

# NOISE ELEMENT

---

## TABLE OF CONTENTS

<b>I.</b>	<b>INTRODUCTION</b> .....	<b>1</b>
<b>II.</b>	<b>POLICY DOCUMENT</b> .....	<b>4</b>
	A. Sources of Noise .....	4
	B. Noise Sensitive Receptors.....	4
	C. Noise Control .....	4
	D. Noise and Land Use Planning Integration .....	6
	E. Objectives, Policies and Implementation Measures .....	8
<b>III.</b>	<b>BACKGROUND REPORT</b> .....	<b>12</b>
	A. Noise Evaluation and Measurement .....	12
	B. Community Noise Measurement Survey .....	16
	C. Existing and Future Noise Environments .....	16
	D. Issues, Opportunities, and Constraints.....	22
	E. Data Sources .....	23

## LIST OF TABLES

Table N - 1: Noise/Land Use Compatibility Matrix.....	7
Table N - 2: Interior and Exterior Noise Standards.....	8
Table N - 3: Significant Sound Levels in Laguna Woods.....	16
Table N - 4: Change in the Future CNEL from Year 2001 to 2025.....	20
Table N - 5: Noise Environment in Excess of 65 CNEL .....	21

## LIST OF EXHIBITS

Exhibit N - 1: Common Noise Sources and A-Weighted Noise Levels	13
Exhibit N - 2: Community Noise Equivalent Level (CNEL) and Contours .....	15
Exhibit N - 3: Noise Measurement Locations .....	18
Exhibit N - 4: Existing Noise Environment .....	19
Exhibit N - 5: Future (2025) Noise Contours.....	19

# NOISE ELEMENT

---

## I. INTRODUCTION

The development of effective strategies to reduce impacts of excessive noise is an essential part of the land use planning process. Since 1971, the Noise Element has been one of the seven mandatory elements of a general plan. The Noise Element requires that noise sources be considered in establishing land use patterns so as to minimize exposure of residents to excessive noise.

The Noise Element follows the State guidelines in California Government Code Section 65302(f) and Section 46050.1 of the Health and Safety Code. California Government Code Section 65302(f) directs preparation of the Noise Element as follows:

*A noise element shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control in the State Department of Health Services and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all 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, helistop, and military airport operations, aircraft overflights, 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.*

*Noise contours shall be shown for all of these sources and stated in terms of community noise equivalent level (CNEL) or day-night average level (Ldn). The noise contours shall be prepared on the basis of noise monitoring or following generally accepted noise modeling techniques for the various sources identified in paragraphs (1) to (6), inclusive. The noise contours shall be used as a guide for establishing a pattern of land*

# NOISE ELEMENT

---

*uses in the land use element that minimizes the exposure of community residents to excessive noise. The noise element shall include implementation measures and possible solutions that address existing and foreseeable noise problems, if any. The adopted noise element shall serve as a guideline for compliance with the state's noise insulation standards.*

The Noise Element quantifies noise levels and patterns of distribution associated with existing and future land use and development. These are expressed as noise contour lines on a map, which quantify current and projected levels of activity within a community. Contours are descriptors of total noise exposure at a given location for an average day. It is intended that the noise exposure information developed for the Noise Element be incorporated into the General Plan to serve as a basis for long-range planning and project review processes. It is also intended that noise exposure information be used to provide levels and noise source identification for use in the development and enforcement of a Noise Ordinance.

The Noise Element is organized into two sections:

## **Policy Document**

The Policy Document defines a course of action for maintaining a noise environment compatible with the public health and welfare and the relationship of land use decisions to noise considerations. The Policy Document reflects statutory requirements for courses of action appropriate to providing a suitable, noise environment in the City of Laguna Woods. These are defined through a series of “Objectives”, “Policies”, and “Implementation Measures”.

Objectives are broad statements about the ends, or outcomes, relative to the noise environment that are to be achieved over the term of the Noise Element.

Policies suggest strategies for achieving the ends identified as Objectives. Policies provide general direction to decision makers in defining specific actions to achieve Objectives.

# NOISE ELEMENT

---

Implementation Measures are the specific, discreet actions to be taken as part of the strategy for achieving Objectives in maintaining and promoting a quality noise environment.

## **Background Report**

The Background Report provides information about the City of Laguna Woods at the time the General Plan was prepared. The Report includes measurements and analysis to identify the existing noise environment in the City. Noise levels were measured at 15 different locations to establish representative examples of stationary and transportation-related noise sources. All data was obtained by use of sound level meters.

Using traffic data and the noise measurement results, an analysis was performed to determine the existing and future traffic noise levels consistent with the traffic noise model developed by the Federal Highway Administration (FHWA-RD-77-108). Tables identify, for each segment of arterial studied in the City, the location of the traffic noise contours relative to the arterial's centerline.

Several contour maps are included demonstrating the existing and future noise environments in the City. The noise contours represent lines of equal noise exposure, just as the contour lines on a topographic map are lines of equal elevation. The contours shown on the maps are the 60, 65, and 70 dB CNEL noise levels for traffic.

The *Issues, Opportunities, and Constraints* section lists those factors that shaped the future-oriented Policy Document of the Noise Element. *Issues, Opportunities and Constraints* reflect input from participants in a series of General Plan community workshops as considerations likely to influence preparations for and responses to the noise environment.

# NOISE ELEMENT

---

## II. POLICY DOCUMENT

### A. Sources of Noise

Major noise sources in the City of Laguna Woods include freeways, major and minor arterial roadways and noise-generating stationary sources. These can be grouped into two basic categories: transportation sources (primarily traffic) and non-transportation sources. The most significant and common source of noise in urban areas is transportation related. It includes automobiles, trucks, buses, motorcycles, railroads, and aircraft. Motor vehicle noise is of concern because of the traffic volume and roadway proximity to noise sensitive areas.

