

**NOISE**



## SECTION 8: NOISE ELEMENT

---

### INTRODUCTION

Excessive noise levels disturb and disrupt human activities and affect the health of individuals. The Noise Element of the *Whittier General Plan* establishes guidelines for controlling and minimizing the impacts of noise in the City. The Noise Element contains a discussion of the characteristics and effects of noise, state and federal guidelines related to noise control, an evaluation of the existing noise environment in the City, and projections of the future noise environment likely to occur in the future. The Element also identifies noise-sensitive land uses and major noise sources in the City.

*Government Code Section 65302 (F)* requires the adoption of a Noise Element to identify existing and projected noise problems of the City and to outline possible solutions to address these problems. Noise contours illustrating existing and future traffic noise levels will serve as a guide for future development in the City.

The goals, policies, and programs contained within the Noise Element are designed to minimize noise problems in the City and to protect public health. With the majority of the planning area devoted to residential uses, it is important that noise sources are controlled at the source, located away from the residential communities, or that buffers are provided between the main sources of noise and residences. The noise mitigation program in the Element explores these options along with noise insulation standards and land use compatibility along major roadways.

Noise sources and the existing noise environment within Whittier are described in the Noise Element Background Report. Concerns that were identified in the report are summarized below.

- Noise affects the physical and psychological well-being of humans and levels of regulations that will be effective in controlling noise sources and protecting people from its harmful effects should be established.
- In Whittier, traffic is a primary source of noise. Traffic noise is directly related to the traffic volume, vehicle speed, roadway grade, motor idling, and acceleration. Land uses along major roadways are exposed to the highest vehicle noise levels and often require insulation and noise reduction measures. Other noise sources in the City include aircraft, occasional trains, commercial and industrial uses, crowds and events attracting large groups of people, trucks and sweepers, residential noise, recreational events, and garden equipment.
- Uses that are particularly sensitive to noise include schools, libraries, hospitals, residences, nursing homes, and churches. These activities are exposed to increasing levels of noise.
- Noise control in Whittier in the past has been prompted by individual complaints, rather than through a regular enforcement program. The development of a noise

ordinance is expected to better address ways to reduce noise levels throughout the community.

## **NOISE GOALS AND POLICIES**

The goals and policies of the Noise Element focus on land use compatibility as it relates to the noise environment. For example, the Noise Element acknowledges the need to provide buffering between noise sensitive land uses and busy roadways. Other policies focus on ways to control those activities that increase excessive noise levels.

### *Issue: Noise Sensitive Uses*

The following goal and supporting policies focus on the impacts of traffic noise on noise sensitive land uses.

**Goal 1** Minimize noise levels throughout the community.

**Policy 1.1** Work toward the separation or buffering of freeways and highways from noise-sensitive land uses such as residences, schools, and hospitals.

**Policy 1.2** Consider steps to correct existing noise problems and avoid future problems through design measures such as buffers and barriers or through abatement procedures.

### *Issue: Noise Sources*

Certain land uses typically generate high levels of noise. For example, manufacturing activities often generate excessive levels of noise which could create a problem for any noise sensitive land use located nearby. The following goal and supporting programs promote the consideration of noise impacts and exposure in land use compatibility.

**Goal 2** Discourage noises which are detrimental to the public health and welfare and contrary to the public interest.

**Policy 2.1** Control, at their sources, any sounds which exceed accepted community noise levels.

**Policy 2.2** Evaluate and control the noise impacts of major developments and construction through the environmental review process.

**Policy 2.3** Encourage attenuation devices and limited hours of operation for new private recreational developments so that neighborhood noise, especially during evening and nighttime hours, can be reduced.

*Section 8: Noise Element (continued)*

**Policy 2.4** Support the enforcement of existing laws pertaining to the noise of off-road vehicles, trucks, and equipment.

**Policy 2.5** Recognize and follow acceptable noise level standards from schools, parks, and other land uses in future planning.

**IMPLEMENTATION PROGRAMS**

Individual actions to achieve noise reduction in the City of Whittier have been developed. The noise goals and policies and their corresponding implementation are provided in Table 8-1. A discussion of these measures is provided in Section 10.

