

City of Bell Gardens GENERAL PLAN

Section 7 Noise Element

SECTION 7: NOISE ELEMENT

INTRODUCTION TO THE NOISE ELEMENT

Every day, people are subjected to a multitude of sounds associated with common day-to-day activities. The effect noise will have on people generally depends on its loudness, duration, and the time of day. Individual annoyance and distraction are the most common effects of noise. Physical health, psychological stability, social cohesion, property values, and economic productivity can also be affected by excessive amounts of noise.

The State of California has mandated that local governments prepare a noise element as part of their general plans. California Government Section 65302(f) indicates:

"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..."

Ambient noise levels can be illustrated through the use of noise contours. This way the Noise Element serves as a guide for development to minimize the potential for noise exposure. The Noise Element also indicates possible solutions that will be effective in addressing existing and foreseeable noise problems.

The Bell Gardens Noise Element consists of the following sections:

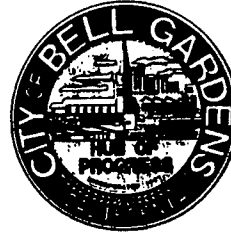
■ **Noise Element Policies and Programs.**

This section indicates the issues, policies, and implementing programs that apply to both existing and anticipated noise levels in the City. The issues address problems such as roadway noise,

from the Long Beach Freeway, and protecting noise sensitive areas from increased noise levels.

■ **Noise Element Background Report.**

This section of the Noise Element describes the existing noise conditions in the City.



NOISE ELEMENT POLICIES AND PROGRAMS

The following issues and policies relating to noise have been identified for the City of Bell Gardens.

The Bell Gardens Noise Element policies are arranged around two key issue areas: land use compatibility and noise sources. The policies assist in the implementation of the City's vision for the future: "Pride of Community/Orgullo en la Comunidad".

Issue 1: Land Use Compatibility

Prolonged exposure to high noise levels cause irreversible hearing damage. There is growing evidence that noise may also have other physiological and psychological effects on humans. The nuisance of noise was once dismissed as being of little consequence. It is now recognized that the importance of maintaining the quality of life is impaired by noise pollution.

The Land Use Element identifies (through the land use designations) areas of existing and future potential noise sensitive receptors. These noise

sensitive receptors include: residential areas, schools, hospitals, and libraries (Exhibit 7-1 locates these uses).

In the City of Bell Gardens, these existing noise sensitive receptors are often located along major arterials and near, or within, industrial and commercial areas. The Long Beach Freeway, along the western boundary of the City, creates noise levels which are normally unacceptable to the adjacent residential, developments based on the application of Department of Housing and Urban Development Guidelines. Although Caltrans has constructed noise attenuation walls along the Long Beach Freeway corridor, noise levels in these residential areas should continue to be monitored.

Policy 1: *The City of Bell Gardens shall discourage the incompatible use of property along major transportation lines, and encourage noise reduction measures for existing uses.*

Issue 2: Other Noise Sources

Other sources of noise are of concern in the City of Bell Gardens, including airplane and railroad noise. There are existing railroad lines along the north and south boundaries of the City, although they are not main lines with high volumes of train traffic. Residential uses are located near the north rail line and manufacturing zones are located adjacent to the south rail line. Regularly scheduled freight switching movements do, however, take place on both lines twice per day.

While there are no airport facilities in the immediate vicinity of Bell Gardens, aircraft destined for the Los Angeles International Airport fly over the City, maintaining their approach route inbound to the airport. At Bell Gardens, these aircraft are at an altitude of 3,500 feet above ground level. Although aircraft noise is

noticeable at this altitude, it has not been found to be a health hazard or inconvenience to the residents of Bell Gardens.

Policy 2: *The City of Bell Gardens shall ensure that the noise caused by sources other than traffic (construction, etc.) are at acceptable levels.*

The following programs implement the above two policies. The programs are identified with their corresponding policies in Table 7-1, following this section, because one program may support more than one policy.

Acoustical Analysis. The City will require that new single-family and multiple-family residential units located within a CNEL contour of 60 dB or greater prepare an acoustical analysis as part of the project design. This analysis and noise control measures must indicate that the interior living space of the units will not exceed a CNEL of 45 dB.

Timing: Ongoing
Agency: Building Department
Funding: General Fund

Barrier Construction. The City will coordinate with Caltrans and any other appropriate agencies in effecting barrier construction or other measures designed to protect the citizens from excessive noise from traffic on the Long Beach Freeway.