The City of Laguna Woods is bisected by two major roadways and is adjacent to Interstate 5. The two major roadways are El Toro Road and Moulton Parkway. Santa Maria Avenue is an additional roadway carrying significant traffic with residential land uses directly adjacent to the roadway.

### B. Noise Sensitive Receptors

The most predominant, noise-sensitive land use in the City of Laguna Woods is residential. This land use is considered especially noise sensitive because (1) considerable time is spent by individuals at home, (2) significant activities occur outdoors, and (3) sleep disturbance is most likely to occur in a residential area.

Additionally, the City of Laguna Woods has churches and recreational facilities that are considered noise sensitive. The locations of residential areas and recreational facilities are shown on the General Plan Land Use Map.

### C. Noise Control

Local governments are prevented from establishing noise standards for motor vehicles. Section 21 of the Vehicle Code prohibits local authorities from adopting additional noise limitations on vehicles and cedes responsibility for controlling vehicle noise emissions to State and Federal agencies. The California Highway Patrol (CHP) and local police officers are educated about California's applicable noise limits and proper

# NOISE ELEMENT

---

standards to enforce the State regulations. Officers issue “Notice to Correct” (fix-it tickets) when vehicles are judged in violation of the noise standard.

Cities may regulate noise levels from most non-vehicular noise sources. Land use planning becomes the primary means to avoiding potential noise concerns in the community. Through land use decisions, cities may reduce noise impacts by separating noise generators from noise sensitive uses. Cities can also minimize the impact of transportation noise on new development by requiring that mitigation measures be incorporated into project design i.e. sound attenuating building construction and on-site noise barriers. Site planning and building design and construction decisions are the most common ways of minimizing traffic noise impacts in existing urban environments.

The standards and criteria shown in Table N-1 specify acceptable limits of noise for various land uses throughout the City. These standards and criteria will be incorporated into the land use planning process to reduce future noise and land use incompatibilities. Table N-1 also presents criteria used to assess the compatibility of various land uses within a range of noise environments. These criteria were used to develop the specific Noise Standards presented in Table N-2 and are the basis for City policies related to land uses and acceptable noise levels.

Using the compatibility matrix in Table N-2, a project within Zone A or Zone B is considered compatible with the noise environment. Location within Zone A implies that no mitigation will be needed. Location within Zone B implies that minor soundproofing of the structure may be needed and should be incorporated in the building design prior to issuance of building permits. Location within Zone C indicates that substantial noise mitigation will be necessary and may include noise barriers and substantial building sound insulation. A project in Zone C, however, may include sound attenuation features that mitigate noise levels to the extent that the “normally unacceptable” ranking does not preclude project approval. Project approvals would likely include requirements for adequate mitigation consistent with standards in Table N-2.

The most effective method for controlling community noise impacts from non-transportation noise sources is through application of a Noise Ordinance. Currently, the City of Laguna Woods uses the County of Orange Noise Ordinance. The Noise Ordinance regulates unnecessary,

# NOISE ELEMENT

---

excessive and annoying sounds emanating from stationary sources in the community that may be detrimental to the public health, welfare and safety and contrary to public interest. In the event ambient noise levels are perceived as exceeding exterior and/or interior noise standards, noise measurements using a sound level meter may be the basis for enforcement action by the City.

## **D. Noise and Land Use Planning Integration**

Information relative to existing and future noise environments within the City of Laguna Woods should be integrated into future land use planning decisions. The Noise Element must accurately characterize the noise environment in order for the City to be able to include appropriate noise impact considerations in future land use decisions. Noise and land use compatibility guidelines are presented and noise standards for new developments are set forth in Tables N-1 and N-2. This information will help City staff to identify and avert potential incompatibilities between proposed land uses and the subject noise environment.

# NOISE ELEMENT

**Table N-1: Noise/ Land Use Compatibility Matrix**

Land Use Category	CNEL, dB							Legend
	55	60	65	70	75	80		
Residential - Single family, Multi-family, duplex	A	A	B	C	C			<b>A</b> 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.
Residential - Mobile homes	A	A	B	C	C			<b>B</b> CONDITIONALLY ACCEPTABLE New construction or development should be undertaken only after a detailed analysis of the noise 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
Transient Lodging - Motels, hotels	A	A	B	B	C	C		
Schools, Libraries, Churches, Hospitals, Nursing Homes	A	A	B	C	C			<b>C</b> NORMALLY UNACCEPTABLE New construction or development should generally be discouraged. If it does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Auditoriums, Concert Halls, Amphitheaters, Meeting Halls	B	B	C	C				
Sports Arenas, Outdoor Spectator Sports, Amusement Parks	A	A	A	B	B			<b>D</b> CLEARLY UNACCEPTABLE New construction or development should generally not be undertaken.
Playgrounds, Neighborhood Parks	A	A	A	B	C			
Golf Courses, Riding Stables, Cemeteries	A	A	A	A	B	C	C	
Office and Professional Buildings	A	A	A	B	B	C		
Commercial Retail, Banks, Restaurants, Theaters	A	A	A	A	B	B	C	
Industrial, Manufacturing, Utilities, Wholesale, Service Stations	A	A	A	A	B	B	B	

Source: Taken in part from “Aircraft Noise Impact Planning Guidelines for Local Agencies,  
“U.S. Dept. of Housing and Urban Development, TE/NA-472, Nov. 1972.



