

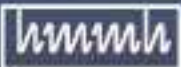


Federal Aviation Administration Sound Insulation Performance Criteria

**Presented to:
Airport Noise Abatement Committee**

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- **FAA funding of mitigation measures**

- Source: Airport Improvement Program (AIP)
- Authorization: Aviation Safety and Noise Abatement Act (ASNA) of 1979
- Guidance: FAA's AIP Handbook

- **FAA sound insulation criteria**

- Relationship to Broward County “Early Action Voluntary Residential Sound Insulation Pilot Program” goals

FAA Funding of Mitigation Measures ³

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- **FAA's Airport Improvement Program (AIP)**

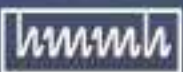
- Provides grants to public agencies – and, in some cases, private entities – for planning and development of public-use airports in the National Plan of Integrated Airport Systems (NPIAS).

- **Aviation Safety and Noise Abatement Act (ASNA) of 1979**

- Permits FAA to provide AIP funds to carry out FAA-approved noise compatibility measures.

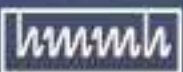
- **FAA Order 5100.38C, "AIP Handbook"**

- Provides FAA staff with guidance for AIP administration.
- Section 580a, "Environmental Mitigation in Approved Project"
 - Mitigation is eligible for funding as "airport development" if it is a condition of approval of an environmental action for an AIP-funded airport development project.
- Section 812, "Noise Insulation Projects"
 - Sets criteria for discretionary AIP funding assistance.



AIP Noise Insulation Criteria (under Order 5100.38C, paragraph 812)

- **The target noise level for interior habitable areas is a 45 decibel (dB) Day-Night Average Sound Level (DNL).**
- **If the structure already meets the 45 dB DNL target, additional insulation normally is not justified.**
 - In practice, FAA usually waives this requirement.
- **A residential insulation project should provide at least a 5 dB increase in noise level reduction “NLR.”**
 - Minimum improvement perceptible to an average person.
- **Broward County’s “Early Action Voluntary Residential Sound Insulation Pilot Program” adopts the FAA criteria:**
 - Interior DNL of 45 dB or less in all habitable rooms
 - NLR improvement of at least 5 dB



AIP Noise Insulation Criteria (under Order 5100.38C, paragraph 812)

▪ FAA-provided examples:

- A residence at 73 dB DNL with an existing 26 dB NLR.
 - The requisite NLR is 28 dB (73 - 45).
 - However, that would provide an NLR improvement of only 2 dB.
 - To increase the NLR by at least 5 dB, the treatment must provide an NLR of 31 dB (26 + 5).
 - *Results in a **42 dB** interior DNL.*
- A residence at 67 dB DNL with an existing NLR of 16 dB.
 - The requisite NLR is 22 dB (67 - 45).
 - Therefore, the treatment should increase the NLR by at least 6 dB (22 - 16).
 - *Results in a **45 dB** interior DNL.*

FAA and Broward County Sound Insulation Performance Criteria ⁶



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Thank you for your attention.
Any questions?



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