

Noise Element

Introduction

Noise is part of everyday life in a community. *Noise* is generally defined as unwanted sound. Whether a sound is unwanted depends on when and where it occurs, what the listener is doing when it occurs, characteristics of the sound (loudness, pitch and duration, speech or music content, irregularity), and how intrusive it is above background sound levels.

The Noise Element of the General Plan addresses existing and projected noise in the community, sources of noise, land uses sensitive to noise, and noise guidelines and standards for guiding future development.

Purpose of the Noise Element

The Noise Element is one of the required elements of the General Plan. The Noise Element is required to present information on the existing and projected noise environment, existing noise problems, and noise standards. This information is used as a basis for a set of policies and programs that minimize the exposure of community residents to excessive noise.

Noise Fundamentals

Sound is the result of air pressure fluctuations created by vibration of an object. Sound travels through the air as waves of minute air pressure fluctuations. In general, sound waves travel away from the sound source as an expanding spherical surface. The energy contained in a sound wave is consequently spread over an increasing area as it travels away from the source. This spread results in a decrease in loudness at greater distances from the sound source.

Sound-level meters measure the pressure fluctuations caused by sound waves. Because of the ability of the human ear to respond to a wide, dynamic range of sound pressure fluctuations, loudness is measured in terms of decibels (dB) on a logarithmic scale. This approach yields a scale that measures pressure fluctuations using a convenient notation and corresponds to our auditory perception of increasing loudness.

Most sounds consist of a broad range of sound frequencies. Because the human ear is not equally sensitive to all frequencies, several frequency-weighting schemes have been used to develop composite decibel scales that approximate the way the human ear responds to sound levels. The “A-weighted” decibel scale (dBA) is the most widely used for this purpose. Typical A-weighted sound levels for various types of sound sources are summarized in Table 1.

Table 1. Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet fly-over at 300 meters (1,000 feet)	— 110 —	Rock band concert
Gas lawn mower at 1 meter (3 feet)	— 100 —	
Diesel truck at 15 meters (50 feet) at 80 kph (50 mph)	— 90 —	Food blender at 1 meter (3 feet)
Noisy urban area, daytime	— 80 —	Garbage disposal at 1 meter (3 feet)
Gas lawn mower, 30 meters (100 feet)	— 70 —	Vacuum cleaner at 3 meters (10 feet)
Commercial area	— 60 —	Normal speech at 1 meter (3 feet)
Heavy traffic at 90 meters (300 feet)	— 60 —	
Quiet urban daytime	— 50 —	Large business office
		Dishwasher next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime	— 30 —	Library
Quiet rural nighttime	— 20 —	Bedroom at night
	— 10 —	Broadcast/recording studio
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Time-varying sound levels are often described in terms of an equivalent constant decibel level. The *equivalent sound level* (L_{eq}) is a single-value description of average sound exposure over various periods of time. Such average sound exposure values often are weighted to account for the potential for the sound to annoy people (because of the time of day or other factors). The L_{eq} data used for these average sound exposure descriptors are generally based on A-weighted sound-level measurements.

Average sound exposure over a 24-hour period is often presented as a *day-night average sound level* (L_{dn}). L_{dn} values are calculated from hourly L_{eq} values, with the L_{eq} values for the nighttime period (10:00 p.m.–7:00 a.m.) increased by 10 dB

to reflect the greater potential for nighttime noises to disturb people. L_{dn} is commonly accepted as an appropriate descriptor for evaluating community noise exposure.

Existing Noise Environment

Vallejo is a developed, urban city located at the mouth of the Carquinez Straits on the northeast edge of the San Francisco Bay. On the edges of the city, lower-density residential areas abut other suburban development, rural residential, agricultural areas, and bodies of water. In the downtown area, commercial uses, water-related uses, and residential uses coexist.

Existing Noise Sources

In the City of Vallejo, vehicular traffic on roadways is the predominant source of noise. Airplanes and mechanical equipment also contribute to noise, as do intermittent sources such as leaf blowers and construction equipment. Noise levels are typically highest along highways and major traffic corridors.

Traffic and Transportation Noise Sources

Highways in the city include Interstate 80, Interstate 780, and State Routes 29 and 37. Other major traffic corridors include Admiral Callaghan Lane, Benicia Road, Broadway/Alameda Street, Columbus Parkway, Curtola Parkway, Fairgrounds Drive, Georgia Street, Glen Cove Parkway, Lake Herman Road, Redwood Street/Parkway, Sacramento Street, Tennessee Street, and Tuolumne Street.

Bus traffic in the downtown area contributes to noise levels on major streets. A rail line runs north-south through the city along the eastern edge of the downtown area; however, only one to two trains travel on this line each day. Ferries to and from Vallejo dock at the ferry terminal in downtown Vallejo. Horn noise from the ferries can be heard in the downtown area.

No airports are located near Vallejo. Accordingly, noise from aircraft is limited.

Existing traffic noise contours in the city are summarized in Appendix A.

Industrial Uses

Industrial uses generate varying levels of noise. There are very few major industrial uses that generate significant noise levels located in Vallejo. Those uses more likely to generate noise impacts are located on Mare Island. Other isolated industrial uses with noise impacts are distributed throughout the City.