# NOISE ELEMENT

**Table N-2: Interior and Exterior Noise Standards**

<u>Land Use</u>	CNEL	
	Interior <sup>1</sup>	Exterior <sup>2</sup>
Residential - Single family, multifamily, duplex, mobile home	45 dB	65 dB
Residential - Transient lodging, hotels, motels, nursing homes, hospitals	45 dB	65 dB
Private offices, church sanctuaries, libraries, board rooms, conference rooms, theaters, auditoriums, concert halls, meeting halls, etc.	45 dB	---
Schools	45 dB	65 dB
General offices, reception, clerical, etc.	50 dB	---
Bank lobby, retail store, restaurant, typing pool, etc.	55 dB	---
Manufacturing, kitchen, warehousing, etc.	65 dB	---
Parks, playgrounds	---	65 dB
Golf courses, outdoor spectator sports, amusement parks	---	65 dB

**Notes:**

1. Standard applies to all habitable interior areas. Standard to be achieved with windows and doors closed. Mechanical ventilation shall be provided as required by the Uniform Building Code.
2. Standard applies to all habitable exterior living areas including: private yards, private patios and balconies, common recreation areas, school playgrounds, etc.

## E. Objectives, Policies and Implementation Measures

The future direction for the City is broadly defined by the Objectives included in each Element of the General Plan. Objectives are statements of community values that will be considered in making choices about future development in the City of Laguna Woods. Noise Element Objectives are intended to guide the application of land use planning procedures as necessary to protect sensitive noise receptors, avoid inappropriate locations for noise generators, and control non-transportation related noise.

Policies are directives for future development decisions. These directives suggest courses of action that will shape the City consistent with the Objectives in the Noise Element.

Implementation Measures are specific actions that may be taken toward effectively planning sensitive land uses to avoid impacts from excessive noise environments.

# NOISE ELEMENT

---

**Objective I:** Protect, to the extent feasible, sensitive noise receptors from the detrimental effects of excessive noise.

**Policy I.A:** Use noise mitigation measures to reduce the impact from transportation noise sources.

## **Implementation Measure:**

I.A.1 Request the inclusion of sound walls, earthen berms, or other acoustical barriers as part of any Caltrans, OCTA or City roadway project, where transportation noise exceeds acceptable standards.

I.A.2. Participate in the planning and environmental review process for any road widenings or road extensions to ensure that appropriate noise mitigation measures are included in the design of the project.

I.A.3. Investigate funding opportunities to reduce transportation noise impacts on residential areas that are presently exposed to noise levels exceeding the City's noise standards.

I.A.4. Request added enforcement of the State's Vehicle Code Noise Standards by the Sheriff's Department.

I.A.5. Minimize risks and noise impacts resulting from aircraft operations by opposing reuse of MCAS—El Toro for commercial or general aviation air operations and participating in and monitoring the planning process for reuse at MCAS—El Toro.

**Objective II:** Recognize the potential effects of noise early in the land use planning process to minimize or avoid detrimental impacts.

# NOISE ELEMENT

---

**Policy II.B:** Incorporate noise considerations into land use planning decisions.

## **Implementation**

### **Measure:**

II.B.1 Review proposed projects to ensure noise/land use compatibility (Table N-1) with the projected noise environment as a guide for future planning and development.

II.B.2. Utilize planning guidelines that establish acceptable noise standards for various land uses throughout the City, as indicated in Table N-2.

II.B.3. Require new residential developments located in proximity to existing roadways and commercial operations to control residential interior noise levels as a condition of approval through mitigation measures such as double-paned windows, noise walls and barriers, etc.

II.B.4. Design mixed-use structures to prevent transfer of noise from commercial to residential uses.

II.B.5. Require new commercial operations located in proximity to existing or proposed residential areas to incorporate noise mitigation into the project's design.

**Objective III:** Control non-transportation noise to avoid exposure to excessive noise levels.

**Policy III.C:** Utilize measures to regulate non-transportation noise impacts.

# NOISE ELEMENT

---

## **Implementation**

### **Measure:**

- III.C.1. Adopt and enforce a Noise Ordinance for the City of Laguna Woods.
- III.C.2. Enforce restrictions on permitted hours of construction activity included in the Noise Ordinance.
- III.C.3. Develop standardized conditions at the project level for the containment of construction noise (e.g., on-site vehicle speeds and vehicle equipment).

## III. BACKGROUND REPORT

This section presents technical information regarding the noise environment in the City of Laguna Woods and the tools necessary to understand the data. The Background Report details the existing and projected noise environment as a starting point for proactive measures to limit noise impacts through Noise Element Goals, Policies, and Implementation Measures. Issues, Opportunities and Constraints reflecting input from participants at community workshops are also included in this section.

### A. Noise Evaluation and Measurement

A description of the character of a particular noise requires the following:

