

VII

*Noise*

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# Noise

- 1.1 Provide for a residential environment free from unwarranted and offensive noise.
- 1.2 Minimize the generation and intrusion of noise from the commercial area, where it interferes with the comfort and health of residents, employees and customers.

In an effort to provide a basic understanding of noise environments, following are terms common to discussions of noise and a scale indicating the association between noise measurements and common or familiar sounds.

## AMBIENT NOISE

The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

## A-WEIGHTED SOUND LEVEL

The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter deemphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.

## COMMUNITY NOISE EQUIVALENT LEVEL, CNEL

The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.

## Goals

## Conditions, Trends

Figure VII - 1

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		Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable
RESIDENTIAL - MULTI. FAMILY		Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	
TRANSIENT LODGING -- MOTELS, HOTELS		Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	
SCHOOLS, LIBRARIES, CHURCHES, HOSPITALS, NURSING HOMES		Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	
AUDITORIUMS, CONCERT HALLS, AMPHITHEATRES	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Clearly Unacceptable		
SPORTS ARENA, OUTDOOR SPECTATOR SPORTS	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Clearly Unacceptable		
PLAYGROUNDS, NEIGHBORHOOD PARKS	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable			
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable			
OFFICE BUILDINGS, BUSINESS COMMERCIAL AND PROFESSIONAL	Normally Unacceptable	Normally Unacceptable	Clearly Unacceptable			
INDUSTRIAL, MANUFACTURING UTILITIES, AGRICULTURE	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable			

# Land Use Compatibility Chart

## INTERPRETATION



### 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.

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## DECIBEL dB

A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 0 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter). A decibel measured on the A-weighted filter network is denoted as dB-A. (See Pressure Range Chart)

- 2.1 Significant noise pollution is limited to the amount of traffic noise generated along the Foothill Freeway (Interstate 210) and the Glendale Freeway (State Route 2), the latter of which opened to traffic in April, 1978. In addition, less offensive, yet still significant noise emissions are generated along the Foothill Boulevard commercial strip, where substantial automobile and light truck traffic-generated noise emissions impact noise sensitive uses.
- 2.2 Throughout the remainder of the community, noise emissions consist of typical noise associated with local automobile traffic, service vehicle traffic and residential maintenance and construction activities. In selected neighborhoods, additional noise is generated from school playgrounds and other recreational facilities. However, the noise emissions generated by these facilities do not normally exceed acceptable levels.

### 3.1 FOOTHILL FREEWAY

The Foothill Freeway (Interstate 210) traverses the City on an east-west axis extending from the Golden State Freeway (Interstate 5) west to Pasadena. In 1978, the freeway was not yet completed through Sunland-Tujunga and, consequently, traffic volumes will ultimately increase significantly. Present plans call for this connection to be completed in the early 1980's. Subsequent to completion, projected increases in truck traffic are expected to generate proportionate increases in noise emissions.

## Issues

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For the most part, the freeway is constructed below grade, with adjoining landscaped buffer strips as wide as seventy-five feet on each side. At Hampton Road, in the eastern part of the community, the freeway rises above grade and continues overhead to the eastern City limits.

Noise sensitive uses adjoining the freeway include single family residences, office buildings and several schools. The State Department of Transportation (CALTRANS) has monitored noise levels as a result of many complaints. Based upon measurements taken at several points along the freeway, by Caltrans, noise levels generated from the freeway generally already surpass the normally acceptable 60 decibel (dBA) level for residential dwellings (See Figure VII-1 Land Use Compatibility). Further, Caltrans forecasts that by the year 2000, these noise levels will approach or exceed levels which are only conditionally acceptable.

### 3.2 GLENDALE FREEWAY

The Glendale Freeway (State Route 2) is a north-south limited access route extending from a point just west of the Golden State Freeway (Interstate 5) to its northern terminus at the Foothill Freeway (Interstate 210). The freeway off-ramp is raised approximately 80-100 feet above grade to attain property elevations to intersect with Foothill Boulevard. At its juncture with Foothill Boulevard, the freeway is at grade, with several homes at a somewhat lower grade abutting the east side of the freeway. Noise readings taken in 1978 in this area indicate freeway noise exceeds the normally acceptable level (60 dBA) for residential dwellings and noise emissions are expected to increase slightly by the year 2000. Since the freeway opened in April, 1978, residents adjoining the Freeway and its off-ramp onto Foothill Boulevard have constantly registered concern about the level of noise generated from the freeway. Such residents and the community as a whole agree that noise levels are far beyond the noise levels existing prior to the Freeway and such noise exceeds this community's standards.

PRESSURE RANGE OF RECOGNIZABLE SOUNDS	
PRESSURE IN DECIBELS dBA	COMMON SOUNDS
170	
160	Medium Jet Engine
150	Large propeller aircraft
140	Air raid siren
130	Riveting and chipping
120	Discotheque
110	Punch press
100	Canning plant, subway
90	Heavy city traffic
80	Busy office
70	
60	Normal speech
50	Private office
40	Quiet residential neighborhood
30	
20	Whisper
10	
0	Threshold of hearing

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### 3.3 Foothill Boulevard

Foothill Boulevard is a major thoroughfare, averaging 80 feet in width and carrying four lanes of east-west traffic totaling approximately 18,000 vehicles daily. It is estimated that 80 percent of this traffic consists of local automobile trips. However, the noise generated from this number of vehicles can become objectionable to pedestrians and occupants of residential or commercial units fronting Foothill Boulevard. Significant noise is also generated by truck traffic utilizing Foothill Boulevard as a major delivery route.

