AVE	3,232	7:30	398	12.3%	54.2%
22	BARRANCA AVE	ROUTE 66	MAUNA LOA AVE	15,920	14:30	1362	8.6%	50.1%
23	BASELINE RD	BARRANCA AVE	GRAND AVE	8,172	7:15	802	9.8%	52.4%
24	BASELINE RD	DODSWORTH	GLENDORA AVE	13,617	7:45	1146	8.4%	61.4%
25	BASELINE RD	GRAND AVE	DODSWORTH	17,085	7:30	1515	8.9%	62.2%
26	BENNETT AVE	BARRANCA AVE	GRAND AVE	3,005	7:30	632	21.0%	50.2%
27	BENNETT AVE	CULLEN AVE	LIVE OAK AVE	3,660	14:15	441	12.0%	52.7%
28	BENNETT AVE	GLENDORA AVE	CULLEN AVE	4,670	14:15	506	10.8%	55.1%
29	BENNETT AVE	GRAND AVE	GLENDORA AVE	5,056	14:15	520	10.3%	55.5%
30	BENNETT AVE	LIVE OAK AVE	LORAINA AVE	5,496	14:15	695	12.6%	50.9%
31	BENNETT AVE	LORAINA AVE	E/O LORAINA AVE	434	7:45	46	10.6%	53.6%
32	BONNIE COVE AVE	GLADSTONE ST	JUANITA AVE	4,001	14:00	337	8.4%	52.7%
33	BONNIE COVE AVE	JUANITA AVE	ARROW HWY	5,166	16:30	451	8.7%	52.6%
34	BONNIE COVE AVE	GLADSTONE ST	N/O GLADSTONE ST	707	15:15	64	9.1%	50.5%
35	COMPROMISE LINE RD	VALLEY CENTER	ROUTE 66	3,843	7:30	555	14.4%	51.3%
36	CULLEN AVE	ADA AVE	FOOTHILL BLVD	2,046	15:30	199	9.7%	62.4%
37	CULLEN AVE	BENNETT AVE	LEADORA AVE	2,416	7:30	284	11.8%	54.6%
38	CULLEN AVE	FOOTHILL BLVD	BENNETT AVE	3,271	7:45	348	10.6%	51.1%
39	CULLEN AVE	LEADORA AVE	SIERRA MADRE AVE	1,165	14:00	137	11.8%	58.4%
40	ELWOOD AVE	ADA AVE	ROUTE 66	1,940	17:00	164	8.5%	53.6%
41	ELWOOD AVE	BENNETT AVE	FOOTHILL BLVD	1,166	17:00	109	9.3%	74.2%
42	ELWOOD AVE	FOOTHILL BLVD	ADA AVE	2,661	17:00	271	10.2%	59.9%
43	FOOTHILL BLVD	AMELIA AVE	CATARACT AVE	17,785	16:45	1824	10.3%	51.4%
44	FOOTHILL BLVD	BARRANCA AVE	GRAND AVE	12,510	7:30	1147	9.2%	52.2%
45	FOOTHILL BLVD	CITRUS AVE	BARRANCA AVE	12,529	7:30	1113	8.9%	53.0%
46	FOOTHILL BLVD	CULLEN AVE	ELWOOD AVE	9,792	7:45	922	9.4%	57.5%
47	FOOTHILL BLVD	ELWOOD AVE	LORAINA AVE	Segment under construction				
48	FOOTHILL BLVD	GLENDORA AVE	CULLEN AVE	11,982	17:00	1110	9.3%	50.3%
49	FOOTHILL BLVD	GRAND AVE	GLENDORA AVE	17,065	16:30	1435	8.4%	52.1%
50	FOOTHILL BLVD	LONE HILL	AMELIA AVE	5,029	17:00	532	10.6%	55.1%
51	FOOTHILL BLVD	LORAINA AVE	VALLEY CENTER AVE	12,383	7:45	1431	11.6%	52.1%
52	FOOTHILL BLVD	VALLEY CENTER AVE	LONE HILL AVE	14,687	7:30	1335	9.1%	52.2%

notes:

K-Factor: Proportion of ADT occurring in Peak Hour

D-Factor: Proportion of ADT occurring in heavier direction

City of Glendora - 2017 Citywide Traffic Counts

ID	Street	From	To	ADT	Peak Hour	Peak Total	K-Factor	D-Factor
53	GLADSTONE ST	BARRANCA AVE	GRAND AVE	14,864	6:15	1525	10.3%	53.8%
54	GLADSTONE ST	BONNIE COVE AVE	SUNFLOWER AVE	20,470	16:45	1772	8.7%	56.4%
55	GLADSTONE ST	GLENDORA AVE	BONNIE COVE AVE	20,316	16:45	1734	8.5%	56.9%
56	GLADSTONE ST	GRAND AVE	GLENDORA AVE	16,048	6:15	1367	8.5%	54.4%
57	GLADSTONE ST	SUNFLOWER AVE	VALLEY CENTER AVE	21,373	17:00	1783	8.3%	50.8%
58	GLADSTONE ST	VALLEY CENTER AVE	LONE HILL AVE	19,738	16:45	1698	8.6%	51.0%
59	GLENDORA AVE	BASELINE RD	GLADSTONE ST	18,046	17:00	1531	8.5%	55.6%
60	GLENDORA AVE	ADA AVE	ROUTE 66	15,603	16:30	1333	8.5%	52.6%
61	GLENDORA AVE	BENNETT AVE	FOOTHILL BLVD	5,702	14:30	509	8.9%	50.3%
62	GLENDORA AVE	FOOTHILL BLVD	ADA AVE	10,242	14:30	893	8.7%	52.8%
63	GLENDORA AVE	GLADSTONE ST	JUANITA AVE	13,444	7:30	1173	8.7%	51.3%
64	GLENDORA AVE	JUANITA AVE	ARROW HWY	13,123	17:00	1094	8.3%	51.2%
65	GLENDORA AVE	LEADORA AVE	BENNETT AVE	3,650	7:30	383	10.5%	54.0%
66	GLENDORA AVE	MAUNA LOA AVE	BASELINE RD	23,598	17:00	1943	8.2%	53.5%
67	GLENDORA AVE	ROUTE 66	MAUNA LOA AVE	20,359	17:00	1682	8.3%	55.0%
68	GLENDORA AVE	SIERRA MADRE AVE	LEADORA AVE	2,442	7:30	284	11.6%	55.0%
69	GLENDORA MOUNTAIN ROAD	SIERRA MADRE AVE	BIG DALTON CANYON RD	936	15:15	87	9.2%	50.4%
70	GLENDORA MARKETPLACE	LONE HILL	1ST STOP SIGN	10,778	12:30	978	9.1%	51.9%
71	GLENWOOD AVE	ROUTE 66	FOOTHILL BLVD	3,347	14:15	415	12.4%	68.4%
72	GRAND AVE	ADA AVE	ROUTE 66	21,782	14:30	1798	8.3%	50.2%
73	GRAND AVE	BASELINE RD	JUANITA AVE	25,736	16:45	1940	7.5%	51.6%
74	GRAND AVE	BENNETT AVE	FOOTHILL BLVD	13,015	14:15	1250	9.6%	55.2%
75	GRAND AVE	FOOTHILL BLVD	ADA AVE	17,945	14:15	1528	8.5%	50.6%
76	GRAND AVE	JUANITA AVE	ARROW HWY	23,056	16:30	1776	7.7%	51.3%
77	GRAND AVE	LEADORA AVE	BENNETT AVE	8,035	14:15	788	9.8%	51.1%
