

Transit Noise (1 of 3)

Why is this important?

Transit noise exposure and level of impact are determined by the transit system operations and its proximity to sensitive land uses or receptors (e.g. churches, places where people sleep, and other places where a quiet environment is essential). Noise is typically defined as unwanted or undesirable sound. A system called “A-weighting” is commonly used when measuring noise to provide a value that represents human response. Noise levels measured using this system are called A-weighted levels, and they are expressed as dBA.

- 2 to 3 dBA change - Barely perceptible
- 5 dBA change - Readily perceived
- 10 dBA change - Perceived as a doubling of noise

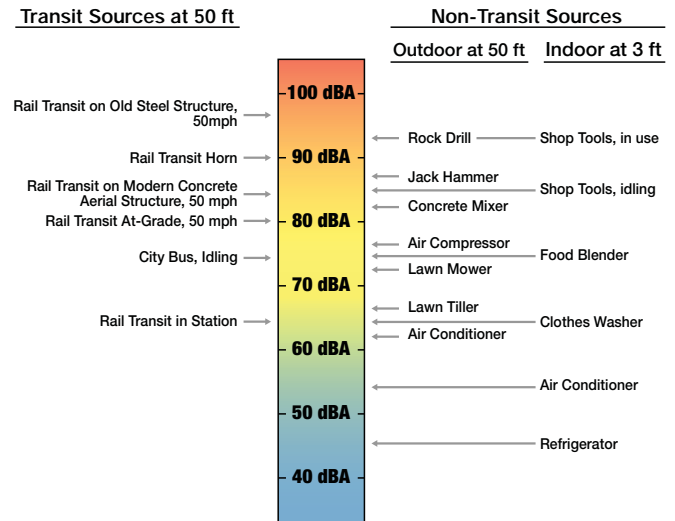
Potential Impacts

- No noise impacts with the implementation of mitigation strategies.
- Noise impacts without mitigation include:
 - ▶ 229 severe noise impacts.
 - ▶ 222 moderate noise impacts.

Proposed Mitigation

Implement quiet zones so that EMU (and freight) warning horns do not need to be sounded at crossings.

- RTD will assist local jurisdictions with their quiet zone applications to the Federal Railroad Administration (FRA) and Public Utility Commission. Local jurisdictions must submit quiet zone applications.
- Use building insulation for the two receptors impacted by EMU vehicle noise that cannot be mitigated by quiet zones.
- If quiet zones are not feasible, use wayside horns and building insulation.



Transit Noise (3 of 3)

Quiet Zones

What is a quiet zone?

A quiet zone is an area at least ½ mile long where freight or commuter rail trains do not need to sound their horns, except for railroad or safety-related reasons.

Where will there be quiet zones?

The following crossings are included in the proposed quiet zones:

- York Street/Josephine Street/Columbine Street (at UPRR crossing)
- York Street/Josephine Street/Columbine Street (at Preferred Alternative crossing)
- Clayton Street
- Steele Street
- Dahlia Street
- Holly Street
- Monaco Street
- Quebec Street southbound Frontage Road
- Quebec Street northbound Frontage Road
- Ulster Street
- Havana Street
- Sable Road
- Chambers Road
- Tower Road

Proposed Mitigation

Quiet zones require installation and maintenance of:

- Active grade crossing warning devices
- Flashing lights and gates (public crossings only)
- Advance warning signs
- Bells at gate location (FRA recommended)
- Equipment that adjusts gate timing to train speed

In addition, the following supplemental safety measures may be included:

- Road closures (permanent and temporary)
- One-way street with gates across width
- Four gates
- Two gates with medians between car lanes

RTD does not have authority to create Quiet Zones – only local jurisdictions can apply.