Timing: Late 1995
Agency: Public Works
Funding: General Fund

Building Codes. The City will modify the building codes to require appropriate acoustical construction for all residential uses in noise-sensitive areas. For new developments, where appropriate, the City will require such features as sound-rated windows, additional insulation in

exterior walls or roofing systems, vent or mail slot modifications or relocation, and/or forced air ventilation to reduce sound propagation into the dwelling or structure.

Timing: Ongoing
Agency: Building Department
Funding: General Fund

Department of Labor. The federal and state governments have established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and various other adverse physiological, psychological, and social effects associated with noise. The federal government specifically preempts local control of noise emissions from aircraft, railroads, and interstate highways, so as not to impose undue burden on interstate or foreign commerce. The first federal efforts regulating noise were issued by the Department of Labor in 1969 which established noise as an occupational health hazard. As a result, two legislative acts were adopted to regulate noise from industrial fixed-point sources resulting in hearing loss. The Walsh Healey Public Contracts Act (as amended) includes provisions for occupational noise regulations. The second legislative action, the Occupational Safety and Health Act (OSHA) of 1970, establishes noise exposure standards in the workplace. The City shall support the standards outlined in these regulations.

Timing: Late 1995
Agency: Police Department
Funding: General Fund

Freeway Noise Affecting Classrooms. California law regulates freeway noise that may affect classrooms. The law is designed to mitigate noise impacts to existing classrooms, libraries, multi-purposes rooms, and spaces used for pupil personnel services of a public or private elementary or secondary school. State-funded

noise abatement programs are required when freeway traffic or the construction of a freeway exceeds 55 dBA L₁₀ or 52 dBA Leq. The temporary or permanent noise abatement program may include installing acoustical materials, eliminating windows, installing air conditioning, or constructing sound buffer structures. The City shall annually review school noise levels for compliance.

Timing: Ongoing
Agency: Building Department
Funding: General Fund

Source Control. The City will encourage control of noise at its source through: the adoption and enforcement of standards and ordinances, cooperation with other agencies, and support of legislative controls at the state and federal levels.

Timing: 1995
Agency: Community Development, Building
Funding: General Fund

Train Noise Minimization. The City will encourage the adjacent railroad users to minimize the level of noise produced by existing train movements. The City will also monitor any future expansion of railway operations, as they may further impact residential and other noise sensitive areas. The City shall monitor the existing operations on all three rail lines, as well as any plans for future developments. The railroad companies also need to be encouraged to provide noise attenuation features which became available as technological improvements evolve.

Section 7: Noise Element (continued)

Timing: 1995
Agency: City Manager
Funding: General Fund

Trash Collection Noise. The City will support appropriate noise control measures for trash collection as part of the contract for services with the trash collecting company.

Timing: Late 1995
Agency: City Manager
Funding: General Fund

U.S. Department of Housing and Urban Development (HUD). HUD has adopted environmental criteria and standards for

determining whether or not mitigation is required for projects the agency is providing funds. HUD's overall goal is for exterior noise levels not to exceed 55 dB Ldn and for interior noise levels not to exceed 45 dB Ldn. However, for purposes of regulation and to meet other program objectives, exterior sound levels of 65 dB Ldn and below are acceptable and allowable. The City will work with HUD on their projects to maintain acceptable noise levels.

Timing: Ongoing
Agency: Building and Housing
Funding: General Fund

TABLE 7-1 NOISE ELEMENT POLICIES AND PROGRAMS MATRIX	
Policies	Programs
Policy 1: <i>The City of Bell Gardens shall discourage the incompatible use of property along major transportation lines, and encourage noise reduction measures for existing uses.</i>	Acoustical Analysis Barrier Construction Building Codes Department of Labor Freeway Noise Affecting Classrooms Trash Collection Noise U.S. Department of Housing and Urban Development
Policy 2: <i>The City of Bell Gardens shall ensure that the noise caused by sources other than traffic are at acceptable levels.</i>	Department of Labor Train Noise Minimization Source Control
Source: David Evans and Associates, Inc., March 1994.	

NOISE ELEMENT BACKGROUND REPORT



The Noise Element Background Report discusses the characteristics of noise, the existing noise environment in the City, and stationary and mobile sources of noise. This Background Report also summarizes state and federal guidelines for the control of noise levels.

Noise Sources

The City of Bell Gardens, like most communities in the region, is subject to noise from a wide range of sources. These noise sources are typically classified as mobile or stationary sources. Mobile noise sources refer to freeway and roadway traffic, passing trains, and aircraft. Noise sources are stationary if they are not transportation-related and are generally emitted from machinery or equipment such as industrial equipment, air conditioners, loud music from stereos, machinery, and construction activities.

