



Noise Impact Analysis Where There are Existing Noise Barriers

Noise Impact Analysis Where There are Existing Noise Walls

- FHWA Guidance: *“Consideration of Existing Noise Barriers in a Type I Noise Analysis”* (August 2012)
- https://www.fhwa.dot.gov/environment/noise/noise_barriers/abatement/existing.pdf
 - Outlines the process for considering the feasibility and reasonableness of replacing or improving existing noise barriers.
 - Step 1:
 - Conduct noise analysis for noise sensitive areas with existing noise barriers using the new project configuration.
 - If there are no noise impacts behind the existing barrier, the process is complete.
 - If impacts are predicted with the project, further consideration is necessary.

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- Step 2:
 - Predict the design year noise levels for the noise sensitive area without the existing barrier.
- Step 3:
 - Compare the “no barrier” case to the “with barrier” case to determine whether the existing noise barrier satisfies the requirements of the state noise policy (feasibility and reasonableness).
 - If the existing barrier meets the requirements, no further action is necessary. Leave existing barrier as is.
 - Approach is acceptable, even though impacts still exist, because the goal of noise abatement is to achieve a substantial reduction in noise levels; not to reduce noise levels below the Noise Abatement Criteria (existing noise barrier achieves an abatement design that is acceptable under the SHA noise policy).

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- Step 4:
 - If the existing barrier does not meet the current policy requirements should retrofit, or replace the existing barrier to meet the requirements of the state noise policy.

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- **Evaluate combinations of lengthening, supplementing, or removing and replacing the barrier.**
 - Is a parallel barrier required?
 - If yes, optimize. If no, consider lengthening.
 - If length reasonable and feasible, optimize.
 - If lengthening is not reasonable and feasible, consider removal and replacement to increase height.
 - If removal and replacement reasonable and feasible, optimize
 - If not keep existing barrier.