Primary noise sources are associated with loading and movement of products as well as some manufacturing or service related noises. The distance across the Mare Island Straits to the mainland significantly limits the extent to which noise from these uses is heard off the island; however, residential and commercial uses are currently being developed on Mare Island.

Commercial Uses

Commercial uses in Vallejo that generate noise include amusement parks, such as Six Flags Marine World; entertainment uses, such as performance facilities and nightclubs; and other uses, such as retail facilities with noise-generating mechanical equipment or loading docks.

Other Noise-Generating Uses

Other noise-generating uses produce more limited levels of noise. These types of uses include recreational uses and institutional uses. Specific noise generators can include equipment such as air conditioning systems and loudspeakers at stadiums or ball fields.

Noise-Sensitive Land Uses

Noise-sensitive land uses in Vallejo include schools, hospitals, nursing homes, parks, and residential areas. In Vallejo, many of these uses are located in areas of high urban activity and are subject to relatively high outside noise levels.

Noise Complaints

The Police Department is responsible for responding to general noise complaints. Noise complaints are scattered throughout the City; however, there is a concentration of noise complaints in some of the older areas of town where industrial uses abut residential uses. The buildings in these areas were constructed prior to the adoption of the Zoning Ordinance in 1947. Many of these buildings, both industrial and residential, are of historic and architectural interest.

There has been a trend in the last few years to adaptively reuse some of the old industrial buildings in these areas for less intense commercial uses that are more compatible with the adjacent and neighboring residential buildings. The adaptive reuse of the historic buildings should be encouraged and will lessen the noise level incompatibilities in these older areas of town; however, development policies that encourage the mixing and co-existence of land uses will continue to make noise attenuation a challenge within Vallejo.

Projected Noise Environment

Projected traffic noise contours in the city for the year 2025 are summarized in Appendix A.

Effects of Noise on People and Basis for Noise Standards

The noise environment can have a significant effect on overall quality of life. The known effects of noise on people include hearing loss (generally not a factor with community noise), interference with communication, interference with sleep, negative physiological responses, and annoyance. Because of the potentially adverse effects of noise on people, various federal and State agencies have, over the years, developed compatibility thresholds for various types of land uses. Compatibility thresholds for exterior noise developed by the U.S. Environmental Protection Agency form the basis for thresholds recommended by the Governor's Office of Planning and Research (OPR). The exterior noise compatibility standards presented here are based on those recommended by the OPR. The interior noise standard presented here is based on the interior noise standard in the California Noise Insulation Standards (Title 24, California Code of Regulations, Part 2).

Policies

Goal: Maintain noise compatibility in a manner that is acceptable to residents and reasonable for commercial and industrial land uses

Policies

Policy 1: Apply the noise guidelines shown in Table 2 to land use decisions and other City actions.

1a: The exterior noise level at primary outdoor use areas for residences should not exceed the maximum "normally acceptable" level in Table 2 (L_{dn} of 60 dB for residences). Small decks and entry porches do not need to meet this goal. Noise levels up to L_{dn} 65 dB may be allowed at the discretion of the City where it is not economically or aesthetically reasonable to meet the more restrictive outdoor goal.

1b: The interior noise standard shall be 45 dB- L_{dn} for all residential uses, including single- and multi-family housing, hotels/motels, and residential healthcare facilities.

Policy 2: Avoid adverse effects of noise-producing activities on existing land uses by implementing noise reduction measures, limiting hours of operation, or by limiting increases in noise.





2a: Continue to enforce the noise regulations within the Vallejo Municipal Code, including Chapter 7.84 “Regulation of Noise Disturbances” and Chapter 16.72 “Performance Standards Regulations”.

2b: Where appropriate, limit noise generating activities (for example, construction and maintenance activities and loading and unloading activities) to the hours of 7:00 a.m. to 9:00 p.m.

2c: When approving new development limit project-related noise increases to no more than 10 dB in non-residential areas and 5 dB in residential areas where the with-project noise level is less than the maximum “normally acceptable” level in Table 2. Limit project-related increases in all areas to no more than 3 dB where the with-project noise level exceeds the “normally acceptable” level in Table 2.

Table 2. City of Vallejo Land Use Compatibility Guidelines for Community Noise Environment

Land Use Category	Community Noise Exposure - L_{dn} (dBA)						
	50	55	60	65	70	75	80
Residential—Low-Density Single-Family, Duplex, Multi-Family, Mobile Homes	Normally Acceptable			Conditionally Acceptable		Normally Unacceptable	Clearly Unacceptable
Transient Lodging—Motels, Hotels	Normally Acceptable			Conditionally Acceptable		Normally Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable			Conditionally Acceptable		Normally Unacceptable	Clearly Unacceptable
Auditoriums, Concert Halls, Amphitheaters	Normally Acceptable			Conditionally Acceptable		Normally Unacceptable	Clearly Unacceptable
Sports Arenas, Outdoor Spectator Sports	Normally Acceptable			Conditionally Acceptable		Normally Unacceptable	Clearly Unacceptable
Playgrounds, Neighborhood Parks	Normally Acceptable			Conditionally Acceptable		Normally Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable			Conditionally Acceptable		Normally Unacceptable	Clearly Unacceptable
Office Buildings, Business Commercial and Professional	Normally Acceptable			Conditionally Acceptable		Normally Unacceptable	Clearly Unacceptable
Industrial, Manufacturing, and Utilities	Normally Acceptable			Conditionally Acceptable		Normally Unacceptable	Clearly Unacceptable

	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 are 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 generally should not be undertaken.