Roadway traffic is often the major source of noise in a community. As in Bell Gardens, vehicles travelling on City streets result in continuous background noise. The adjacent Long Beach Freeway is another major source of mobile noise which adds a constant hum of vehicles to the local environment. Intermittent train travel to the north and south boundaries of the City add to peak noise levels 5 to 7 times daily. Noise impact areas are shown in Exhibit 7-1.

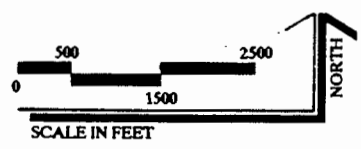
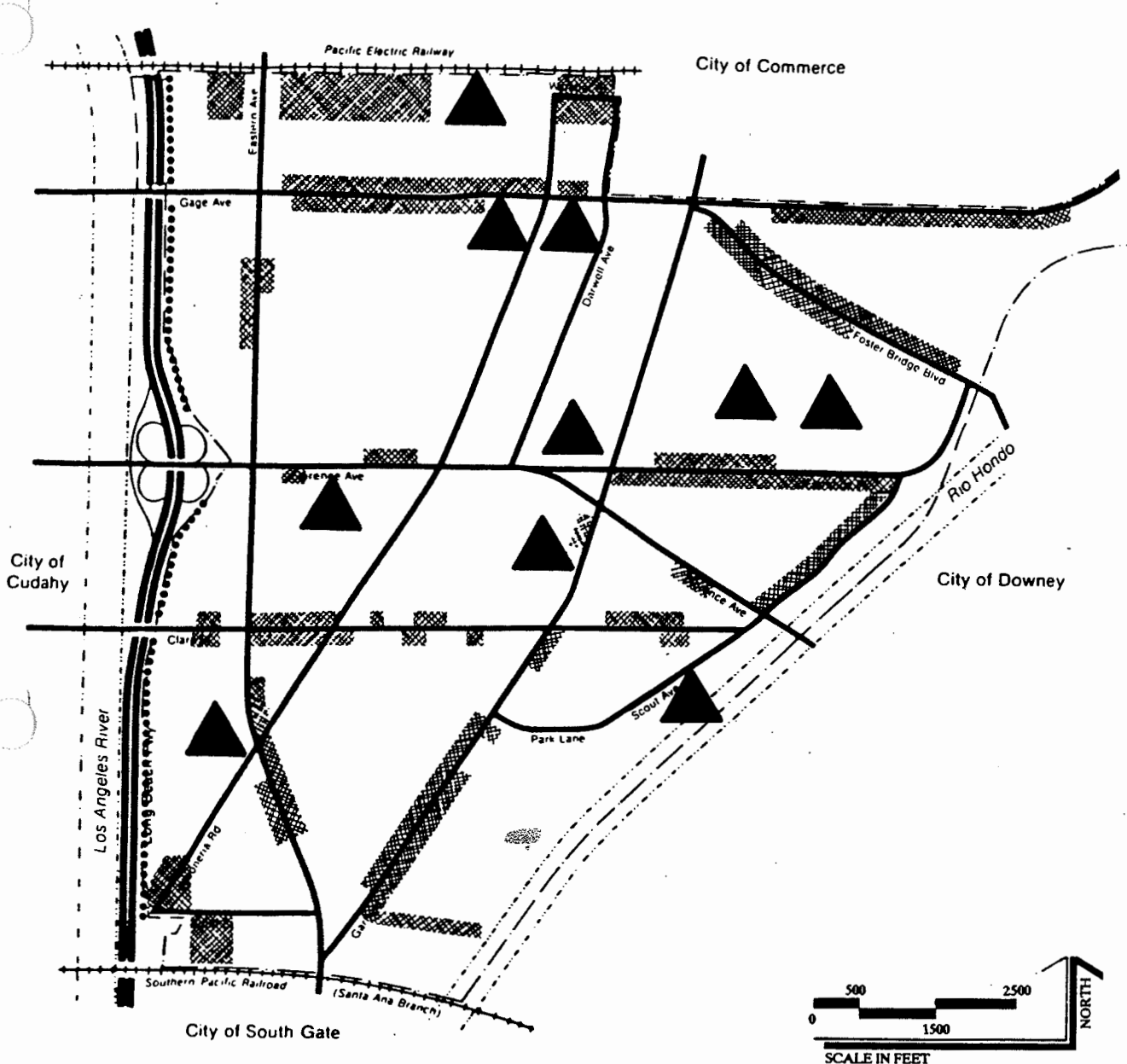
Stationary noise sources in Bell Gardens are concentrated in the industrial and commercial sections of the City. Industrial activities may result in high noise levels at certain times when loud machinery is in operation. Commercial and business activities, clients and patrons are the main sources of noise along the Eastern Avenue commercial corridor. Schools also create their own type of noise from buses, students, school activities, and outdoor games.