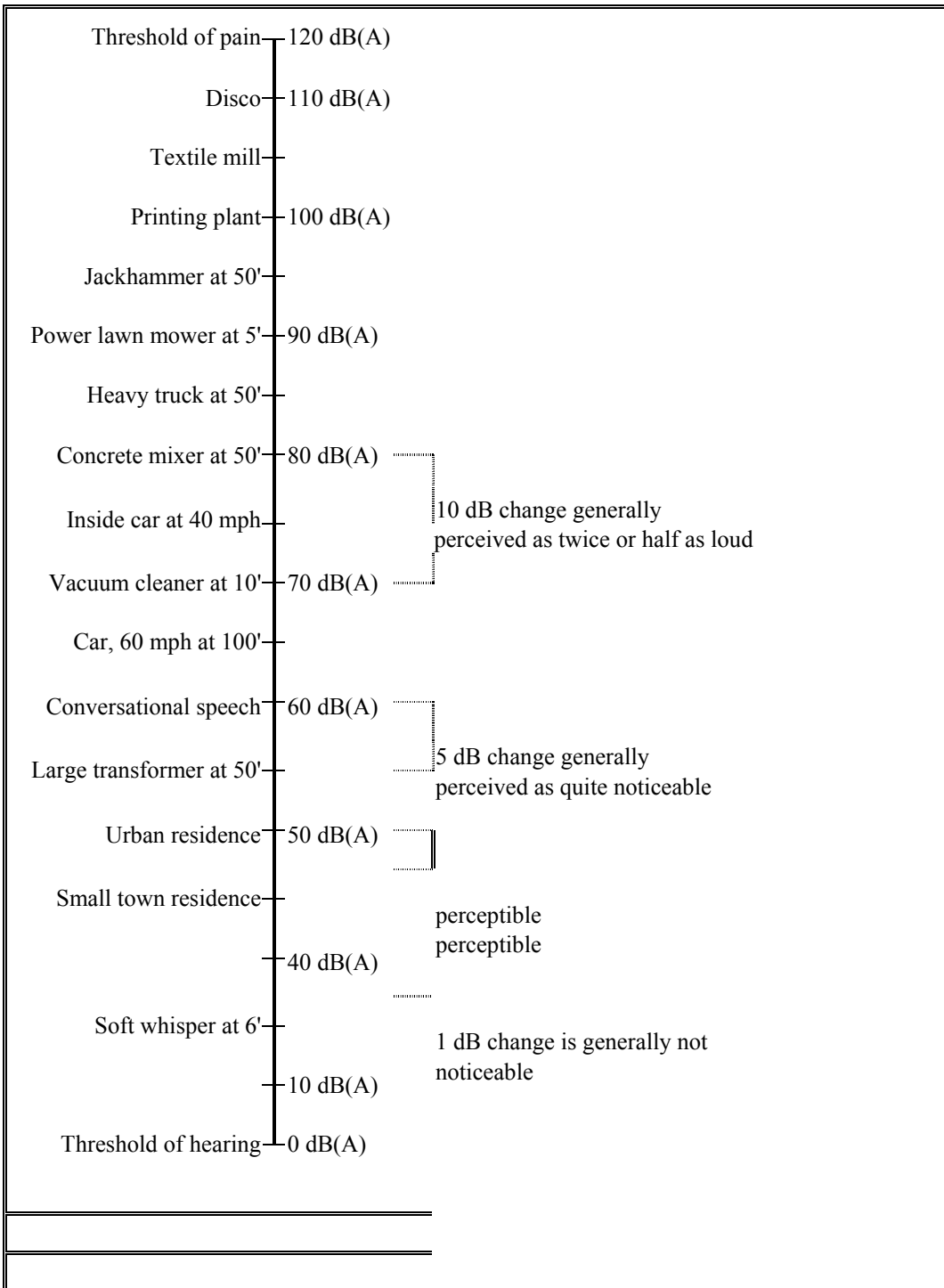
- The amplitude and amplitude variation of the acoustical wave;
- The frequency (pitch) content of the noise; and
- The duration of the noise.

The A-weighted sound pressure level [identified as dB(A)] is the scale of measurement that is most useful in community noise measurement. This scale is weighted to approximate the sensitivity of the human ear to various frequencies.

To establish the A-weighted sound level, an acoustical signal is detected by a microphone and then filtered to emphasize those portions of the noise that are most annoying to individuals. This weighting of sound energy corresponds approximately to the relative annoyance experienced by humans from noises at various frequencies. The sound levels of a few typical sources of noise that may be routinely experienced by people within the City of Laguna Woods are listed in Exhibit N-1.

# NOISE ELEMENT

**Exhibit N-1: Common Noise Sources and A-Weighted Noise Levels**



# NOISE ELEMENT

---

Within the 60 and 65 dB CNEL contours, any proposed or expanded noise sensitive land use (i.e., residential, churches, etc.) should be evaluated on a project-specific basis at the planning stage. A project may be permitted only if appropriate mitigation measures attenuate sound levels consistent with City (County of Orange Noise Ordinance) and/or State (Title 24 of California Codes and Regulations) standards.

Within the 70 dB CNEL contour, noise sensitive developments are normally unacceptable and discouraged. Developments may be approved, however, after detailed analysis indicating that noise reduction requirements may be achieved through noise insulation features included in the design of the project.

