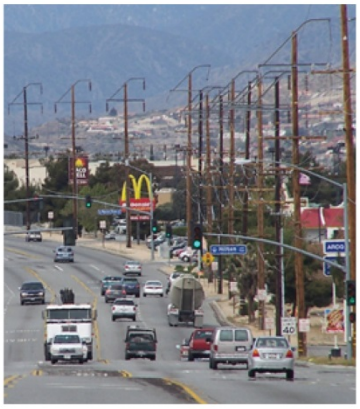
7. NOISE



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7 NOISE ELEMENT

The Town of Yucca Valley's low density and predominately 2 lane roads with relatively calm traffic allows its residents and visitors to experience lower noise levels than in cities located in more urbanized areas. Low levels of noise are part of the community's desert and low density character. As development occurs, appropriate noise controls must be followed since excessive noise levels can negatively affect quality of life and be harmful to public health, especially in sensitive places like residential neighborhoods. The most prevalent noise source in Yucca Valley is motor vehicles on SR-62 and SR-247 because they carry the highest volumes of traffic compared to other roadways in Town. The Town also experiences intermittent noise generated by local industrial, commercial, and aviation activities as well as periodic training exercises conducted at Marine Corps Air Ground Combat Center.

Purpose of the Noise Element

The purpose of the Noise Element is to provide goals and polices that seek to minimize or avoid negative noise impacts. An elevated ambient noise level is expected in any developed community; however, controlling noise to acceptable levels is important for protecting public health and maintaining a quiet environment. Mobile, stationary, and temporary noise sources contribute to the ambient noise level, and the impacts of all three must be evaluated when considering new development.

The Noise Element provides policies in accordance with the Land Use Element and Circulation Element to protect the community from noise impacts as the Town grows.

Relationship to Other Documents

Airport Comprehensive Land Use Plan

The Airport Comprehensive Land Use Plan establishes the standards for acceptable levels of aircraft noise for uses in the vicinity of the Yucca Valley Airport. The 1992 document describes 65 dB CNEL as the standard for acceptable exterior noise for persons living in the vicinity of the airport, and 45 as the maximum interior noise exposure level for all residential uses and other noise-sensitive uses near the airport.

Ambient noise: The composite of noise from all sources. The ambient noise level constitutes the normal or existing level of background noise at a given location.

Decibel (dB): The unit of measure for loudness, based on a logarithmic scale.

A-weighted decibel (dBA): The A-weighted decibel scale discriminates against upper and lower frequencies in a manner approximating the sensitivity of the human ear. The scale ranges from zero for the average least perceptible sound to about 130 for the average pain level.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day obtained after the addition of five decibels to sound levels from 7 pm to 10 pm and 10 decibels to sound levels from 10 pm to 7 am. CNEL describes acceptable and unacceptable ranges of noise.

Intrusive noise: Noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, and tonal or informational content.

Noise contours: Areas around a noise source with equal levels of noise exposure. Noise contours are drawn similarly to a topographic map.

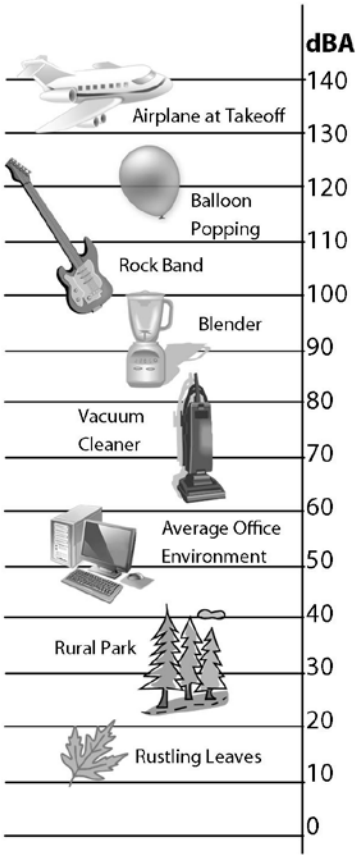
7.1 Noise-Sensitive Land Uses

Sensitive land uses include residential uses, hospitals and medical facilities, residential care facilities, places of worship, schools, daycare centers, and parks. These uses are characterized as areas where people need peace and quiet for their health and well-being. Common strategies used to reduce noise impacts to sensitive land

uses include placing non-sensitive land uses (such as parking lots, garages, etc.) closest to noise sources, increasing the distance between the source and the receiver, orienting buildings to protect outdoor gathering spaces from noise, and locating bedrooms away from major roads.

