Noise Element

Noise" is sometimes defined as "unwanted sound." Sound which is desirable in some situations—for instance, amplified music—can become "noise" in other situations. Some types of sound—from trains, vehicle traffic, and mechanical equipment—are generally considered undesirable in residential areas, but are accepted in other areas (such as industrial areas). Noise has been linked directly to human health and, aside from general annoyances, excessive noise is a source of discomfort, interferes with sleep, and disrupts communication and relaxation.

Railroad noise affects many residential areas in Elk Grove

The preservation and enhancement of the acoustical environment relates directly to the quality of life that can be achieved in a community. By recognizing existing sources of noise pollution, taking reasonable steps to mitigate future impacts, and preventing additional sources of noise, the City seeks to achieve a more pleasant environment and a comfortable and calming community.

Sound meter of the type used to measure noise levels for this General Plan

Elk Grove is committed to implementing "Best Management Practices" for all development and construction in Elk Grove to help reduce noise sources and exposure to noise.

However, the development of new neighborhoods may create situations where new residents are introduced to existing noise sources (such as major roadways). Proper land use practices can minimize the proximate placement of conflicting uses.

Soundwalls can minimize many of these impacts, but land use practices will more effectively address the true issue. Soundwalls can also create unsightly streetscapes, particularly if they are installed in front yard areas. This Element contains policies which promote methods other than soundwalls in all cases, and discourage their construction in front yards in existing neighborhoods.

By recognizing the impacts of noise pollution, the City seeks to effectively address any proposed sources of noise or noise conflicts as they arise.

The policies of the Noise Element implement the following Goals of the City of Elk Grove:

Guiding Goal 1: A High Quality of Life for All Residents

Focused Goal 1-1: A safe community, free from manmade and natural hazards

NO-1 New development of the uses listed in Table NO-C shall conform with the noise levels contained in that Table. All indoor and outdoor areas shall be located, constructed, and/or shielded from noise sources in order to achieve compliance with the City's noise standards.

NO-2 Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table NO-C or the performance standards of Table NO-A, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

NO-3 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table NO-A as measured immediately within the property line of lands designated for noise-sensitive uses.

NO-3-Action 1 Limit construction activity to the hours of 7 a.m. to 7 p.m. whenever such activity is adjacent to residential uses.

NO-3-Action 2 Consider limiting the hours of operation for loading docks, trash compactors, and other noise-producing uses in commercial areas which are adjacent to residential uses.

NO-3-Action 3 The City shall require that stationary construction equipment and construction staging areas be set back from existing noise-sensitive land uses.

Note: For the purposes of this Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations.
Other noise sources are presumed to be subject to local regulations, such as a noise control ordinance. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, loading docks, etc.

NO-4 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table NO-A at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design. The requirements for the content of an acoustical analysis are shown in Table NO-B.

NO-5 Noise created by the construction of new transportation noise sources (such as new roadways or new light rail service) shall be mitigated so as not to exceed the levels specified in Table NO-C at outdoor activity areas or interior spaces of existing noise-sensitive land uses. *Please see Policy NO-6 for discussion of improvements to existing roadways.*

NO-6 It is anticipated that roadway improvement projects (such as widening of existing roadways) will be needed to accommodate build-out of the General Plan. Therefore, existing noise-sensitive uses may be exposed to increased noise levels due to roadway improvement projects as a result of increased roadway capacity, increases in travel speeds, etc. It may not be practical to reduce increased traffic noise levels consistent with those contained in Table NO-C. Therefore, the following criteria shall be used as a test of significance for roadway improvement projects which are not directly tied to a development project:

- Where existing traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in noise levels due to

roadway improvement projects will be considered significant; and

- Where existing traffic noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant; and

- Where existing traffic noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +1.5 dB L_{dn} increase in noise levels due to roadway improvement projects will be considered significant.

NO-7 The City shall not require the installation of soundwalls in front yard areas to reduce noise to acceptable levels in residential areas which were originally constructed without soundwalls. The City shall emphasize other methods to reduce noise levels in these situations.

NO-7-Action 1 Consider adopting a city-wide noise reduction program to reduce traffic and other noise levels citywide.