Noise Measurements

Community noise levels are measured in terms of the A-weighted decibel, abbreviated dBA. A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear. Additional units of measurement have been developed to

evaluate the longer term characteristics of sound. One of the more common noise measurements uses statistical samples in terms of percentile noise levels. For example, the L_{10} noise level represents the noise level that was exceeded 10% of the time. The L_{50} noise level represents the median noise level; half the time noise exceeded this level and half the time noise was less than this level. The L_{90} noise level represents the background noise level experienced during the monitoring period. The equivalent noise level (Leq) is a single-number representation of the fluctuating sound level in decibels over a specified period of time. The "eq" of Leq stands for "equivalent." The Leq of a time-varying sound is equivalent or equal to a constant unchanging sound of that decibel level.

The Day-Night Average Noise Level (Ldn) is used by all federal agencies and the Community Noise Equivalent Level (CNEL) is the noise and land use compatibility criteria most widely used in the State of California. These measurements represent an average of all measured noise levels obtained over a specified period of time. The Ldn scale represents a time weighted 24-hour average noise level based on the A-weighted decibel. Time weighting refers to adjustments to noise levels that occur during certain sensitive time periods. For example, the late evening and early morning hours (between 10:00 p.m. and 7:00 a.m.) receive a 10 dB weighting. The CNEL scale includes an additional 5 dB adjustment to sounds occurring in the evening (7:00 p.m. to 10 p.m.) in addition to the 10 dB adjustment to sounds occurring in the late evening and early morning hours. Ldn and CNEL are generally considered to be equivalent descriptors of the community noise environment and are within +/- 1.0 dB. Representative noise sources and sound levels are shown in Exhibits 7-2 and 7-3.