7.2 Noise Standards

In the context of the General Plan, noise refers to sound pressure variations that are audible to the human ear. The audibility of a sound depends on the amplitude (loudness) and frequency (pitch). The frequency of sound is important because the human ear is more sensitive to some frequencies than others. The A-weighted decibel scale (dBA) measures the perceived loudness of a sound at varying frequencies. Sound itself is measured in decibels (dB). Ranges of noise that are acceptable in a community are often described as Community Noise Equivalent Levels (CNEL).



Noise Levels on A-weighted decibel scale (dBA).

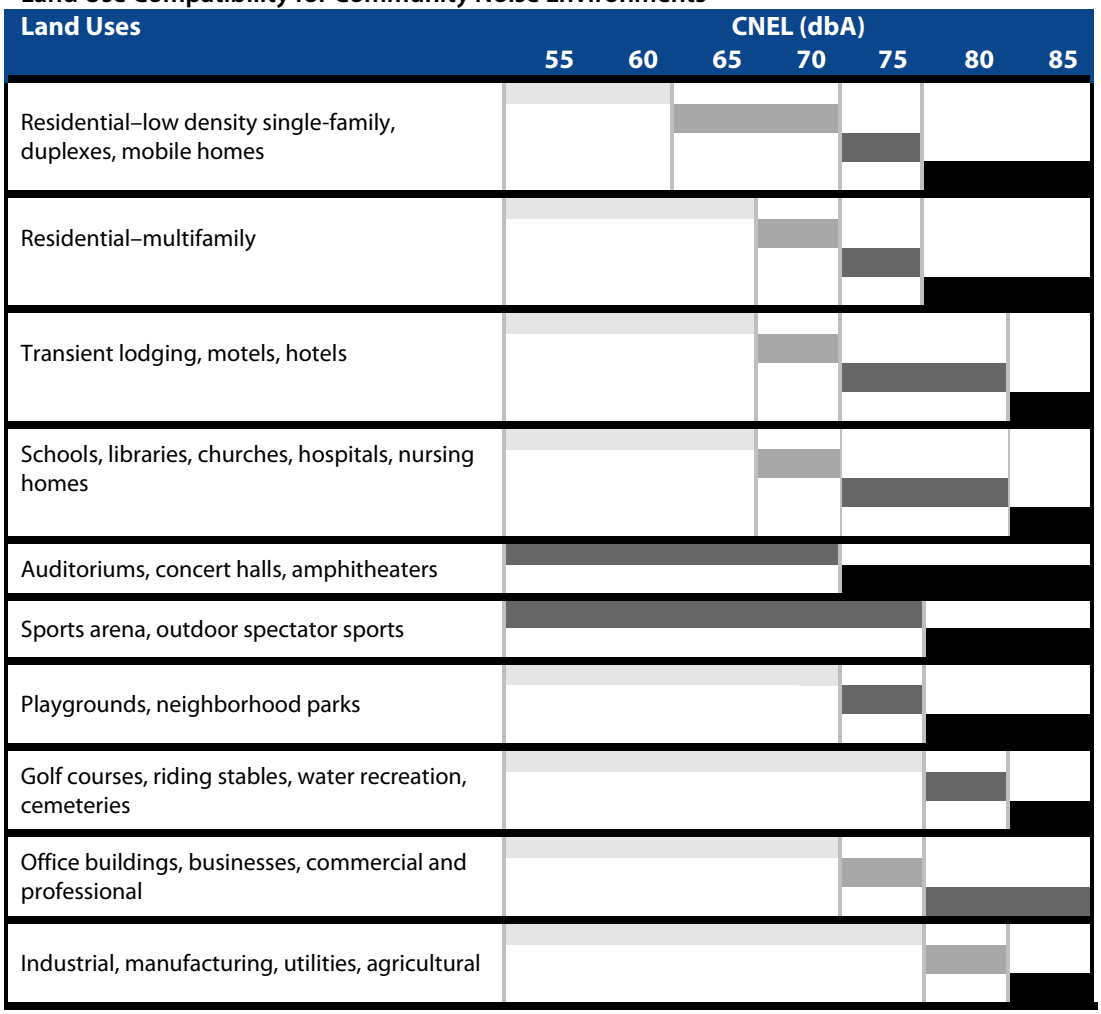
The State of California Office of Planning and Research General Plan Guidelines include noise compatibility guidelines that should be incorporated into land use planning to reduce future noise and land use incompatibilities. These guidelines are primarily used to assess transportation noise impacts to new developments. Table N-1 illustrates the noise compatibility general plan guidelines.