GENERAL PLAN NOISE ELEMENT

APPENDIX A

Table 1: Existing Noise Contours (Page 1 of 3)

Roadway	Segment Limits		Existing L _{dn} Contour Distance (feet)				
	From	To	80	75	70	65	60
SR 29 Sonoma Street	Jct. Interstate 80	Lemon Street	--	--	--	85	183
	Lemon Street	Maine Street	--	--	--	85	183
	Maine Street	Tennessee Street	--	--	52	112	240
	Tennessee Street	Marine World Pkwy.	--	--	55	118	255
	Marine World Pkwy.	Mini Drive	--	55	118	254	546
	Mini Drive	City Limits	--	59	128	276	594
SR 37 Marine World Parkway	Solano County	Mare Island, North Gate	--	59	128	275	592
	Mare Island, North Gate	Sonoma Boulevard	--	--	79	169	365
	Sonoma Boulevard	Broadway	--	--	92	198	426
	Broadway	Fairgrounds Drive	--	86	185	398	857
	Fairgrounds Drive	Jct. Interstate 80	70	151	324	699	1505
Interstate 80	Carquinez Bridge	Jct. SR 29, Sonoma Street	95	205	442	952	2050
	Jct. SR 29, Sonoma Street	Magazine Street	92	198	426	918	1978
	Magazine Street	I-780	96	208	448	964	2078
	I-780	Georgia Street	112	242	520	1121	2416
	Georgia Street	Springs Road	116	250	538	1159	2498
	Springs Road	Tennessee Street	117	253	545	1175	2531
	Tennessee Street	Redwood Street	119	256	552	1190	2563
	Redwood Street	SR 37 Marine World Parkway	105	227	490	1055	2272
	SR 37 Marine World Parkway	Napa County Line	91	195	421	907	1955
	Interstate 780	Glen Cove Road	Jct. Interstate 80	55	118	255	548
Jct. Interstate 80		Lemon Street (end)	--	89	192	414	892
Admiral Callaghan Lane	Tennessee Street	Redwood Parkway	--	--	--	--	93
	Redwood Parkway	Turner Parkway	--	--	62	134	288
	Turner Parkway	Plaza Drive	--	--	--	77	166
	Plaza Drive	Columbus Parkway	--	--	58	126	271
Alameda Street		--	--	--	--	78	
Amador Street		--	--	--	--	88	
Ascot Parkway		--	--	--	74	160	
Benicia Road		--	--	--	--	101	
Broadway	Mini Drive	SR37	--	--	53	115	248
	SR37	Tuolumne Street	--	--	--	90	195
	Tuolumne Street	Garibaldi Drive	--	--	--	105	227
	Garibaldi Drive	Sereno Drive	--	--	51	110	237
	Sereno Drive	Redwood Street	--	--	--	95	205
	Redwood Street	Tennessee Street	--	--	--	79	171
Columbus Parkway	Tennessee Street	Ohio Street	--	--	--	60	129
	Interstate 80	Admiral Callaghan Lane	--	73	156	337	726
	Admiral Callaghan Lane	Ascot Parkway	--	--	91	196	422
	Ascot Parkway	Redwood Parkway	--	--	84	180	388
	Redwood Parkway	Club House Drive	--	--	64	137	296
	Club House Drive	Lake Herman Road	--	--	65	139	300
	Lake Herman Road	Ascot Parkway	--	--	--	67	145
	Ascot Parkway	Springs Road	--	--	60	129	279
	Springs Road	Georgia Street	--	--	67	145	312
	Georgia Street	Regents Park Drive	--	--	66	142	306
Corcoran Avenue	Regents Park Drive	Benicia Road	--	--	66	141	305
	Fairgrounds Drive	Mini Drive	--	--	--	--	73
Couch Street	Sonoma Boulevard (SR29)	Broadway	--	--	--	--	89
Curtola Parkway	Mare Island Way	Solano Avenue	--	--	60	129	279
	Solano Avenue	I-780	--	--	71	154	331
Fairgrounds Drive	Corcoran Street	Borges Lane	--	--	51	110	236
	Borges Lane	Taper Avenue	--	--	52	113	243
	Taper Avenue	Gateway Drive	--	--	64	137	295
	Gateway Drive	SR37	--	--	69	148	318
	SR37	Marine World Entrance	--	--	--	68	147
	Marine World Entrance	Sereno Drive	--	--	--	68	146
	Sereno Drive	Redwood Street	--	--	--	--	101
Florida Street	Mare Island Way	Sonoma Boulevard (SR29)	--	--	--	--	65
	Sonoma Boulevard (SR29)	Alameda Street	--	--	--	--	62
	Alameda Street	Solano Avenue	--	--	--	--	92