NOISE IMPACT AREAS




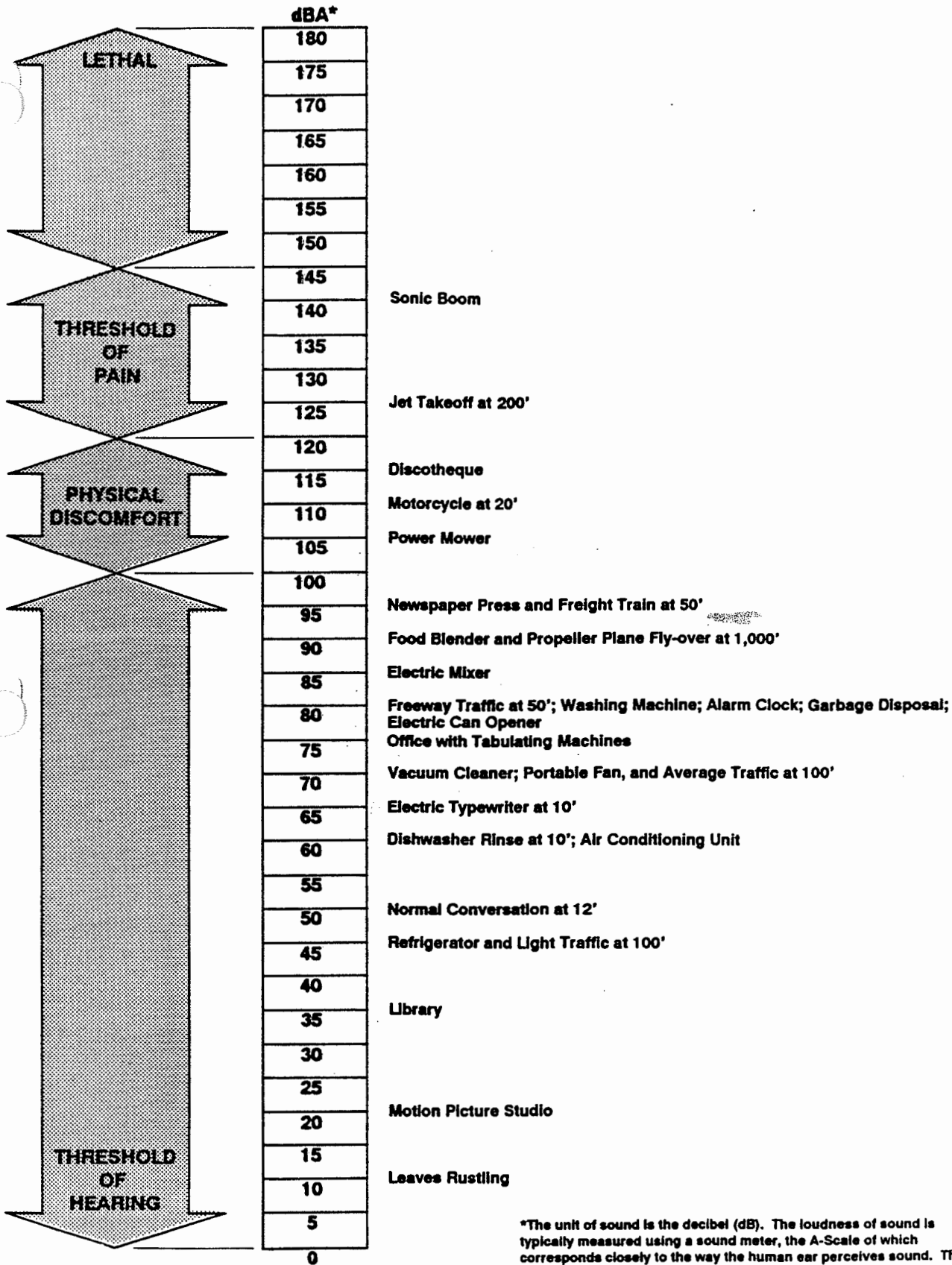
-  RESIDENTIAL AREAS ADVERSELY IMPACTED
-  SCHOOLS
-  NOISE ATTENUATION WALLS

EXHIBIT 7-1
NOISE SENSITIVE RECEPTORS





*The unit of sound is the decibel (dB). The loudness of sound is typically measured using a sound meter, the A-Scale of which corresponds closely to the way the human ear perceives sound. Thus the sound level for noise evaluations is frequently expressed in dBA.


EXHIBIT 7-2 ACOUSTICAL SCALE


LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE					
	L _{dn} 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_{dn}. Normalized values are obtained by adding or subtracting the constants described in Table 1 to the measured or calculated value of CNEL or L_{dn}.

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_{dn}. 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.

EXHIBIT 7-3
NOISE COMPATIBILITY

Sound levels are logarithmical in nature. This means that the 60 dB CNEL of the Long Beach Freeway and the 60 dB CNEL of Atlantic Avenue will not result in 120 dB CNEL in the City. Rather, the addition of the same noise levels will result in a 3 dBA increase in noise levels, thus 63 dB CNEL. It is safe to assume that the existing traffic noise levels in Bell Gardens and the noise from the Long Beach Freeway will create noise levels 3 dBA higher than the highest levels measured.

Noise Standards

Noise influences the quality of the environment. People often relate noisy areas with chaos and disorder while quiet areas evoke more favorable perceptions. Noise can disrupt work activities, decrease the enjoyment of leisure and recreation, interfere with hearing and conversations, or cause physical discomfort. Research shows that noise is linked to stress-related health problems such as heart disease, ulcers and high-blood pressure, though direct relationships have not been established. The negative effects of noise are widely recognized and public agencies have established ways of controlling noise or minimizing their impacts. A number of federal agencies have adopted standards and recommended noise criteria to protect people in both the working and home environments. These are listed below:

- In 1969 and 1970, the Department of Labor established occupational noise regulations through the Walsh Healey Public Contracts Act and set standards for noise exposure for all businesses engaged in interstate commerce through the Occupational Safety and Health Act (OSHA).

- The Federal Highway Administration (FHWA) has set design standards for different land uses. These standards are used in the planning and design of federally-funded highway projects.

- The Department of Housing and Urban Development (HUD) has environmental criteria for determining project acceptability of HUD-assisted housing and financial assistance programs. It includes noise standards of 65 dB Ldn for residential areas. These standards can be used to assess the exposure of sites to present and future noise conditions.

- In 1972, the Noise Control Act authorized the Environmental Protection Agency to publish data on the effects of noise. This included noise levels requisite to protect public health (hearing loss) and welfare (annoyance) with an adequate margin of safety.