78	GRAND AVE	MAUNA LOA AVE	BASELINE RD	33,839	14:30	2439	7.2%	52.0%
79	GRAND AVE	ROUTE 66	MAUNA LOA AVE	31,434	14:30	2349	7.5%	51.5%
80	GRAND AVE	SIERRA MADRE AVE	LEADORA AVE	6,032	14:30	592	9.8%	52.4%
81	JUANITA AVE	BONNIE COVE AVE	SUNFLOWER AVE	2,341	7:15	243	10.4%	52.5%
82	JUANITA AVE	GLENDORA AVE	BONNIE COVE AVE	2,972	7:30	307	10.3%	52.5%
83	JUANITA AVE	GRAND AVE	GLENDORA AVE	2,398	7:30	216	9.0%	55.3%
84	JUANITA AVE	SUNFLOWER AVE	VALLEY CENTER AVE	1,862	16:30	173	9.3%	51.8%
85	LEADORA AVE	BARRANCA AVE	GRAND AVE	1,325	7:30	182	13.7%	51.6%
86	LEADORA AVE	CULLEN AVE	LIVE OAK AVE	1,350	7:30	180	13.3%	50.8%
87	LEADORA AVE	GLENDORA AVE	CULLEN AVE	1,413	7:30	170	12.0%	53.3%
88	LEADORA AVE	GRAND AVE	GLENDORA AVE	1,475	7:30	188	12.7%	50.8%
89	LEADORA AVE	LIVE OAK AVE	LORAIN AVE	1,538	7:30	181	11.8%	53.5%
90	LEADORA AVE	LORAIN AVE	VALLEY CENTER AVE	552	13:45	167	30.2%	52.2%
91	LEADORA AVE	YUCCA RIDGE	BARRANCA AVE	495	7:30	53	10.7%	51.7%
92	LIVE OAK AVE	BENNETT AVE	LEADORA AVE	1,901	14:15	205	10.8%	52.7%
93	LIVE OAK AVE	FOOTHILL BLVD	BENNETT AVE	1,987	16:00	183	9.2%	52.3%
94	LIVE OAK AVE	LEADORA AVE	SIERRA MADRE AVE	1,429	7:30	183	12.8%	55.2%
95	LIVE OAK AVE	SIERRA MADRE AVE	PALM AVE	1,569	8:00	150	9.5%	51.0%
96	LONE HILL AVE	AUTO CENTRE DR	GLADSTONE ST	34,709	12:30	2769	8.0%	52.3%
97	LONE HILL AVE	FOOTHILL BLVD	PALOPINTO AVE	11,542	7:45	917	7.9%	51.2%
98	LONE HILL AVE	PALOPINTO AVE	ROUTE 66	14,629	7:30	1360	9.3%	53.0%
99	LONE HILL AVE	PETUNIA AVE	AUTO CENTRE DR	38,920	16:45	2735	7.0%	53.0%
100	LONE HILL AVE	ROUTE 66	PETUNIA AVE	33,901	17:15	2572	7.6%	50.8%
101	LORAIN AVE	BENNETT AVE	FOOTHILL BLVD	8,596	7:30	1067	12.4%	55.6%
102	LORAIN AVE	FOOTHILL BLVD	STEFFEN AVE	7,590	7:30	926	12.2%	53.9%
103	LORAIN AVE	LEADORA AVE	BENNETT AVE	5,445	7:30	686	12.6%	51.4%
104	LORAIN AVE	PALM AVE	SIERRA MADRE AVE	1,815	7:45	251	13.8%	53.5%
105	LORAIN AVE	SIERRA MADRE AVE	LEADORA AVE	3,177	7:30	507	15.9%	50.6%
106	LORAIN AVE	STEFFEN AVE	ROUTE 66	9,636	7:30	1042	10.8%	50.7%