To effectively use the guidelines a jurisdiction sets their own standards based on the community's current exposure to noise sources and their assessment of the importance of noise pollution. The Town of Yucca Valley wants to balance its small desert town atmosphere with new growth; the noise compatibility table was adjusted, in accordance with the State of California's Office of Planning and Research Guidelines, to account for these community values.

The table displays the amount of noise that is acceptable by land use, breaking down acceptability on a scale from normally acceptable to conditionally acceptable, normally unacceptable, and clearly unacceptable. When evaluating new development the table can be used as a guide to determine whether the site will be suitable for the proposed use based on the noise levels it will be subjected to.

For single-family residential and mobile homes, an ambient noise level of up to 60 dBA CNEL is considered "Clearly Acceptable," between 55 and 70 dBA CNEL considered "Normally Acceptable," and between 70 to 75 dBA CNEL "Normally Unacceptable." The least-sensitive land uses where higher noise levels are acceptable include commercial, industrial, and utility uses.

Table N-1
Land Use Compatibility for Community Noise Environments



Normally acceptable. Specified land use is satisfactory based on the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

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.

Normally unacceptable. New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise reduction features included in the design.

Clearly unacceptable. New construction or development should generally not be undertaken.

Source: Office of Planning and Research, California, *General Plan Guidelines*, October 2003.