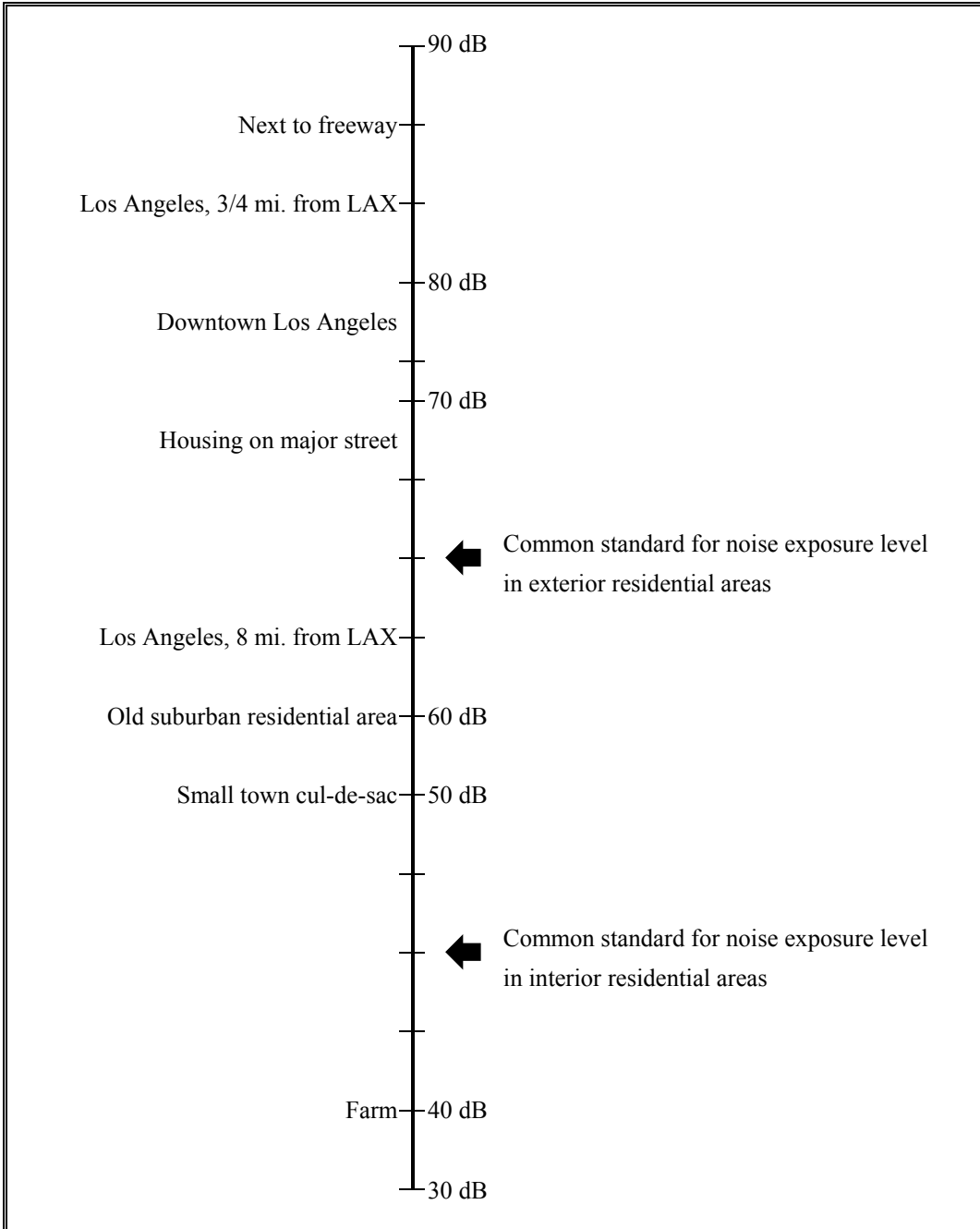
It is recognized that a given level of noise may be more or less tolerable depending on the duration of exposure and the time of day during which the noise is experienced. The California Division of Aeronautics and the California Department of Housing and Community Development have adopted the Community Noise Equivalent Level (CNEL) that factor both noise duration and time of day into measurement of the noise level.

The CNEL measurement includes “weighting” of the average noise level during evening hours (from 7:00 p.m. to 10:00 p.m.) by 5 dB, and the late evening and early morning hours (from 10:00 p.m. to 7:00 a.m.) by 10 dB. The weighting for CNEL from 7:00 p.m. to 7:00 a.m. reflects increased human sensitivity to noise during these hours. Unweighted daytime noise levels are combined with weighted levels and averaged to obtain a CNEL value. Exhibit N-2 provides an example of typical outdoor CNEL at locations throughout Southern California.

The noise environment for the City of Laguna Woods can be described using noise contours developed for the major noise sources within the City. Noise contours represent various locations at which noise levels are equal just as the contour lines on a topographic map are lines of equal elevation. The contours shown on the maps are the 60, 65 and 70 dB CNEL contours reflecting traffic and aircraft noise. The distances from sources to contour lines are shown in tabulated format in the full report.

# NOISE ELEMENT

## Exhibit N-2: Community Noise Equivalent Level (CNEL) and Contours





# NOISE ELEMENT

---

## **B. Community Noise Measurement Survey**

A noise study reflecting locations of significant noise sources and sensitive noise receptors in the City of Laguna Woods was prepared. The results of this extensive survey, including methodology used, are summarized in the full report on file in the Community Development Department at the City of Laguna Woods. The survey measured existing noise levels at noise sensitive land uses and provided empirical data for the correlation and calibration of the computer-modeled noise environment. Actual noise levels, the primary noise sources at each site, and other pertinent data are also presented in the full study.

Various locations within the City of Laguna Woods were surveyed in September 2001 and noise measurement locations were selected so as to determine the impact of noise on residential areas from traffic on major arterial roadways including the I-5 Freeway and from activities at nearby commercial properties. Exhibit N-3 provides the location of the noise measurement positions.

A total of five (5) 24-hour noise measurements and ten (10) limited duration noise measurements were obtained throughout the City. Noise measurement sites were monitored for a minimum of 20 minutes each. Sites impacted by noise from stationary sources such as air conditioning fans and truck deliveries were monitored for a minimum of 2 hours each.

## **C. Existing and Future Noise Environments**

Roadways are the most significant noise sources within the City of Laguna Woods (see Table N-3). The following section provides a discussion of the noise measurements obtained and an inventory of noise sources. Using these measurements, noise exposure contours have been derived for the City of Laguna Woods, and noise impact areas have been identified.

**Table N-3: Significant Sound Levels in Laguna Woods**

<b>Noise Source</b>	<b>Range of Sound Levels</b>
Private aircraft flyover	47 to 59 dB(A)
Traffic on City streets	59 to 79 dB(A)
Traffic on the I-5 freeway	64 to 78 dB(A)
Activities at the Vons shopping center	49 to 71 dB(A)

# NOISE ELEMENT

---

## **CNEL Contours**

The CNEL contours for the roadways within the City and for I-5 Freeway were developed utilizing a methodology based on a simplified version of the Federal Highway Administration's Traffic Noise Model (FHWA-RD-77-108) and traffic data obtained from Caltrans and the Mobility Group\*. The assumptions, methods and noise level data used to develop the contours are explained in detail in the full report located at the Community Development Department at the City of Laguna Woods.