TABLE 8-1 NOISE IMPLEMENTATION		
Goal	Policy	Implementation Measure
1. Minimize Noise Levels	1.1 Work for separation of freeways and highways from noise-sensitive land uses.	Landscaping and Land Use Buffers Acoustical Analysis Reports
	1.2 Correct existing noise problems and avoid future noise problems.	Noise Ordinance
2. Discourage Noise	2.1 Control noise at their sources.	Noise Ordinance OSHA Requirements Noise Complaints
	2.2 Evaluate and control noise impacts during review process.	Environmental Review Acoustical Analysis Reports Noise Ordinance
	2.3 Encourage noise attenuation devices and limited hours of operation.	Noise Ordinance Acoustical Analysis Reports
	2.4 Support the enforcement of noise control regulations.	Noise Control Coordination Noise Ordinance OSHA Requirements
	2.5 Establish acceptable noise standards.	Noise Ordinance

**NOISE COMPATIBILITY GUIDELINES**

Developments in certain areas of the City of Whittier are currently exposed to high noise levels created by roadway traffic and industrial and commercial activities. Federal, state and county

**Section 8: Noise Element (continued)**

agencies are involved in noise control. The City will acknowledge these regulations and will work with responsible agencies in addressing the noise problems of Whittier. In order to minimize noise impacts on future development, the City has developed a Noise Mitigation Program. The program addresses ways for correcting existing noise problems, as well as ways to control future increases in ambient noise levels in the City.

The implementation of the Noise Mitigation Program is dependent on the level of noise that residents are willing to live with and the health effects of noise on people and the importance of a quiet environment to the City.

Noise compatibility guidelines for the City are illustrated in Exhibit 8-1. These guidelines indicate the acceptability of noise exposure levels for different land uses. Future projects should incorporate noise mitigation measures if they will exceed normally acceptable levels as defined by the Guidelines. Noise reduction measures may include any of the following:

- The control of noise at the source, including muffling devices on noise generating equipment;
- The provision of buffers, berms, or setbacks between the noise source and adjacent developments;
- The mitigation of noise impacts, thus reducing the level of exposure, for development adjacent to a noise source (freeways, railroads, etc.);
- Noise reduction at the receiver through the use of sound insulation, blank walls, double paned windows, and other design techniques to reduce interior noise;
- Restriction of noise sensitive land uses adjacent to known noise sources or prohibiting the placement of noise generators near noise sensitive areas;
- Limiting the development of noise sensitive land uses in areas where noise levels exceed acceptable standards pursuant to the noise compatibility guidelines; and
- Use of masking effects, where more pleasant sounds (water, leaves, music, etc.) disguise less desirable noises.

Noise control efforts should be focused on areas where the most number of people are exposed and the highest noise levels are experienced. Noise from transportation sources are regulated by state laws. The State of California Department of Health Services and the Department of Motor Vehicles have noise standards which are enforced by the California Highway Patrol. The City may choose to be involved in this control process through coordination with the highway patrol.

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE					
	L <sub>dn</sub> OR CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL-LOW DENSITY SINGLE FAMILY, DUPLEX MOBILE HOMES	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
RESIDENTIAL- MULTI FAMILY	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
TRANSIENT LODGING- MOTELS, HOTELS	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
SCHOOLS, LIBRARIES CHURCHES, HOSPITALS, NURSING HOMES	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
AUDITORIUMS, CONCERT HALLS, AMPITHEATRES	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
SPORTS ARENA, OUTDOOR SPECTATOR SPORTS	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
PLAYGROUNDS, NEIGHBORHOOD PARKS	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
OFFICE BUILDINGS, BUSINESS, COMMERCIAL AND PROFESSIONAL	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX
INDUSTRIAL, MANUFACTURING, UTILITIES, AGRICULTURE	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX

**LEGEND**



**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.



**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 insulation features included in the design.



**CLEARLY UNACCEPTABLE**

New construction or development should generally not be undertaken.

