

Table 4-2 State Department of Transportation Recommendations for Local Land Use Compatibility Expressed in Yearly Day-Night Average Sound Levels (Ldn)

TYPE OF LAND USE	Yearly Day-Night Average Sound Level					
	< 60	60-65	65-70	70-75	75-80	80-85
RESIDENTIAL:						
Low density residential, resorts, & hotels (w/ outdoor facil)	Y(a)	N(b)	N	N	N	N
Low density apartment w/ moderate outdoor use	Y	N(b)	N	N	N	N
High density apartment with limited outdoor use	Y	N(b)	N(b)	N	N	N
Transient lodgings (w/ limited outdoor use)	Y	N(b)	N(b)	N	N	N
PUBLIC USE:						
Schools, day care centers, libraries, and churches	Y	N(c)	N(c)	N(c)	N	N
Hospitals, nursing homes, clinics, and health facilities	Y	Y(d)	Y(d)	Y(d)	N	N
Indoor auditoriums and concert halls	Y(c)	Y(c)	N	N	N	N
Government services and office bldgs. serving the public	Y	Y	Y(d)	Y(d)	N	N
Transportation and parking	Y	Y	Y(d)	Y(d)	Y(d)	Y(d)
COMMERCIAL AND GOVERNMENT USE:						
Offices—government, business, and professional	Y	Y	Y(d)	Y(d)	N	N
Wholesale & Retail: bldg. mater., hardware, & heavy equip..	Y	Y	Y(d)	Y(d)	Y(d)	Y(d)
Airport businesses—car rental, ticketing, lei stands, etc..	Y	Y	Y(d)	Y(d)	N	N
Retail trade, restaurants, shp. centers, financial institute. etc.	Y	Y	Y(d)	Y(d)	N	N
Power plants, sewage treatment plants, & base yards.	Y	Y	Y(d)	Y(d)	Y(d)	N
Studios w/o outdoor sets, broadcasting & Production facil.	Y(c)	Y(c)	N	N	N	N
MANUFACTURING, PRODUCTION AND STORAGE:						
Manufacturing, general	Y	Y	Y(d)	Y(d)	Y(d)	N
Photographic and optical	Y	Y	Y(d)	Y(d)	N	N
Agriculture (except livestock) and forestry	Y	Y(e)	Y(e)	Y(e)	Y(e)	Y(e)
Livestock farming and breeding	Y	Y(e)	Y(e)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL USE:						
Outdoor sports arenas and spectator sports	Y	Y(f)	Y(f)	N	N	N
Outdoor music shells, amphitheaters	Y(f)	N	N	N	N	N
Nature exhibits and zoos, neighborhood parks	Y	Y	Y	N	N	N
Amusements, beach parks, active playgrounds, etc.	Y	Y	Y	Y	N	N
Public golf courses, riding stables, cemeteries, gardens, etc.	Y	Y	N	N	N	N
Professional/resort sports facil., media event facil., etc.	Y(f)	N	N	N	N	N
Extensive natural wildlife and recreation areas	Y(f)	N	N	N	N	N



Note: Letters in parentheses refer to following notes.

- (a) A noise level of 60 Ldn does not eliminate all risks of adverse noise impacts from aircraft noise. However, the 60 Ldn planning level has been selected by the State Airports Division as an appropriate compromise between the minimal risk level of 55 Ldn and the significant risk level of 65 Ldn.
- (b) Where the community determines that these uses should be allowed, Noise Level Reduction (NLR) measures to achieve interior levels of 45 Ldn or less should be incorporated into building codes and be considered in individual approvals. Normal local construction employing natural ventilation can be expected to provide an average NLR of approximately 9 dB. Total closure plus air conditioning may be required to provide additional outdoor to indoor NLR, but will not eliminate outdoor noise problems.
- (c) Because the Ldn noise descriptor system represents a 24-hour average of individual aircraft noise events, each of which can be unique in respect to amplitude, duration, and tonal content, the NLR requirements should be evaluated for the specific land use, interior acoustical requirements, and properties of the aircraft noise events. NLR requirements should not be based solely upon the exterior Ldn exposure level.
- (d) Measures to achieve required NLR must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas, or where the normal noise level is low.
- (e) Residential buildings require NLR. Residential buildings should not be located where exterior noise is greater than 65 Ldn.
- (f) Impact of amplitude, duration, frequency, and tonal content of aircraft noise events should be evaluated.

Abbreviations:
 Y(Yes) = Land Use and related structures compatible without restrictions.
 N(No) = Land Use and related structures are not compatible and should be prohibited.

Source: Airports Division, Department of Transportation, State of Hawaii