- 4.1 The City should pursue all reasonable steps to ensure that noise attenuation facilities will be installed along freeways and freeway approaches in areas adjoining residences and other noise sensitive uses.
- 4.2 The City should strive to regulate and eventually prohibit through truck traffic on Foothill Boulevard east of Ocean View Boulevard.
- 4.3 The City should require all new nonresidential uses to be designed to have minimum noise impact upon neighboring properties or uses.
- 4.4 The City should, in its regulation of activities in residential zones, prevent noise levels in excess of those appropriate to residential living.

## Policies

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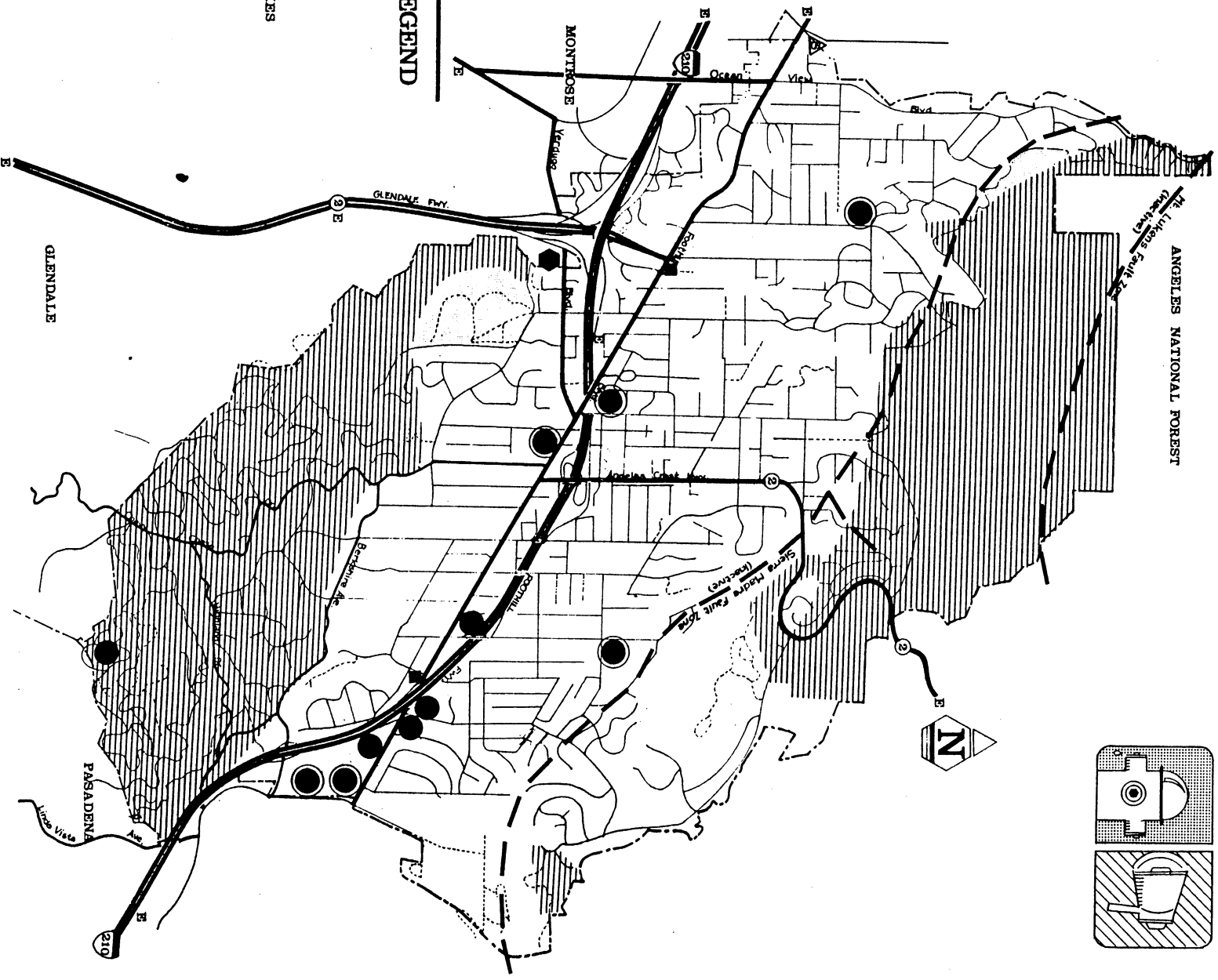
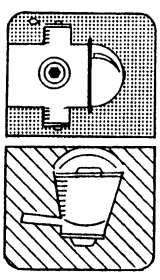
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## Programs










- 5.1 The City will insist that the State provide noise attenuation facilities on freeways adjoining noise sensitive uses.
- 5.2 The City will adopt noise regulations to ensure that development is designed and maintained to minimize noise impacts on adjoining uses.
- 5.3 The City shall undertake a review of its noise control and abatement regulations with an intent to enact and enforce such ordinances as are required to encourage development which will allow that all residents may realize the peaceful and quiet enjoyment of their property.
- 5.4 The City shall obtain noise contour information from the California State Department of Transportation identifying decibel levels along the freeway frontage through the community. Such information shall be mapped and included in this Noise Element to aid in identifying noise problem areas.
- 5.5 The City will adopt noise regulations to ensure that development is designed and maintained to reduce noise and to maintain a suitable interior noise environment.

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**SAFETY · NOISE**



**LEGEND**

- HAZARD AREAS**
  -  Fire
  -  Flood
- NOISE-SENSITIVE FACILITIES**
  -  Public School
  -  Private School
  -  Hospital
- SAFETY FACILITIES**
  -  Sheriff's Department
  -  Fire Station
- SEISMIC SAFETY**
  -  Historical Fault
- EVACUATION**
  -  Potential Route