The existing and projected noise contours for the City of Laguna Woods are presented in Exhibits N-4 and N-5. The 60, 65 and 70 dB CNEL contour levels are shown on these maps. Full size exhibits (i.e., Scale 1" = 600') are available for inspection at the Community Development Department at the City of Laguna Woods.

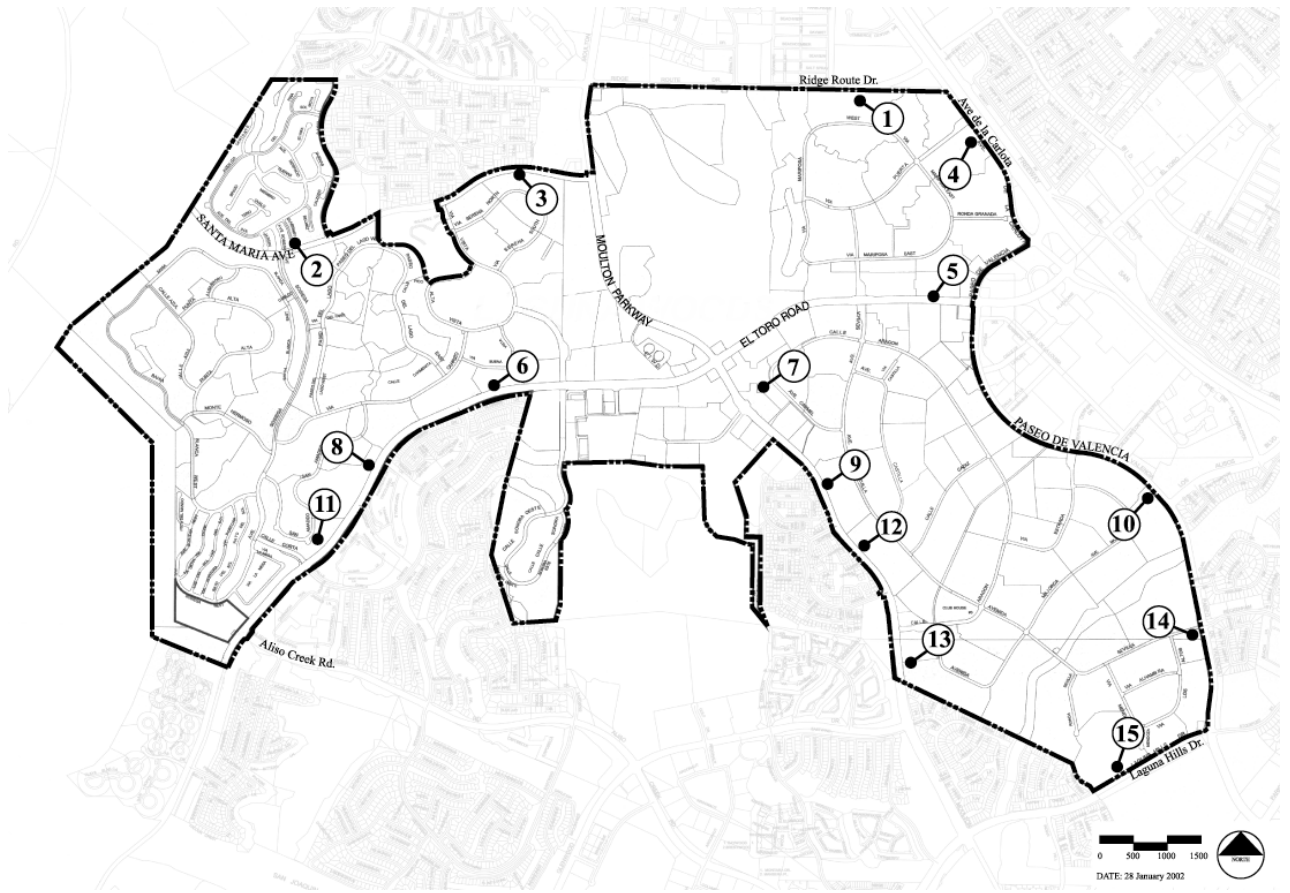
Noise contours are shown for all roadways with significant noise levels where the projected 60 CNEL contour extends beyond the road right-of-way. If the 60 CNEL contour was not anticipated to extend beyond the road right-of-way, the contour was not plotted.

---

\* City of Laguna Woods Traffic Consultant for the preparation of the General Plan