**CONSIDERATIONS IN DETERMINATION OF NOISE-COMPATIBLE LAND USE**

**A. NORMALIZED NOISE EXPOSURE DESIRED**

Where sufficient data exists, evaluate land use suitability with respect to a "normalized" value of CNEL or L<sub>dn</sub>. Normalized values are obtained by adding or subtracting the constants described in Table 1 to the measured or calculated value of CNEL or L<sub>dn</sub>.

**B. NOISE SOURCE CHARACTERISTICS**

The land use-noise compatibility recommendations should be viewed in relation to the specific source of the noise. For example, aircraft and railroad noise is normally made up of higher single noise events than auto traffic but occurs less frequently. Therefore, different sources yielding the same composite noise exposure do not necessarily create the same noise environment. The State Aeronautics Act uses 65dB CNEL as the criterion which airports must eventually meet to protect existing residential communities from unacceptable exposure to aircraft noise. In order to facilitate the purposes of the Act, one of which is to encourage land uses compatible with the 65dB CNEL criterion wherever possible and in order to facilitate the ability of airports to comply with the Act, residential uses located in Community Noise Exposure Areas greater than 65dB should be discouraged and considered located within normally unacceptable areas.

**C. SUITABLE INTERIOR ENVIRONMENTS**

One objective of locating residential units relative to a known noise source is to maintain a suitable interior noise environment at no greater than 45 dB CNEL of L<sub>dn</sub>. This requirement, coupled with the measured or calculated noise reduction performance of the type of structure under consideration, should govern the minimum acceptable distance to a noise source.

**D. ACCEPTABLE OUTDOOR ENVIRONMENTS**

Another consideration, which in some communities is an overriding factor, is the desire for an acceptable outdoor noise environment. When this is the case, more restrictive standards for land use compatibility, typically below the maximum considered "normally acceptable" for that land use category, may be appropriate.

**DEA DAVID EVANS AND ASSOCIATES, INC.**

City of Whittier



GENERAL PLAN



Section 8: Noise Element (continued)

State law requires multi-family development to be located within areas with noise levels of 65 dB or less unless mitigation measures are provided that would reduce the interior noise levels to 45 dB or less. Sound transmission control standards (Title 24 of the California Administrative Code) outline noise insulation performance standards for habitable structures. Future noise regulations contained in a noise ordinance (as provided for in this General Plan) may include standards for land use compatibility, restriction on the hours of operation for noise sources, periodic investigation of noise sources, noise reduction measures for new and existing developments, time limits for car alarms, and acoustical design in new construction.