NO-8 Where noise mitigation measures are required to achieve the standards of Tables NO-A and NO-C, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures—including the use of distance from noise sources—have been integrated into the project.

NO-9 Where soundwalls or noise barriers are constructed, the City shall strongly encourage and may require the use of a combination of berms and walls to reduce the apparent height of the wall and produce a more aesthetically appealing streetscape. *See illustration below:*

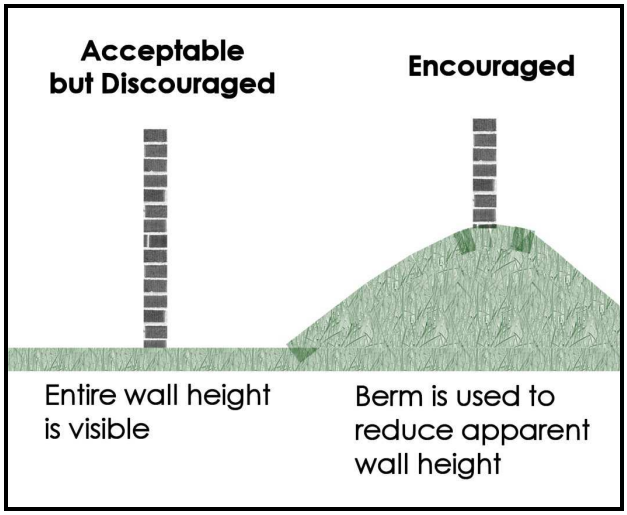

Table NO-A
Noise Level Performance Standards for New Projects
Affected by or Including Non-Transportation Noise Sources

The types of uses which may typically produce the noise sources addressed below include, but are not limited to: industrial facilities including pump stations, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, race tracks, landfills, sand and gravel operations, and athletic fields.

Part 1: Performance Standards for Typical Stationary Noise Sources

Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq}, dB	55	45

The standards above will apply generally to noise sources that are not tonal, impulsive, or repetitive in nature. Typical noise sources in this category would include HVAC systems, cooling towers, fans, blowers, etc.

Part 2: Performance Standards for Stationary Noise Sources Which Are Tonal, Impulsive, Repetitive, or Consist Primarily of Speech or Music

Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq}, dB	50	40

The standards in Part 2 apply to noises which are tonal in nature, impulsive or repetitive, or which consist primarily of speech or music (e.g., humming sounds, outdoor speaker systems, etc.). Typical noise sources in this category include: pile drivers, drive-through speaker boxes, punch presses, steam valves, and transformer stations.

These noise level standards in Parts 1 and 2 above **do not** apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

The City may impose noise level standards which are more or less restrictive than those specified above based upon determination of existing low or high ambient noise levels.

Table NO-B
Requirements for Acoustical Analysis

All acoustical analysis prepared pursuant to this Noise Element shall:

A. Be the financial responsibility of the applicant.

B. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.

C. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.

D. Estimate existing and projected cumulative (20 years) noise levels in terms of L_{dn} or CNEL and/or the standards of Table NO-A, and compare those levels to the adopted policies of the Noise Element.

E. Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element, giving preference to proper site planning and design over mitigation measures which require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses.

F. In cases where a sound wall is proposed, the potential impacts associated with noise reflecting off the wall and toward other properties or sensitive uses shall be evaluated.

G. Estimate noise exposure after the prescribed mitigation measures have been implemented.

H. Describe a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures.

Table NO-C
Maximum Allowable Noise Exposure,
Transportation Noise Sources

Land Use	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces	
		L_{dn}/CNEL,dB	L_{eq}, dB[2]
Residential	60[3]	45	--
Residential subject to noise from railroad tracks, aircraft overflights, or similar noise sources which produce clearly identifiable, discrete noise events (the passing of a single train, as opposed to relatively steady noise sources such as roadways)	60[3]	40[5]	--
Transient Lodging	60[4]	45	--
Hospitals, Nursing Homes	60[3]	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60[3]	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

1 Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

Where it is not practical to mitigate exterior noise levels at patio or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.

2 As determined for a typical worst-case hour during periods of use.

3 Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

4 In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.

5 The intent of this noise standard is to provide increased protection against sleep disturbance for residences located near railroad tracks.