Table 1: Existing Noise Contours (Page 2 of 3)

Roadway	Segment Limits		Existing L _{dn} Contour Distance (feet)				
	From	To	80	75	70	65	60
Georgia Street	Santa Clara Street	Sacramento Street	--	--	--	--	--
	Sacramento Street	Marin Street	--	--	--	--	--
	Marin Street	Sonoma Boulevard (SR29)	--	--	--	--	--
	Sonoma Boulevard (SR29)	Alameda Street	--	--	--	--	100
	Alameda Street	Amador Street	--	--	--	51	111
	Amador Street	Solano Avenue	--	--	--	54	117
	Solano Avenue	I-80	--	--	--	53	114
	I-80	Maple Street	--	--	--	61	132
	Maple Street	Oakwood Avenue	--	--	--	58	124
	Oakwood Avenue	Rollingwood Drive	--	--	--	--	105
	Rollingwood Drive	Columbus Parkway	--	--	--	--	73
Columbus Parkway	Ascot Parkway	--	--	--	--	75	
Glen Cove Parkway	Interstate 780	Robles Way	--	--	52	113	242
	Robles Way	New Bedford Drive	--	--	--	98	212
	New Bedford Drive	South Regatta Drive	--	--	--	80	173
	South Regatta Drive	end	--	--	--	66	143
Glen Cove Road	Benicia Road	Glen Cove Parkway	--	--	--	71	153
Hiddenbrooke Parkway	Interstate 80	Bennington Drive	--	--	--	--	85
	Bennington Drive	Landmark Drive	--	--	--	--	73
Lake Herman Road	East of Columbus Parkway		--	--	52	111	239
Lemon Street	Derr Avenue	Sonoma Boulevard (SR29)	--	--	--	57	123
	Sonoma Boulevard (SR29)	Sixth Street	--	--	--	57	123
	Sixth Street	Curtola Parkway	--	--	--	55	119
Magazine Street	Sonoma Boulevard (SR29)	I-80	--	--	--	--	92
	I-80	Laurel Street	--	--	--	--	66
	Laurel Street	City Limits	--	--	--	--	75
Mare Island Way			--	--	--	107	231
Marin Street	Curtola Parkway	Maine Street	--	--	--	--	--
	Maine Street	Georgia Street	--	--	--	--	--
	Georgia Street	Virginia Street	--	--	--	--	--
	Virginia Street	Tennessee Street	--	--	--	--	--
Meadows Drive	Sonoma Boulevard (SR29)	Echo Summit Drive	--	--	--	55	119
	Echo Summit Drive	Catalina Way	--	--	--	69	148
Mini Drive	City Limits	Sonoma Boulevard (SR29)	--	--	--	57	122
	Sonoma Boulevard (SR29)	Broadway	--	--	--	58	126
	Broadway	Corcoran Avenue	--	--	--	--	90
	Corcoran Avenue	SR37	--	--	--	--	92
Redwood Parkway	Interstate 80	Admiral Callaghan Lane	--	--	57	122	263
	Admiral Callaghan Lane	Oakwood Avenue	--	--	--	87	186
	Oakwood Avenue	Ascot Parkway	--	--	--	86	184
	Ascot Parkway	Rocky Shore Pl.	--	--	--	64	138
	Rocky Shore Pl.	Columbus Parkway	--	--	--	--	86
Redwood Street	Sacramento Street	Sonoma Boulevard (SR29)	--	--	--	79	169
	Sonoma Boulevard (SR29)	Couch Street	--	--	--	83	179
	Couch Street	Broadway	--	--	--	92	198
	Broadway	Valle Vista Avenue	--	--	--	93	200
	Valle Vista Avenue	Interstate 80	--	--	61	131	282
Rollingwood Drive			--	--	--	50	109
Sacramento Street	Maine Street	Florida Street	--	--	--	--	59
	Florida Street	Tennessee Street	--	--	--	--	90
	Tennessee Street	Hichborn Street	--	--	--	70	151
	Hichborn Street	Valle Vista Avenue	--	--	--	74	159
	Valle Vista Avenue	Redwood Street	--	--	--	64	137
	Redwood Street	SR37	--	--	--	--	106
Santa Clara Street			--	--	--	--	53
Sereno Drive	Sonoma Boulevard (SR29)	Broadway	--	--	--	53	115
	Broadway	North Camino Alto	--	--	--	69	148
	North Camino Alto	Tuolumne Street	--	--	--	56	122
	Tuolumne Street	Fairgrounds Drive	--	--	--	--	86
Solano Avenue	Sonoma Boulevard (SR29)	Fifth Street	--	--	--	--	75
	Fifth Street	Curtola Parkway	--	--	--	--	74
	Curtola Parkway	Benicia Road	--	--	--	--	91
	Benicia Road	Interstate 80	--	--	--	55	119

Table 1: Existing Noise Contours (Page 3 of 3)