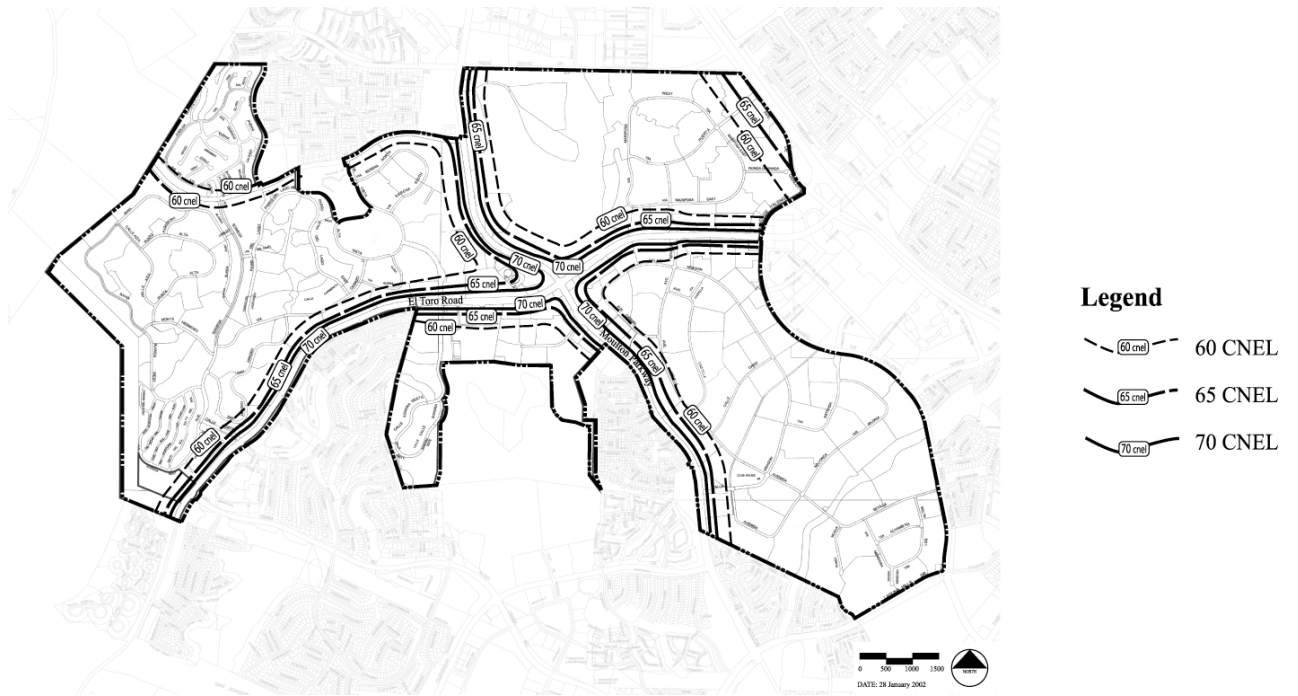
# NOISE ELEMENT

## Exhibit N-3: Noise Measurement Locations

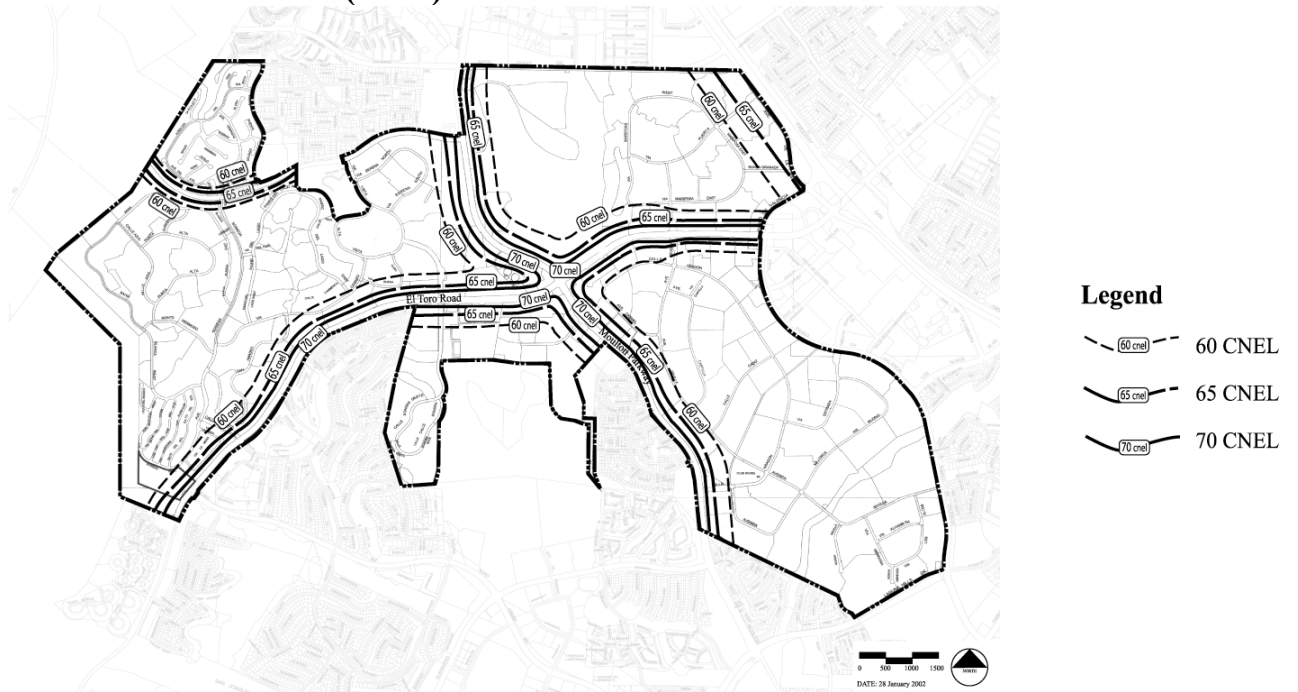


# NOISE ELEMENT

## Exhibit N-4: Existing Noise Environment



## Exhibit N-5: Future (2025) Noise Contours



# NOISE ELEMENT

Future noise sensitive projects (e.g., residential) subject to the 60 CNEL contour and higher may or may not require noise insulation. A noise study specific to the project will be necessary to determine what mitigation, if any, is needed. Noise sensitive projects in areas subject to the 65 CNEL contour and higher will require noise mitigation in the form of noise barriers, additional building sound insulation, etc.

Exhibit N-4 depicts the existing noise environment within the City of City of Laguna Woods and Exhibit N-5 depicts the projected noise environment for year 2025. Table N-4 illustrates the relative differences in noise exposure associated with the existing noise environment (year 2001) and the projected noise environment (year 2025).