- The State of California has adopted noise standards for areas not regulated by the federal government. State standards cover noise from motor vehicles, freeway noise affecting classrooms, noise insulation of structures, occupational noise control, and airport noise. The California Motor Vehicle Code sets noise limits for vehicles according to type of vehicle and date of manufacture.

- The California Streets and Highways Code, Division 1, Chapter 1, Article 6, requires state-funded noise abatement programs for freeway construction or any use which will result in noise levels exceeding 55 dBA L₁₀ or 52 dBA Leq at existing classrooms, libraries, multi-purpose rooms, and pupil personnel services of public and private elementary and secondary schools. The noise abatement program may include acoustical treatment, elimination of windows, air conditioning, sound buffer structures and other mitigation measures.

- The Sound Transmission Control Standards, in the California Administrative Code, Title 24, Building Standards, Chapter 2.5, outline noise insulation performance standards for new hotels, motels, apartment houses, and dwellings other

than detached single-family units. It requires an interior noise level of 45 dB CNEL or less for residential projects. For projects near noise sources (airport, major roads, and industrial areas), an acoustical analysis must be made to show compliance with the standards.

- Noise standards in the California Administrative Code, Title 21, Public Works, Chapter 25, Division of Aeronautics, require compatible land uses within a criterion CNEL contour. Compatible and incompatible land uses have been identified for areas within an airport's 65 dB CNEL. Occupational Noise Control Standards are also found in Title 8, Industrial Relations, Chapter 4, of the California Administrative Code. It provides permissible noise level exposure at the workplace in terms of permitted hours per weekday.

- The California Office of Noise Control has prepared "Guidelines for the Preparation and Content of Noise Elements of General Plans". This provides a guide for land use compatibility of noise sensitive land uses in areas subject to noise levels of 55 to 80 dB CNEL. Residential uses are normally unacceptable in areas with 70 dB CNEL and conditionally acceptable within 60 to 70 dB CNEL.

Existing Noise Environment

Certain activities are particularly sensitive to noise. These include sleep, study, reading, relaxation and other activities requiring intense concentration. Hospitals, libraries and schools are considered noise-sensitive uses and are best located away from noise sources. Residential areas are also recommended to be placed away from noise-impact areas. In Bell Gardens, schools, the library, and residences are sometimes found along major highways and residential developments and mobile homes are often found along major vehicle routes and near industrial areas (Exhibit 7-1).

The noise environment in the City was measured through a noise survey, performed in February 1993 from 10 a.m. to 4 p.m. Ten locations were selected for the survey and noise was metered for a 10-minute interval at each site. Exhibit 7-4 illustrates the 10 locations and Table 7-2 summarizes the results of the survey.

Aircraft and heavy to medium duty trucks shifting into gear were sources of higher noise levels. At commercial intersections (Sites 2,3,4, and 6), there were a high percentage of trucks on the road.

**TABLE 7-2
NOISE MEASUREMENTS**

Site	Location	L _{max}	L ₁₀	L ₃₃	L ₅₀	L ₉₀
1	Northwest corner of Florence Place and Emil Avenue	76	66	63	61	56
2	Southwest corner of Garfield Avenue and Gage Avenue	86	78	76	74	70
3	Northwest corner of Clara Street and Garfield Avenue	80	76	72	70	66
4	Northeast corner of Garfield Avenue and Eastern Avenue	89	75	70	69	67

**TABLE 7-2
NOISE MEASUREMENTS (continued)**

Site	Location	L _{max}	L ₁₀	L ₃₃	L ₅₀	L ₉₀
5	Jaboneria Road, at Muller Street	76	66	66	64	58
6	Northeast corner of Florence Avenue and Eastern Avenue	84	76	74	72	66
7	Corner of Watcher Street and Colmar Avenue	77	66	58	56	52
8	Northeast corner of El Selinda Avenue and Lubec Street	67	66	61	59	54
9	Southeast corner of Loveland Street and Perry Road	66	66	64	62	58
10	Jaboneria Road, northeast of Eastern Avenue	76	74	70	67	61

L_{max} - the maximum sound level recorded during the noise measurement duration.
 L₁₀ - the sound level exceeded 10 percent of the noise measurement duration.
 L₃₃ - the sound level exceeded 33 percent of the noise measurement duration.
 L₅₀ - the sound level exceeded 50 percent of the noise measurement duration.
 L₉₀ - the sound level exceeded 90 percent of the noise measurement duration. It is also considered the background noise level.

Source: David Evans and Associates, Inc., 1993.