Roadway	Segment Limits		Existing L _{dn} Contour Distance (feet)				
	From	To	80	75	70	65	60
Springs Road	Interstate 80	Maple Avenue	--	--	--	84	182
	Maple Avenue	Columbus Parkway	--	--	--	80	173
Steffan Street	Benicia Road	Georgia Street	--	--	--	--	57
Tennessee Street	Mare Island Way	Sonoma Boulevard (SR29)	--	--	--	85	183
	Sonoma Boulevard (SR29)	Broadway	--	--	53	114	245
	Broadway	Tuolumne Street	--	--	62	133	288
	Tuolumne Street	Interstate 80	--	--	62	134	290
	Interstate 80	Oakwood Avenue	--	--	--	77	166
	Oakwood Avenue	Rollingwood Drive	--	--	--	56	120
	Rollingwood Drive	Columbus Parkway	--	--	--	57	122
Tuolumne Street	Broadway	Walnut Street	--	--	--	--	81
	Walnut Street	Del Mar Avenue	--	--	--	67	145
	Del Mar Avenue	Valle Vista Avenue	--	--	--	76	163
	Valle Vista Avenue	Nebraska Street	--	--	--	52	111
	Nebraska Street	Tennessee Street	--	--	--	--	89
Turner Parkway	Tennessee Street	Solano Avenue	--	--	--	--	105
	Admiral Callaghan Lane	Ascot Parkway	--	--	--	83	178
Valle Vista Avenue	Ascot Parkway	East of Ascot Parkway	--	--	--	66	143
	Sacramento Street	Sonoma Boulevard (SR29)	--	--	--	--	67
	Sonoma Boulevard (SR29)	Fairgrounds Drive	--	--	--	--	75
Wilson Avenue	SR37	Hichborn Street	--	--	--	51	110
	Hichborn Street	Tennessee Street	--	--	--	61	131

Table 2: Future Noise Contours (Page 1 of 3)

Roadway	Segment Limits		Future L _{dn} Contour Distance (feet)					
	From	To	80	75	70	65	60	
SR 29 Sonoma Street	Jct. Interstate 80	Lemon Street	--	--	--	108	232	
	Lemon Street	Maine Street	--	--	--	108	232	
	Maine Street	Tennessee Street	--	--	66	141	305	
	Tennessee Street	Marine World Pkwy.	--	--	70	150	323	
	Marine World Pkwy.	Mini Drive	--	69	149	321	692	
	Mini Drive	City Limits	--	75	162	349	752	
SR 37 Marine World Parkway	Solano County	Mare Island, North Gate	--	106	228	492	1061	
	Mare Island, North Gate	Sonoma Boulevard	--	65	141	304	654	
	Sonoma Boulevard	Broadway	--	69	148	320	689	
	Broadway	Fairgrounds Drive	53	114	246	529	1140	
	Fairgrounds Drive	Jct. Interstate 80	71	153	331	712	1535	
Interstate 80	Carquinez Bridge	Jct. SR 29, Sonoma Street	133	287	619	1334	2873	
	Jct. SR 29, Sonoma Street	Magazine Street	131	282	607	1307	2815	
	Magazine Street	I-780	134	288	620	1337	2880	
	I-780	Georgia Street	136	294	633	1365	2940	
	Georgia Street	Springs Road	137	296	638	1374	2960	
	Springs Road	Tennessee Street	138	297	641	1380	2973	
	Tennessee Street	Redwood Street	139	300	646	1392	2998	
	Redwood Street	SR 37 Marine World Parkway	133	287	618	1333	2871	
	SR 37 Marine World Parkway	Napa County Line	129	278	600	1292	2783	
Interstate 780	Glen Cove Road	Jct. Interstate 80	65	141	303	653	1406	
	Jct. Interstate 80	Lemon Street (end)	--	106	229	493	1062	
Admiral Callaghan Lane	Tennessee Street	Redwood Parkway	--	--	--	--	102	
	Redwood Parkway	Turner Parkway	--	--	68	147	316	
	Turner Parkway	Plaza Drive	--	--	--	85	183	
	Plaza Drive	Columbus Parkway	--	--	64	138	298	
Alameda Street			--	--	--	--	95	
Amador Street			--	--	--	--	90	
Ascot Parkway			--	--	54	117	253	
Benicia Road			--	--	--	54	117	
Broadway	Mini Drive	SR37	--	--	61	132	285	
	SR37	Tuolumne Street	--	--	--	104	224	
	Tuolumne Street	Garibaldi Drive	--	--	56	121	260	
	Garibaldi Drive	Sereno Drive	--	--	59	126	272	
	Sereno Drive	Redwood Street	--	--	51	109	236	
	Redwood Street	Tennessee Street	--	--	--	91	196	
	Tennessee Street	Ohio Street	--	--	--	69	148	
Columbus Parkway	Interstate 80	Admiral Callaghan Lane	53	115	248	533	1149	
	Admiral Callaghan Lane	Ascot Parkway	--	67	144	310	667	
	Ascot Parkway	Redwood Parkway	--	61	132	285	615	
	Redwood Parkway	Club House Drive	--	--	101	217	468	
	Club House Drive	Lake Herman Road	--	--	102	220	474	
	Lake Herman Road	Ascot Parkway	--	--	--	106	229	
	Ascot Parkway	Springs Road	--	--	95	205	441	
	Springs Road	Georgia Street	--	--	106	229	494	
	Georgia Street	Regents Park Drive	--	--	104	225	484	
	Regents Park Drive	Benicia Road	--	--	104	224	482	
Corcoran Avenue	Fairgrounds Drive	Mini Drive	--	--	--	--	73	
Couch Street	Sonoma Boulevard (SR29)	Broadway	--	--	--	62	134	
Curtoia Parkway	Mare Island Way	Solano Avenue	--	--	88	189	406	
	Solano Avenue	I-780	--	--	104	224	483	
Fairgrounds Drive	Corcoran Street	Borges Lane	--	--	59	126	272	
	Borges Lane	Taper Avenue	--	--	60	130	280	
	Taper Avenue	Gateway Drive	--	--	73	158	341	
	Gateway Drive	SR37	--	--	79	171	368	
		SR37	Marine World Entrance	--	--	--	79	170
		Marine World Entrance	Sereno Drive	--	--	--	78	169
	Sereno Drive	Redwood Street	--	--	--	54	116	
Florida Street	Mare Island Way	Sonoma Boulevard (SR29)	--	--	--	--	66	
	Sonoma Boulevard (SR29)	Alameda Street	--	--	--	--	63	
	Alameda Street	Solano Avenue	--	--	--	--	93	