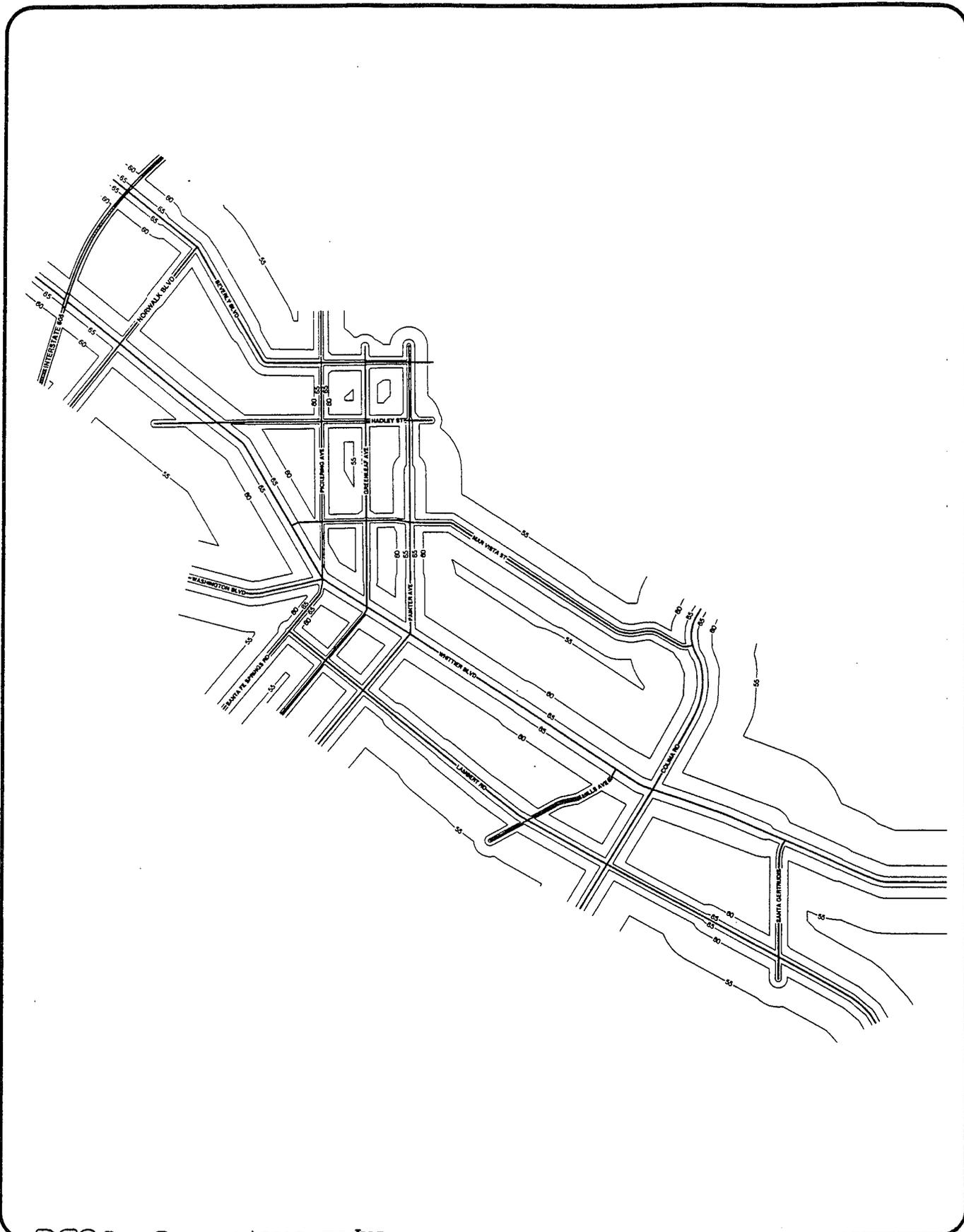
At buildout of the Land Use Plan, noise levels are expected to be higher than today. Using the Federal Highway Administration Noise Prediction Model, the future noise environment is estimated from projected traffic volumes. Table 8-2 shows noise levels along major streets at buildout of the plan and Exhibit 8-2 shows the areas that will be impacted by traffic noise.

TABLE 8-2 FUTURE ROADWAY NOISE LEVELS					
Road Segment	Distance from Roadway Centerline to CNEL (feet)				
	70 CNEL	65 CNEL	60 CNEL	55 CNEL	CNEL at 50' from CL
<u>Beverly Blvd.</u>					
SR-605/Carley	70.0	212.0	667.0	2108.0	70.0
Carley/Palm	0.0	158.0	497.0	1570.0	69.0
Palm/Magnolia	55.0	163.0	512.0	1618.0	69.0
Magnolia/Pickering	0.0	139.0	435.0	1373.0	68.0
Pickering/Greenleaf	0.0	86.0	265.0	834.0	66.0
Greenleaf/Painter	0.0	60.0	187.0	590.0	65.0
Painter/Turnbull Canyon	0.0	0.0	0.0	0.0	54.0
<u>Whittier Blvd.</u>					
West of SR-605	67.0	202.0	636.0	2011.0	70.0
SR-605/Painter	79.0	241.0	760.0	2403.0	71.0
Painter/Calmada	82.0	251.0	791.0	2501.0	71.0
Calmada/Santa Gertrudes	88.0	271.0	853.0	2697.0	71.0
Santa Gertrudes/First	63.0	188.0	590.0	1864.0	69.0
East of First Street	58.0	173.0	543.0	1717.0	69.0
<u>Hadley Avenue</u>					
Glengarry/Whittier Blvd.	0.0	0.0	126.0	393.0	63.0
Whittier Blvd./Hoover	0.0	67.0	203.0	638.0	65.0
Hoover/Pickering	0.0	76.0	234.0	736.0	65.0
Pickering/Greenleaf	0.0	72.0	218.0	687.0	65.0
Greenleaf/Painter	0.0	62.0	187.0	589.0	64.0
East of Painter Avenue	0.0	0.0	111.0	344.0	62.0

