ACOUSTICAL REPORT
INFORMATION SHEET

GENERAL INFORMATION

Acoustical analysis reports for noise impacted projects may be required, according to either the Noise Element of the Irvine General Plan, the zoning regulations, or conditions of project approval. This information sheet will discuss the requirements for acoustical reports, the review process, and guidelines for evaluation of noise reports. If you have any questions after you have read this information, call Community Development Department, Development Assistance Center at (949) 724-6308.

ACOUSTICAL REPORT

In meeting the acoustical analysis requirements for noise impacted areas (outside ambient noise levels of 60 & 65 CNEL or more for aircraft noise impacted areas) in the City of Irvine, two acoustical reports are usually required, a preliminary report and a final report.

1. Preliminary Acoustical Reports: In noise impacted areas, a preliminary acoustical analysis is required prior to approvals for either Zone Change, subdivision, Conditional Use Permit or Master Plan, whichever come first. The site plan and/or subdivision map shall show where the 60 and 65 etc. CNEL lines fall within the project. Specific approaches to reducing noise to acceptable levels shall be discussed in this preliminary report. Noise mitigation measures such as berms, walls, or other barriers, setbacks, and project design alternative shall be discussed and evaluated. Sound barriers such as berms and walls shall be specified on the site plan.

2. Final Report: Prior to issuance of building permits, a final acoustical report shall be submitted if required by a condition of project approval; noise attenuation, building materials and construction techniques shall be provided. Where appropriate, verify the adequacy of mitigation measures proposed in the preliminary report. For new hotels, motels, apartment houses, and dwellings other than single-family detached, the noise report shall also verify whether the requirements of Title 25 have been met for mitigating noise transmission between attached units.

PROCESSING ACOUSTICAL REPORTS

1. Preliminary Acoustical Reports.

   a) The project applicant shall submit the preliminary acoustical report at the time of submittal of plans for approvals for Zone Change, subdivision, Conditional Use Permit, or Master Plan. The preliminary acoustical report shall meet the minimum requirements as outlined in “Submittal Requirements”, on the following page.

   b) Review of all preliminary acoustical reports will be complete within the time frames established for review and approval of all other environmental documents to be prepared for the development project pursuant to the California Environmental Quality Act (CEQA).

   c) The approval of the preliminary acoustical report will be made as part of the approval of environmental documents prepared pursuant to CEQA for the project. The environmental documents will specify mitigation measures necessary for the project to meet City standards. Copies of all environmental documents will be incorporated into the development project file and appropriate conditions will be placed in the project resolution of approval.

2. Final Acoustical Reports.

   a) The project applicant shall submit the final acoustical report building permit submittal. The final acoustical report shall meet the minimum requirements as specified in "Submittal Requirements."

   b) Review of all final acoustical reports will be completed within three weeks.

SUBMITTAL REQUIREMENTS

The following items shall be included in an acoustical analysis submitted to the City:

1. City Noise Standards

   a) Exterior noise levels
   b) Interior noise levels

2. Title 25 Standard

   a) Sound transmission class
   b) Impact insulation class

3. Noise sources

   a) Highway sources
   b) Aircraft sources
   c) Other: specify
   d) Combined sources

4. Noise Level Calculations (both existing and ultimate)

   a) CNEL
   b) $^{L}max^{(10 \text{ or } 30)}$

NOTE: Show in terms of distance from centerline of the road. Show the CNEL contours for all surface and air noise sources, both individually and combines.

5. Assumptions

   a) Average daily traffic (ADT)
   b) Traffic speed
   c) Percent of truck traffic
   d) Future motor vehicle noise reduction
   e) Roadway pad elevations
   f) On-site aircraft noise measurements (sample should include 20-25 overflights, or 35-40 over flights for critical areas).

6. Mitigation Measures

   a) Site and building design orientation
   b) Grading assumptions identified for noise barriers
   c) Sound flanking on barriers
   d) Barrier breaks line of sight (with center line of road)
   e) Building construction elements identified
   f) Total noise reduction

7. Optional. Material. The Planning Commission or Director of Community Development may require the submittal of additional supportive materials illustrating the design and development concept proposed for the project will meet City noise attenuation requirements.

INTERIOR AND EXTERIOR NOISE STANDARDS

ENERGY AVERAGE (CNEL)

LAND USE CATEGORIES		ENERGY AVERAGE (CNEL)			
CATEGORIES	USES	INTERIOR[1]	EXTERIOR[2]	STC	IIC
RESIDENTIAL	Single Family	45[3] 55[4]	65		
	Multiple Family, Duplex	45[3] 55[4]	65	50	50
	Mobile Home	----- -----	65[5]		
COMMERCIAL	Hotel, Motel, Transient lodging	45	65[6]	50	50
INDUSTRIAL/ INSTITUTIONAL	Commercial Retail, Bank, Restaurant	55	-----		
	Office building, Research development, Professional office City office building	50	-----		
	Amphitheater, Concert Hall, Auditorium meeting hall	45	-----		
	Gymnasium (Multipurpose)	50	-----		
	Sports clubs	55	-----		
	Manufacturing, Warehousing, Wholesale, Utilities	65	-----		
	Movie Theater	45	-----		
INSTITUTIONAL	Hospital, Schools' classroom	45	65		
	Church, Library	45	-----		
OPEN SPACE	Parks	-----	65		

INTERPRETATION

1. Indoor environment excluding: Bathrooms, toilets, closets, corridors.

2. Outdoor environment including:
3. Private Yard of Single Family
   Private Patio or Balcony of Multiple Family
   Mobile Home Park
   Hospital Patio
   Park's Picnic Area
   Hotel and Motel Recreation Area

Noise level requirement with closed windows. Mechanical ventilating system shall be provided as of Chapter 12, Section 1205 of UBC.

3. Noise level requirement with open windows.

4. Exterior noise level should be such that interior noise level will not exceed 45 CNEL.

5. Except those area affected by aircraft noise.

Single Event Noise Standard

$^{L}max^{(10)}$ for	65 dBA 7a.m. - 7p.m.
Less than	55 dBA 7p.m. - 7a.m.

Noise sensitive land uses
within the 60 CNEL of
Aircraft and Railroad

The maximum interior noise levels of the loudest 10% of single noise events ($^{L}mas^{(10)}$) for typical occupancy for noise sensitive land uses shall not exceed 65 dBA daytime (7a.m. to 7p.m.) and 55 dBA nighttime (7p.m. to 7a.m.).

NOTE: The samples for single event noise measurement must include representative aircraft operation.