Table 2: Future Noise Contours (Page 2 of 3)

Roadway	Segment Limits		Future L _{dn} Contour Distance (feet)				
	From	To	80	75	70	65	60
Georgia Street	Santa Clara Street	Sacramento Street	--	--	--	--	--
	Sacramento Street	Marin Street	--	--	--	--	56
	Marin Street	Sonoma Boulevard (SR29)	--	--	--	--	--
	Sonoma Boulevard (SR29)	Alameda Street	--	--	--	59	127
	Alameda Street	Amador Street	--	--	--	65	140
	Amador Street	Solano Avenue	--	--	--	69	148
	Solano Avenue	I-80	--	--	--	67	145
	I-80	Maple Street	--	--	--	78	167
	Maple Street	Oakwood Avenue	--	--	--	73	158
	Oakwood Avenue	Rollingwood Drive	--	--	--	62	133
	Rollingwood Drive	Columbus Parkway	--	--	--	--	93
Columbus Parkway	Ascot Parkway	--	--	--	--	95	
Glen Cove Parkway	Interstate 780	Robles Way	--	--	56	120	258
	Robles Way	New Bedford Drive	--	--	--	105	226
	New Bedford Drive	South Regatta Drive	--	--	--	86	185
	South Regatta Drive	end	--	--	--	71	152
Glen Cove Road	Benicia Road	Glen Cove Parkway	--	--	--	73	158
Hiddenbrooke Parkway	Interstate 80	Bennington Drive	--	--	--	--	96
	Bennington Drive	Landmark Drive	--	--	--	--	82
Lake Herman Road	East of Columbus Parkway		--	--	55	118	255
Lemon Street	Derr Avenue	Sonoma Boulevard (SR29)	--	--	--	59	128
	Sonoma Boulevard (SR29)	Sixth Street	--	--	--	59	128
	Sixth Street	Curtola Parkway	--	--	--	57	124
Magazine Street	Sonoma Boulevard (SR29)	I-80	--	--	--	--	96
	I-80	Laurel Street	--	--	--	--	69
	Laurel Street	City Limits	--	--	--	--	78
Mare Island Way			--	--	89	191	411
Marin Street	Curtola Parkway	Maine Street	--	--	--	--	--
	Maine Street	Georgia Street	--	--	--	--	--
	Georgia Street	Virginia Street	--	--	--	--	54
	Virginia Street	Tennessee Street	--	--	--	--	61
Meadows Drive	Sonoma Boulevard (SR29)	Echo Summit Drive	--	--	--	62	134
	Echo Summit Drive	Catalina Way	--	--	--	77	167
	City Limits	Sonoma Boulevard (SR29)	--	--	--	64	137
Mini Drive	Sonoma Boulevard (SR29)	Broadway	--	--	--	65	141
	Broadway	Corcoran Avenue	--	--	--	--	101
	Corcoran Avenue	SR37	--	--	--	--	103
	Interstate 80	Admiral Callaghan Lane	--	--	66	142	305
Redwood Parkway	Admiral Callaghan Lane	Oakwood Avenue	--	--	--	100	216
	Oakwood Avenue	Ascot Parkway	--	--	--	99	214
	Ascot Parkway	Rocky Shore Pl.	--	--	--	75	161
	Rocky Shore Pl.	Columbus Parkway	--	--	--	--	100
	Sacramento Street	Sonoma Boulevard (SR29)	--	--	--	84	181
Redwood Street	Sonoma Boulevard (SR29)	Couch Street	--	--	--	89	191
	Couch Street	Broadway	--	--	--	98	211
	Broadway	Valle Vista Avenue	--	--	--	99	213
	Valle Vista Avenue	Interstate 80	--	--	65	139	301
Rollingwood Drive			--	--	--	52	113
Sacramento Street	Maine Street	Florida Street	--	--	--	--	66
	Florida Street	Tennessee Street	--	--	--	--	102
	Tennessee Street	Hichborn Street	--	--	--	79	170
	Hichborn Street	Valle Vista Avenue	--	--	--	83	180
	Valle Vista Avenue	Redwood Street	--	--	--	72	155
	Redwood Street	SR37	--	--	--	55	119
Santa Clara Street			--	--	--	--	58
Sereno Drive	Sonoma Boulevard (SR29)	Broadway	--	--	--	64	137
	Broadway	North Camino Alto	--	--	--	82	176
	North Camino Alto	Tuolumne Street	--	--	--	67	145
	Tuolumne Street	Fairgrounds Drive	--	--	--	--	102
Solano Avenue	Sonoma Boulevard (SR29)	Fifth Street	--	--	--	--	82
	Fifth Street	Curtola Parkway	--	--	--	--	82
	Curtola Parkway	Benicia Road	--	--	--	--	100
	Benicia Road	Interstate 80	--	--	--	61	131