## Section 8: Noise Element (continued)

<b>TABLE 8-2 FUTURE ROADWAY NOISE LEVELS (continued)</b>					
Road Segment	Distance from Roadway Centerline to CNEL (feet)				
	70 CNEL	65 CNEL	60 CNEL	55 CNEL	CNEL at 50' from CL
<u>Washington</u> West of Whittier Blvd.	0.0	129.0	404.0	1275.0	68.0
<u>Lambert Avenue</u> Santa Fe Springs/Laurel	0.0	115.0	357.0	1128.0	67.0
Laurel/Calmada	0.0	144.0	450.0	1422.0	68.0
Calmada/Gunn	0.0	158.0	497.0	1570.0	69.0
Gunn/Colima	55.0	163.0	512.0	1618.0	69.0
Colima/Scott	0.0	115.0	357.0	1128.0	67.0
Scott/Santa Gertrudes	0.0	153.0	481.0	1521.0	69.0
Santa Gertrudes/Beach Blvd.	0.0	139.0	435.0	1373.0	68.0
<u>Colima</u> South of Whittier Blvd.	0.0	153.0	482.0	1523.0	69.0
Whittier Blvd./Mar Vista	61.0	183.0	574.0	1815.0	69.0
North of Mar Vista	63.0	207.0	652.0	2060.0	70.0
<u>Santa Fe</u> South of Lambert Rd.	0.0	81.0	249.0	785.0	66.0
Lambert/Whittier Blvd.	0.0	86.0	265.0	843.0	66.0
<u>Norwalk</u> South of Whittier Blvd.	0.0	95.0	295.0	932.0	66.0
Whittier Blvd/El Rancho	0.0	81.0	249.0	785.0	66.0
El Rancho/Beverly Blvd.	0.0	95.0	295.0	932.0	66.0
<u>Pickering</u> Whittier Blvd/Penn	0.0	65.0	202.0	639.0	65.0
Penn/Hadley	0.0	74.0	233.0	737.0	66.0
Hadley/Beverly Blvd	0.0	77.0	241.0	762.0	66.0
<u>Greenleaf</u> South of Whittier Blvd.	0.0	62.0	187.0	589.0	64.0
Whittier Blvd/La Cuarta	0.0	91.0	280.0	883.0	66.0
La Cuarta/Franklin	0.0	115.0	357.0	1128.0	67.0
Franklin/Beverly Blvd.	0.0	0.0	126.0	393.0	63.0

12



DAVID EVANS AND ASSOCIATES, INC.



# EXHIBIT 8-2 FUTURE NOISE CONTOURS



Section 8: Noise Element (continued)

<b>TABLE 8-2 FUTURE ROADWAY NOISE LEVELS (continued)</b>					
Road Segment	Distance from Roadway Centerline to CNEL (feet)				
	70 CNEL	65 CNEL	60 CNEL	55 CNEL	CNEL at 50' from CL
Mills Avenue	0.0	58.0	172.0	540.0	64.0
Santa Gertrudes Avenue	0.0	95.0	295.0	932.0	66.0

Source: FHWA Traffic Noise Prediction Model, David Evans & Associates, Inc., 1992.

The City of Whittier should focus its noise reduction programs in areas within the future 70 dB noise contour and on noise sensitive future uses within the future 65 dB noise contour. The area along Whittier Boulevard and the northern segment of Colima Road are within 70 dB CNEL. At buildout, noise levels will impact commercial, industrial, and high density residential uses along Whittier Boulevard and residential uses along Colima Road, absent any noise control measures. The 65 dB CNEL is found along most major streets in the City. Noise sensitive uses along these corridors include schools, hospitals, libraries, nursing homes, and residential developments. Specific programs to help reduce the adverse impacts of traffic noise are identified in Table 8-1 discussed in Section 10.