notes:

K-Factor: Proportion of ADT occurring in Peak Hour

D-Factor: Proportion of ADT occurring in heavier direction

City of Glendora - 2017 Citywide Traffic Counts

ID	Street	From	To	ADT	Peak Hour	Peak Total	K-Factor	D-Factor
107	MAUNA LOA AVE	BARRANCA AVE	GRAND AVE	3,723	7:30	431	11.6%	52.5%
108	MAUNA LOA AVE	GRAND AVE	GLENDORA AVE	3,879	7:45	470	12.1%	54.3%
109	MAUNA LOA AVE	E/O GLENDORA		2,329	7:45	224	9.6%	50.2%
110	PALM AVE	LIVE OAK AVE	LORAINA AVE	1,415	7:45	160	11.3%	51.8%
111	PASADENA AVE	ADA AVE	ROUTE 66	1,605	14:15	176	11.0%	62.1%
112	PASADENA AVE	S/O ROUTE 66		2,111	7:45	223	10.6%	54.3%
113	ROUTE 66	BARRANCA AVE	GRAND AVE	23,800	16:45	1758	7.4%	52.7%
114	ROUTE 66	COMPROMISE LINE RD	LONE HILL AVE	32,092	7:30	2620	8.2%	50.7%
115	ROUTE 66	ELWOOD AVE	LORAINA AVE	28,454	7:45	2340	8.2%	51.0%
116	ROUTE 66	GLENDORA AVE	PASADENA AVE	29,636	14:45	2294	7.7%	52.2%
117	ROUTE 66	GRAND AVE	VERMONT AVE	24,352	14:30	1829	7.5%	54.2%
118	ROUTE 66	LONE HILL AVE	AMELIA AVE	18,647	16:45	1809	9.7%	50.2%
119	ROUTE 66	LORAINA AVE	COMPROMISE LINE RD	30,252	7:30	2600	8.6%	50.9%
120	ROUTE 66	PASADENA AVE	ELWOOD AVE	28,150	7:45	2299	8.2%	51.8%
121	ROUTE 66	VERMONT AVE	GLENDORA AVE	23,381	14:45	1755	7.5%	54.1%
122	SIERRA MADRE AVE	BARRANCA AVE	GRAND AVE	7,840	7:00	872	11.1%	51.5%
123	SIERRA MADRE AVE	CULLEN AVE	LIVE OAK AVE	6,608	7:30	660	10.0%	50.1%
124	SIERRA MADRE AVE	GLENDORA AVE	CULLEN AVE	5,500	7:30	550	10.0%	60.8%
125	SIERRA MADRE AVE	GRAND AVE	GLENDORA AVE	7,179	7:15	747	10.4%	50.6%
126	SIERRA MADRE AVE	LIVE OAK AVE	LORAINA AVE	5,605	7:30	615	11.0%	52.4%
127	SIERRA MADRE AVE	LORAINA AVE	VALLEY CENTER AVE	5,582	7:30	595	10.7%	51.1%
128	SIERRA MADRE AVE	YUCCA RIDGE	BARRANCA AVE	7,707	7:30	776	10.1%	50.3%
129	SUNFLOWER AVE	ARROW HWY	JUANITA AVE	14,708	7:30	1182	8.0%	56.3%
130	SUNFLOWER AVE	GLADSTONE ST	210 FREEWAY	18,902	7:15	1587	8.4%	57.2%
131	SUNFLOWER AVE	JUANITA AVE	GLADSTONE ST	14,618	7:30	1145	7.8%	56.0%
132	VALLEY CENTER AVE	ALLEN AVE	GLADSTONE ST	560	19:00	57	10.2%	51.5%
133	VALLEY CENTER AVE	COMPROMISE LINE RD	PALOPINTO AVE	2,991	7:45	391	13.1%	51.3%
134	VALLEY CENTER AVE	FOOTHILL BLVD	SIERRA MADRE AVE	6,454	7:30	654	10.1%	50.9%
135	VALLEY CENTER AVE	GLADSTONE ST	JUANITA AVE	5,880	16:30	525	8.9%	57.2%
136	VALLEY CENTER AVE	JUANITA AVE	ARROW HWY	7,358	17:00	662	9.0%	56.3%
137	VALLEY CENTER AVE	PALOPINTO AVE	FOOTHILL BLVD	4,645	7:45	581	12.5%	54.9%
138	VERMONT AVE	FOOTHILL BLVD	NORTH ADA	4,120	14:15	392	9.5%	53.8%
139	VERMONT AVE	MEDA AVE	FOOTHILL BLVD	2,473	7:30	284	11.5%	51.5%
140	VERMONT AVE	NORTH ADA	ROUTE 66	3,803	14:30	349	9.2%	53.1%
141	VERMONT AVE	ROUTE 66	COLORADO AVE	1,244	14:15	123	9.9%	60.7%

notes:

K-Factor: Proportion of ADT occurring in Peak Hour

D-Factor: Proportion of ADT occurring in heavier direction

COG-08**Traffic Noise Calculations**

Roadway Segment	ADT Volumes		dBa CNEL Increase
	Existing No Project	Existing Plus Project	Project Noise Increase
Glendora Avenue - Leandora Avenue to Bennet Avenue	3,650	3,703	0.1
Leandora Avenue - Glendora Avenue to Cullen Avenue	1,413	1,466	0.2
Leandora Avenue - Grand Avenue to Glendora Avenue	1,475	1,528	0.2
Bennett Avenue - Glendora Avenue to Cullen Avenue	4,670	4,723	0.0
Bennett Avenue - Grand Avenue to Glendora Avenue	5,056	5,109	0.0
Whitecomb Avenue - Glendora Avenue to Vista Bonita Avenue	365	418	0.6