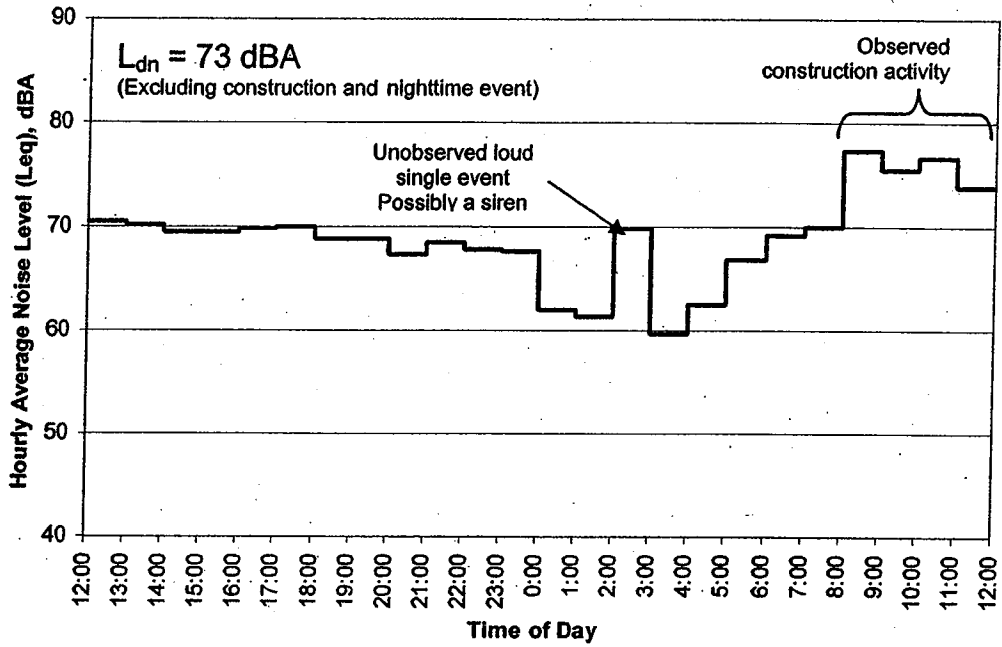
Table 2: Future Noise Contours (Page 3 of 3)

Roadway	Segment Limits		Future L _{dn} Contour Distance (feet)				
	From	To	80	75	70	65	60
Springs Road	Interstate 80	Maple Avenue	--	--	--	88	189
	Maple Avenue	Columbus Parkway	--	--	--	84	180
Steffan Street	Benicia Road	Georgia Street	--	--	--	--	60
Tennessee Street	Mare Island Way	Sonoma Boulevard (SR29)	--	--	--	98	211
	Sonoma Boulevard (SR29)	Broadway	--	--	61	131	283
	Broadway	Tuolumne Street	--	--	72	154	332
	Tuolumne Street	Interstate 80	--	--	72	155	334
	Interstate 80	Oakwood Avenue	--	--	--	89	191
	Oakwood Avenue	Rollingwood Drive	--	--	--	64	138
	Rollingwood Drive	Columbus Parkway	--	--	--	65	141
Tuolumne Street	Broadway	Walnut Street	--	--	--	--	89
	Walnut Street	Del Mar Avenue	--	--	--	74	161
	Del Mar Avenue	Valle Vista Avenue	--	--	--	83	180
	Valle Vista Avenue	Nebraska Street	--	--	--	57	123
	Nebraska Street	Tennessee Street	--	--	--	--	98
	Tennessee Street	Solano Avenue	--	--	--	54	116
Turner Parkway	Admiral Callaghan Lane	Ascot Parkway	--	--	--	98	211
	Ascot Parkway	East of Ascot Parkway	--	--	--	79	169
Valle Vista Avenue	Sacramento Street	Sonoma Boulevard (SR29)	--	--	--	--	74
	Sonoma Boulevard (SR29)	Fairgrounds Drive	--	--	--	--	82
Wilson Avenue	SR37	Hichborn Street	--	--	--	78	167
	Hichborn Street	Tennessee Street	--	--	--	92	199