Mobile Noise

The major source of ambient noise in the City comes from freeway, roadway and railroad traffic. The noise generated by traffic on the Long Beach Freeway is significant. Where the freeway is closest to the City, its lanes are at a lower elevation which helps reduce noise impacts in the City. Another major source of mobile noise in Bell Gardens consists of auto and truck traffic on major roadways in the area. Based on traffic volumes and potential noise impact on residential areas, the following streets generate the greatest noise impacts: Eastern Avenue, Garfield Avenue, Florence Avenue, Gage Avenue, and parts of Clara Street.

Railroad traffic noise is intermittent throughout the day. The Southern Pacific Railroad lines run along the northern and southern boundaries of the City and are used 7 times per day on average. Trains runs at approximately 25 miles per hour.

Trains create individual noise impacts of several minutes during each pass. Noise from passing trains is dependent on the number of trains, speed, type of tracks, grade crossings, track curves, crossings bells and train horns, and type of trains. Tracks for the Southern Pacific Railroad are welded. Bolted tracks create more noise than welded ones.

While there are no airport facilities in the immediate vicinity of Bell Gardens, aircraft destined for the Los Angeles International Airport do fly over the City within the La Habra-Downey-LAX final approach pattern. Aircraft flying over Bell Gardens in their final approach are at an altitude of 3,500 feet and descending. Noise from these planes are not at levels that could disturb or disrupt local activities.

Traffic noise levels were also calculated using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-109, December 1978), as modified, to generate CNEL values. Table 7-3 indicates the

Section 7: Noise Element (continued)

Distances (in feet) to the 60, 65, and 70 dB CNEL contours of key roadways in the

City. These noise levels do not consider any obstructions to the noise path, such as buildings or changes in topography, and are therefore considered worst-case scenarios.

TABLE 7-3 EXISTING ROADWAY NOISE LEVELS				
Street	Distance (in feet) from the Centerline to 65 CNEL	Distance (in feet) from the Centerline to 60 CNEL	Distance (in feet) from the Centerline to 55 CNEL	CNEL, (MEASURED 50' FEET FROM THE CENTERLINE)
Eastern Avenue				
north of Gage	107.5	326.7	1028.9	66.4
north of Florence	117.9	360.7	1136.6	66.8
south of Florence	162.2	504.3	1591.7	68.3
north of Clara	121.2	371.5	1170.9	66.9
north of Garfield	98.6	297.5	935.9	66.0
Garfield Avenue				
north of Florence	129.2	397.7	1254.1	67.2
south of Florence	91.7	274.4	862.5	65.6
north of Eastern	97.2	292.8	921.2	65.9
Florence Avenue				
west of Eastern	345.5	1084.8	3427.8	71.2
west of Jaboneria	185.5	572.2	1804.8	68.4
east of Jaboneria	202.7	627.7	1980.7	68.8
east of Garfield	157.1	479.8	1511.6	67.6
Gage Avenue				
east of Eastern	126.1	388.4	1224.9	67.2
west of Eastern	115.7	354.4	1117.2	66.8
east of Jaboneria	120.9	371.4	1171.0	67.0
east of Garfield	110.5	337.5	1063.3	66.6
west of Greenwood	106.2	323.6	1019.2	66.4
Florence Place				
east of Garfield	0	73.8	215.1	59.6
west of Scout	0	0	138.6	57.6

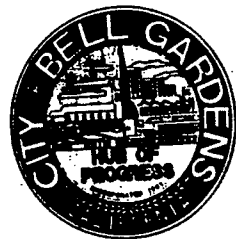
Section 7: Noise Element (continued)