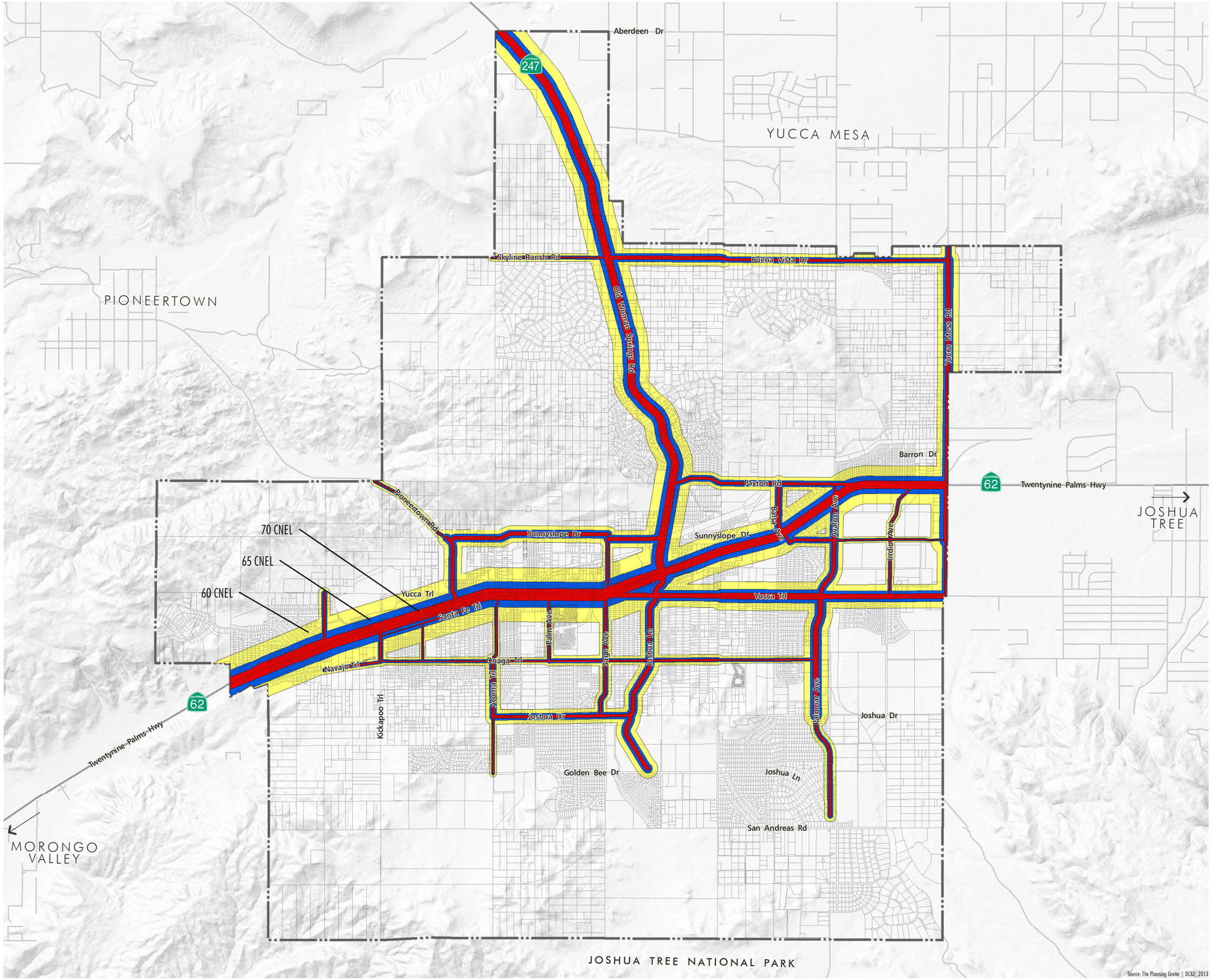
7.3 Future Noise Environment

The noise environment in Yucca Valley will increase slightly as a result of the implementation of the Land Use and Circulation Elements of this General Plan. The most elevated and frequent noise source expected to affect the community in the future is vehicular traffic along SR-62 and SR-247. As commercial and industrial areas build out over time, there is also the potential for increased stationary sources of noise; however, implementation of the policies in this element and compliance with the Town's noise standards mitigate these impacts to an acceptable level.

The future surface noise environment can be described in noise contours. Figure N-1, *Future Noise Level Contours,* is the contour map developed for projected 2035 forecast conditions. Future surface noise impacts to the community are expected to be primarily generated by increased traffic volumes along highways. The 65–70 CNEL contour level represents the threshold for which noise mitigation is required to protect sensitive land uses according to the California Code of Regulations Title 24. The 70+ CNEL contour is another area where noise mitigation is also necessary to accommodate sensitive land uses.

Figure N-1

FUTURE NOISE LEVEL CONTOURS



NOISE CONTOURS

- 60 -65 CNEL
- 65 - 70 CNEL
- 70+ CNEL

NOTE: This figure depicts projected surface transportation noise level contours post-2035

YUCCA VALLEY GENERAL PLAN

TYV-01 08.22.13

0 1,500 3,000 6,000 Feet

THE PLANNING CENTER DC&E

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7.4 Future Noise Conditions

Noise generation and sensitivity of surrounding uses are important considerations when determining land use compatibility. If proposed projects emit noise above a certain level, they may not be compatible with existing land uses, and noise reduction techniques will be necessary to mitigate the noise to an acceptable indoor and outdoor level.

Transportation-Related Noise

Motor vehicle traffic noise is the primary contributor to noise the Town. The noise level from vehicles is dependent on the traffic volume, speed, type, pavement condition, and distance to the human ear. Generally, high speed traffic creates the greatest amount of noise. In Yucca Valley, transportation-related noise is generated by passenger vehicles, public transportation, trucks, and aircraft.

State Route 62 is a heavily traveled roadway making it a significant mobile source of noise in Yucca Valley.

The Yucca Valley Airport is a public use airport operated by the Yucca Valley Airport District. The airport supports private flights and does not offer any commercial passenger flight services. Onsite operations include aircraft maintenance, aircraft storage, and flight training. The airport recommends a series of noise mitigation procedures related to power settings, propeller revolutions, arriving and departing aircraft traffic patterns and times, minimum altitudes before initiating certain maneuvers, and others.

Non-Transportation Related Noise

There are numerous potential sources of noise that are not related to transportation. Stationary sources of noise are noise producers in a fixed location. For example, common sources of noise in industrial areas include heavy equipment and machinery. Restaurants and retail uses can generate excessive noise in commercial areas. Even residential areas face stationary noise issues. Common sources of noise in residential neighborhoods are temporary sources such as air conditioning, power tools, and lawn and pool maintenance equipment. Other temporary sources of nontransportation-related noise include construction, special events, and military operations.

