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Guidance on Assessing Noise and Vibration Impacts

Noise is one of the most common environmental impacts from transportation systems including rail operations. Guidance is available on how to assess noise and vibration impacts as part of the National Environmental Policy Act (NEPA) documentation. FAQs and an analytic model to assess horn noise are also available. FRA's Office of Safety is responsible for enforcing the [Railroad Noise Emissions Compliance Regulation](#) that sets maximum sound levels from railroad equipment and for regulating locomotive horns.

FRA maintains a [list of FAQs](#) related to train horn noise.

Transit Noise and Vibration Impact Assessment Manual

Guidance has been developed by the Federal Transit Administration (FTA) for conventional rail noise and vibration impact assessments, and FRA has developed complementary guidance for high-speed rail. [FTA transit noise and vibration impact assessment procedures](#) are relied on by FRA in evaluating improvements to conventional passenger rail lines and stationary rail facilities and for horn noise assessment. A supplemental freight rail analysis spreadsheet tool was developed for the Chicago Rail Efficiency And Transportation Efficiency (CREATE) program using the FTA procedures and is provided below.

CREATE Freight Noise and Vibration Model

- [MS Excel© Spreadsheet Model](#)
- [Model User Guide](#)

High Speed Ground Transportation Noise & Vibration Impact Assessment Manual

The FRA high-speed ground transportation noise and vibration impact assessment manual is for use in planning high-speed passenger train projects. This manual contains criteria and procedures for use in analyzing the potential noise and vibration impacts of various types of high-speed fixed guideway transportation systems. The manual was updated in 2012 and this version along with the prior version are available below. Also available for download is a companion MS Excel© spreadsheet model based on the older 2005 version of the manual.

- [Updated 2012 High Speed Ground Transportation Manual](#)
- [Complete 2005 Document](#)
- [2005 MS Excel© Spreadsheet Model](#)

Also available is a background report by HMMH Inc. documenting noise and vibration measurements of European high-speed trains.

- [European Noise and Vibration Measurements](#)

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Related Links

- [The Train Horn Rule and Quiet Zones](#)

Related Documents

- [High Speed Ground Transportation Noise and Vibration Impact Assessment Manual](#)

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