

Purpose:

The purpose of this policy is to define:

- a. the maximum design criteria for noise levels adjacent to roadways constructed in new development areas, and
- b. a warrant system for constructing retro-fit noise attenuation facilities in older existing areas.

Policy Statement(s):**A. Maximum Design Criteria for Noise Levels Adjacent to New Roadways**

When designing new arterial roadways in the City, traffic noise should be estimated based on traffic volumes projected 20 years ahead. The estimated noise level calculated at ground level within the properties of the adjacent residential development should not exceed a maximum 24 hour, continuous noise level equivalent (Leq) of 60 dBA.

B. Warrant System for Retro-fit Noise Attenuation in Existing Areas

1. In existing areas, it may be prohibitive to retro-fit roadways, even when reconstructing them, to meet the 60 dBA design criteria noted above. In these situations, the warrant for noise attenuation measures should consider how much the measured noise levels exceed the 60 dBA criteria, the cost of the noise attenuation solution, the resulting noise reduction, the number of residents benefiting from the noise reduction, and other associated benefits and problems.
2. The following criteria should be met for retro-fit noise attenuation in existing areas:
 - a. Residential dwelling units must be exposed to noise levels greater than 60 dBA Leq (24 hr) at ground level.
 - b. Installation of a noise barrier must be technically and economically feasible, as determined by the Engineering Department Manager.

- c. Noise barriers must achieve at least a 5 dBA noise level reduction.
- d. Noise barrier installation should be addressed at the time of road reconstruction for roadways scheduled to be upgraded.
- e. Evaluation of noise attenuation facilities should consider the number of affected residents, the severity of the noise problem, the amount of noise reduction provided by the barrier, the total cost of the barrier, and other benefits and problems.
- f. The result of the following benefit-cost equation should be greater than 1.0:

$$\frac{R \times (NL-60) \times NR \times 1,000}{\$}$$

where:

R = The number of residential units affected by the traffic noise

NL = The existing 24 hour, continuous noise equivalent (Leq)

NR = The estimated reduction in noise level (24 Hr Leq) with the noise barrier installed

\$ = Cost of the noise barrier

Authority/Responsibility to Implement:

The City Manager will ensure the policy requirements are met and updated as required.

Document History:

Approved: September 9, 1996
Administrative Revision (new template): March 9, 2010