Noise Related to Marine Corps Air Ground Combat Center

The 596,000-acre Marine Corps Air Ground Combat Center is 15 miles east of Yucca Valley. Marines, sailors, other service members, and international troops receive special training at this location. Yucca Valley lies directly under several designated military flight routes. Uninterrupted use of these routes is an essential part of military training. Some properties will experience intermittent noise and

vibration from airplanes, helicopters, munitions, other machinery, training, and operations.

GOAL N1

A noise environment where excessive noise from stationary, transportation-related, and temporary sources of noise are appropriately managed.

Sensitive Receptors: Include, but are not limited to residential uses, hospitals and medical facilities, residential care facilities, places of worship, schools, daycare centers, and parks. These are areas where the occupants are more susceptible to the adverse effects of exposure to noise.

Noise-Sensitive Land Use Policies

Policy N 1-1 Separate excessive noise-generating uses from residential uses and other sensitive receptors through building design and noise-minimizing buffers such as landscaping, berms, and setbacks. (See LU 1-23)

Policy N 1-2 Require noise-reducing site design and building construction in residential and mixed-use projects in areas with outdoor CNEL levels in excess of 65 dBA.

Policy N 1-3 Require daytime only truck deliveries to commercial and industrial uses adjacent to residential uses and other sensitive receptors unless there is no feasible alternative.

Transportation-Related Noise Policies

Policy N 1-4 Encourage the use of alternative transportation such as busing, bicycling, and walking to reduce peak traffic volumes and therefore transportation-related sources of noise (See C1-8).

Policy N 1-5 Encourage traffic-calming road construction and design and engineering methods, where appropriate, to decrease excessive motor vehicle noise (See C 1-19).

Policy N 1-6 Encourage noise-compatible land uses and thoughtful site planning and building design adjacent to highways and airports.

Policy N 1-7 Support CalTrans efforts to use attractive and effective landscaping and other buffers and materials to reduce highway traffic noise.

Policy N 1-8 Support the efforts of Caltrans and other agencies in developing and funding roadway noise-mitigation programs.

Policy N 1-9 Encourage the use of landscaping, berms, setbacks and architecture rather than conventional walls to

reduce motor vehicle noise in an aesthetically pleasing manner.

Policy N 1-10 Encourage all law enforcement agencies operating within the Town to enforce the State Vehicle Code noise standards.

Policy N 1-11 Encourage civilian airport operators to monitor aircraft noise and implement noise-reducing operation measures.

Policy N 1-12 Consider limiting the development of heliports and helipads to areas where noise impacts on adjacent uses can be properly mitigated and where helicopter access has a demonstrated Townwide benefit and noise will not adversely affect adjacent uses.

Non-Transportation-Related Noise Policies

Policy N 1-13 Enforce Town noise standards and monitor compliance with noise standards.

Policy N 1-14 Seek public and grant funding for noise mitigation programs for Town facilities and Town projects.

Policy N 1-15 Require the design and construction of industrial and commercial development to minimize excessive offsite noise impacts to surrounding properties.

Policy N 1-16 Encourage existing and proposed industrial uses to use operation methods that minimize excessive noise.

Policy N 1-17 Consider potential noise impacts before purchasing large or heavy equipment for Town facilities and encourage selection of equipment that generates the least noise.

Policy N 1-18 Enforce standards on the hours of operation for nonemergency construction.

Policy N 1-19 Enforce limits on the hours of refuse collection, street and parking lot sweeping, and other property maintenance operations.

Policy N 1-20 Encourage special events to be planned to minimize the potential effects of noise on adjacent properties to the degree feasible.

Construction is an example of a temporary source of noise.

Marine Corps Air Ground Combat Center Noise Policies

Policy N 1-21 Consult with the Marine Corp Air Ground Combat Center on solutions to noise complaints that are sensitive to the residents of the Town and do not impede the mission of the Marine Corps Base.

Policy N 1-22 Consult Marine Corps Air Ground Combat Center officials on base operations that could adversely affect the noise environment in Yucca Valley.

Policy N 1-23 Notify Yucca Valley residents of periodic base operations that will temporarily increase noise and vibration in the community.