**Table N- 4: Change in the Future CNEL from Year 2001 to 2025**

Arterial	Projected Change
Route 5 Freeway	0 dB
Moulton Parkway segment from:	
Gate 12 to El Toro	+0.5 dB
El Toro to Calle Cortez	+0.5 dB
Via Iglesia to City Limits	+0.5 dB
El Toro Road segment from:	
Aliso Creek to Calle Corta	0 dB
Calle Corta to Calle Sonora	0 dB
Calle Sonora to Moulton	0 dB
Moulton to Ave. Sevilla	+0.5 dB
Ave. Sevilla to Paseo de Valencia	+0.5 dB
Santa Maria Avenue	+1.0 dB

As can be seen from the above table, the differences in noise environment from 2001 to 2025 are generally insignificant, being 1 dB or less. This is particularly true for residences adjacent to the I-5 Freeway, Moulton Parkway and El Toro Road, where the existing noise environment already exceeds acceptable levels and will become marginally worse (i.e., 0 to 0.5 dB). However, at residences adjacent to Santa Maria Avenue, the modest increases of 0.5 to 1.0 dB raise the CNEL above the generally recognized guideline of 65 dB.

# NOISE ELEMENT

---

## Freeway Traffic Noise

The results of 24-hour measurements indicate a CNEL of about 69 dB at rear yards of dwellings in the vicinity of the freeway. This level is higher than is considered acceptable and could compromise the welfare of residents exposed to the noise for a long period of time.

## Traffic Noise From Roadways

The CNEL values at noise-sensitive (residential) locations directly adjacent to certain roadway segments exceed 65 dB as indicated in Table N-5 and are generally considered unacceptable.

**Table N-5: Noise Environment in Excess of 65 CNEL**

Roadway	Reach	Time Frame
El Toro Road	Aliso Creek to Paseo de Valencia	Existing & Future
Moulton Parkway	Gate 12 south to City Limits	Existing & Future
Santa Maria Avenue	Avenida Sosiega to Santa Victoria	Future

## Commercial Noise

In general, noise from commercial land uses within the City of Laguna Woods is not considered excessive. A significant impact may exist, however, where residential locations adjoin commercial uses. This impact is primarily related to noise generated by loading dock operations, trucks entering and leaving the area, and mechanical equipment located both inside and outside the building(s). An example is the residential community abutting the Vons supermarket center at El Toro Road and Moulton Parkway (See Noise Measurement Position No. 7 on Exhibit 3). Measurements obtained on a pathway adjacent to a residential neighborhood approximately 19 feet from the south side of Calle Aragon indicate maximum noise levels that range from 49 to 71 dB(A) with an average of 50.4 dB(A).

The County of Orange Noise Ordinance addresses noise levels at residential properties whenever the 65 dB(A) level is exceeded for a certain period of time. The Ordinance uses a sliding scale to determine the amount of time the standard may be exceeded. For example, the noise standard plus 5 dB(A) for a cumulative period of more than 15

# NOISE ELEMENT

---

minutes in any hour is prohibited or the noise standard plus 15 dB(A) for a cumulative period of more than 1 minute in any hour is prohibited. Additional noise analysis may be needed to determine whether or not noise generated at the Vons supermarket center exceeds City standards.

## **Construction Activity**

The impact of construction noise that occurs during the daytime is considered minimal due to the temporary duration of the activity. However, late night and weekend disturbances caused by construction noise may cause a significant impact at nearby residential locations. The County of Orange Noise Ordinance limits construction activity to occur between 7:00 a.m. and 8:00 p.m. on any day, and does not allow construction on Sundays or Federal holidays.

## **Noise-Sensitive Non-Residential Locations**

There are no noise-sensitive non-residential locations within the City of Laguna Woods.

## **D. Issues, Opportunities, and Constraints**

This section highlights the key considerations that shaped the Noise Element as a guide for future action by the City in the areas of the noise environment. The information represents a compilation of input from participants at community workshops and background data collected by planning staff.

### **1. Issues**

#### *a. Disposition of Former Marine Corps Air Station – El Toro*

No other issue represents a threat to the quality of the noise environment in City of Laguna Woods as does potential development of a commercial airport at the former Marine Corps Air Station – El Toro. Residents express overwhelming opposition to the airport. Accordingly, the City of Laguna Woods will continue to work with the El Toro Reuse Planning Authority to reduce potential noise impacts resulting from the future reuse of MCAS El Toro by: 1) participating in and monitoring the planning process for the reuse; and 2) supporting non-aviation uses.

# NOISE ELEMENT

---

## **2. Opportunities**

### *a. Noise and Land Use Planning Integration*

Future land use decisions will be influenced by the noise environment. Through the design review process, the Noise Element standards of compatibility described in Tables N-1 and N-2 will be applied to new development proposals and methods to mitigate anticipated impacts will be employed. Acoustical analysis reports prepared by a qualified acoustical consultant will be required for new sensitive land uses within noise impact areas (i.e., those areas where the existing or future CNEL exceeds 60 dB).

### *b. Roadway Improvement Projects*

The most significant noise-producing activity within the City involves vehicular traffic. The principal method of protecting sensitive land uses from traffic noise is the construction of noise barriers in concert with road improvements. Where necessary to mitigate identified adverse significant noise impacts, the City shall request the inclusion of sound walls, earthen berms, or other acoustical barriers as part of any Caltrans, OCTA or County roadway project.

## **3. Constraints**

Vehicular traffic will continue to increase. Land uses adjacent to major arterials are of concern since transportation provides the most significant noise-producing activity for the City. Unfortunately, residential uses, as the most sensitive land use in the City, are located adjacent to all major arterials and will continue to experience noise impacts. Future land development may be shaped by the preparation of noise studies to ensure an appropriate noise environment by assessing compatible land uses and employing adequate mitigation measures.

### **E. Data Sources**

The primary source in preparing the Noise Element was a technical memorandum prepared by David L. Wieland, Principal Consultant for Wieland Associates, Inc. Secondary information was obtained from sources including: U.S. Environmental Protection Agency, U.S. Department of Transportation, California Department of Health, U.S.



# NOISE ELEMENT

---

Department of Housing and Urban Development, and the Mobility Group.