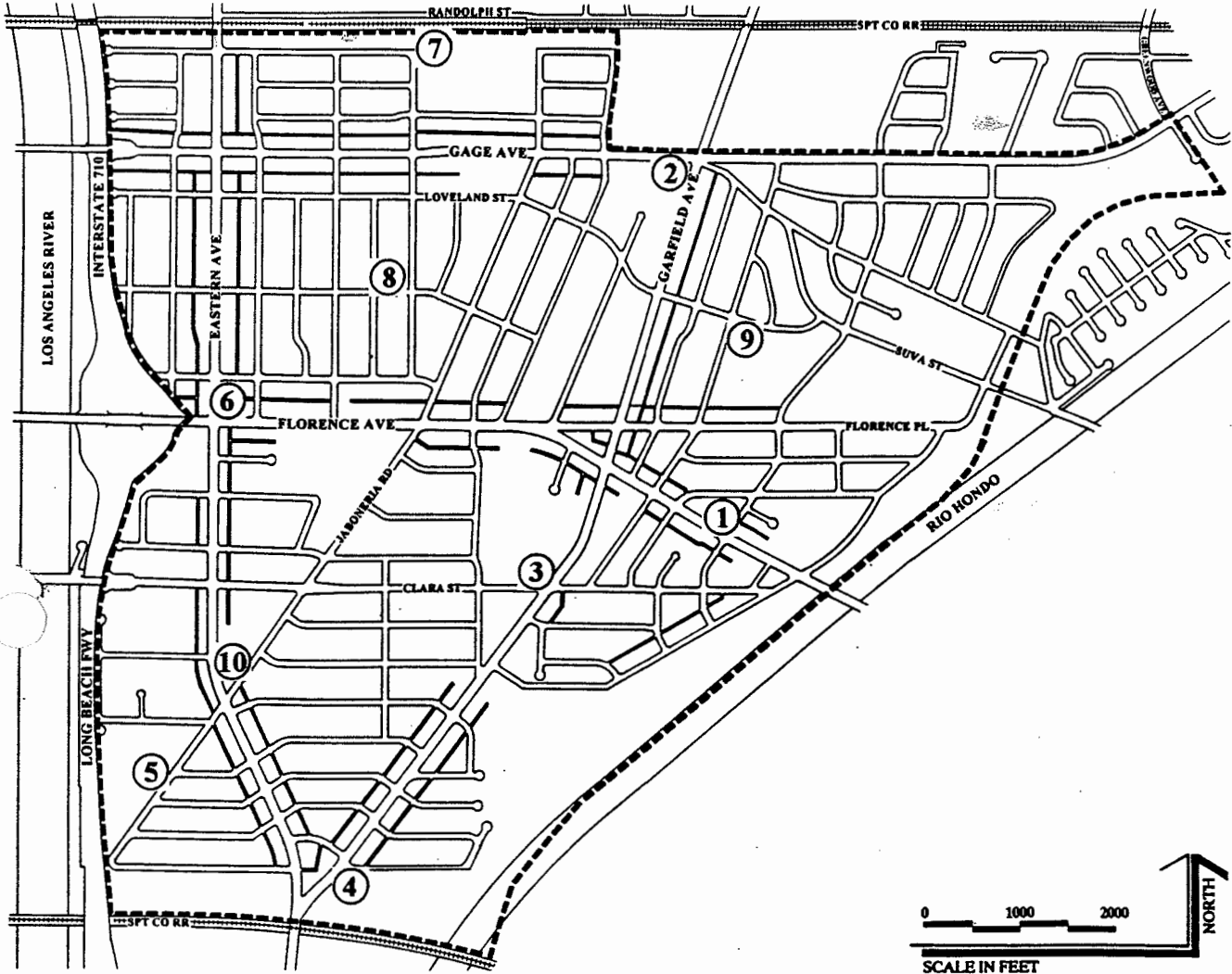
**TABLE 7-3
EXISTING ROADWAY NOISE LEVELS (continued)**

Street	Distance (in feet) from the Centerline to 65 CNEL	Distance (in feet) from the Centerline to 60 CNEL	Distance (in feet) from the Centerline to 55 CNEL	CNEL, (MEASURED 50' FEET FROM THE CENTERLINE)
Jaboneria Road				
south of Gage	0	73.4	227.6	60.6
north of Clara	0	96.6	302.0	61.8
Scout Avenue				
north of Florence	0	65.0	200.5	60.0
south of Florence	0	0	102.8	57.1
Clara Street				
west of Eastern	68.4	211.6	667.7	65.2
east of Eastern	0	118.8	373.1	62.7
east of Garfield	0	89.2	278.3	61.4
Source: David Evans and Associates, Inc., 1993.				

Noise along transportation corridors are highest near the roadway and decrease as the distance from the roadway (noise source) increases. Thus, they may be shown as contours that indicate equal noise exposures from the roadway. Noise contour maps show the relative distance of noise levels with respect to the road centerline. Berms, walls and other barriers to the noise path reduce noise levels. Noise contour maps do not reflect the presence of noise barriers and often overestimate noise levels in a community.

Using the estimated roadway noise levels given above, a noise contour map was developed by plotting all the CNEL points to form a contour. Exhibit 7-5 provides the existing noise contours created by vehicular traffic in the City. The noise impacts of the Long Beach Freeway are shown as separate noise contours.





NOTE: Sites correspond to those listed in Table 7-1.

EXHIBIT 7-4
NOISE SURVEY LOCATIONS