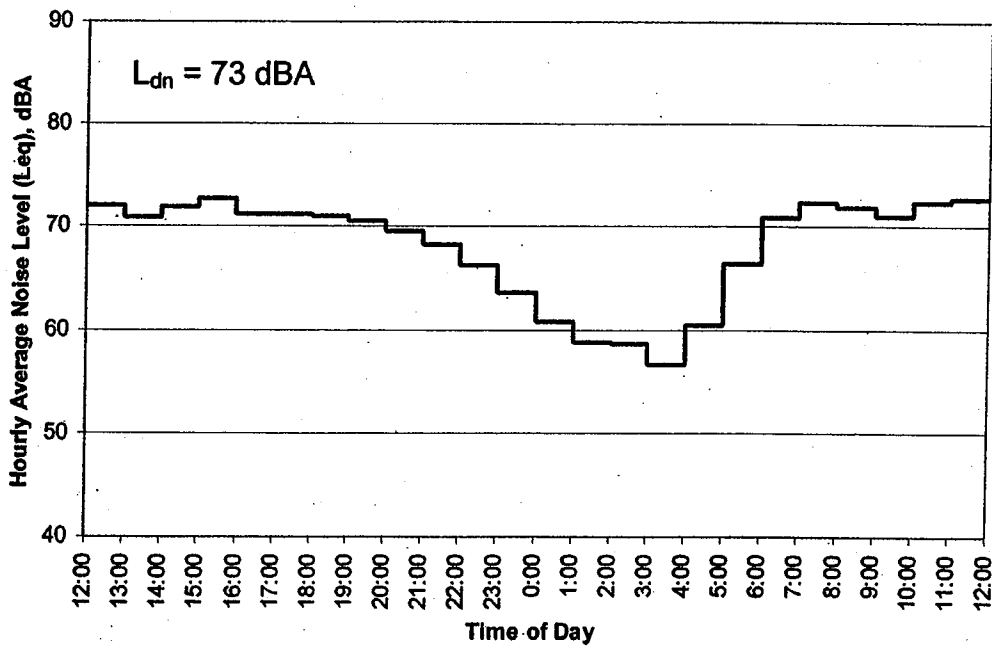
Table 3: Existing and Future Railroad Noise Contours

Location	Railroad L _{dn} Contour Distances (feet)				
	75	70	65	60	55
Within 1/4 mile of an at-grade roadway crossing	--	--	51	109	235
Farther than 1/4 mile from an at-grade roadway crossing	--	--	--	--	50

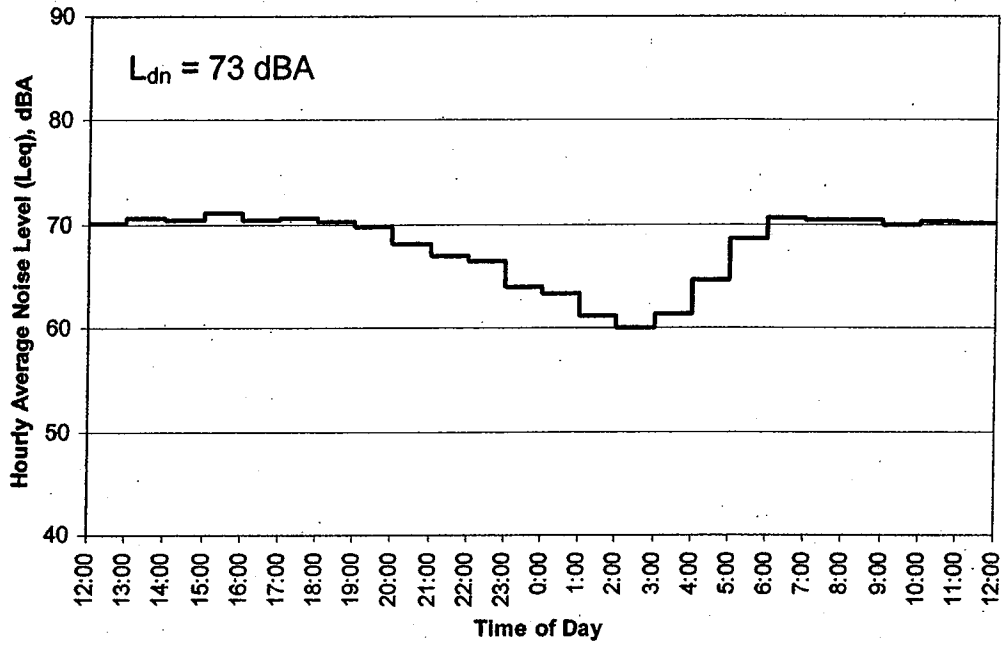
**Figure 1: 24-Hour Noise Measurement: State Route 29, Sonoma Boulevard
North of Virginia Street, East Side
33 Feet from Centerline of Near Lane**



**Figure 2: 24-Hour Noise Measurement: Columbus Parkway
North of Springs Road, West Side
33 Feet from Centerline of Near Lane**



**Figure 3: 24-Hour Noise Measurement: Interstate 780
At Cedar Street, North Side
105 Feet from Centerline of Near Lane**



**Figure 4: 24-Hour Noise Measurement: Interstate 80
South of Florida Street, East Side
100 Feet from Centerline of Near Lane**

