

### 3.0 Summary of the Final Rule

FRA's locomotive horn rule has several provisions. First, it requires that horns be sounded at all public at-grade highway-rail crossings in the United States; second, it sets a maximum sound level for locomotive horns; third, it prescribes how and when locomotive horns are to be sounded; and fourth, it provides an opportunity for any community in the nation to establish a quiet zone. These provisions apply to all public highway-rail grade crossings, including those now subject to whistle bans promulgated by local or state authorities.

The rule also incorporates many mitigation measures, which are intended to minimize potential direct impacts in communities that are now subject to whistle bans and to assist communities that may want to establish quiet zones in the future. The rule describes a series of supplementary and alternative safety measures that can be employed to establish a quiet zone. These provisions constitute a means of substituting other safety measures for locomotive horns. A full description of what constitutes a quiet zone and the process for establishing a quiet zone is provided below.

As required by 49 USC 20153, FRA has taken into account the interest of communities that either have whistle bans in effect or are not yet subject to the routine sounding of locomotive horns. In implementing the rule, FRA will work in partnership with affected communities to provide technical assistance and allow a reasonable amount of time for the communities to install added safety measures.

The key substantive elements of the interim final rule are summarized below in Items 1 through 8. Additional details on the rule's procedural and administrative elements are contained in the interim final rule, which is being published in the Federal Register and is available on the FRA's website at: [www.fra.dot.gov](http://www.fra.dot.gov).

1. Requirement for Sounding Horn. Locomotive horns must be sounded while each train is approaching and entering upon each public highway-rail grade crossing.
2. Maximum Horn Sound Level. Locomotive horn sound levels shall be at least 96 dB(A) and no louder than 110 dB(A) measured at 100 feet in front of the locomotive and at 15 feet above the rail.
3. How Locomotive Horns are to be Sounded. All trains must sound the horn in the standard signal sequence of two longs, a short, and a long, starting at least 15 seconds, but no more than 20 seconds, before reaching the crossing, however, in no case may locomotive horns be sounded more than ¼ mile in advance of a crossing, regardless of train speed.
4. Application of Use of Locomotive Horn Rule. Applies to all railroads, both freight and passenger, that operate on the general railroad system of transportation throughout the country. Rapid transit operations sharing tracks and public crossings with general system railroads, or otherwise sharing public crossings with general system railroads, are connected to the general

railroad system at the crossing and are thus subject to the rule, except that transit operations operating on separate tracks are not subject to the horn volume provisions. The quiet zone provisions of the rule also apply to public authorities responsible for safety and maintenance at public highways, streets, or roads crossing railroad tracks at grade.

The use of locomotive horn rule applies to every railroad except:

- 1) Rapid transit systems within urban areas that are not connected to the general railroad system of transportation.
- 2) Railroads that exclusively operate freight, tourist, or scenic trains only on track that is not part of the general railroad transportation system.
- 3) A railroad may, with certain exceptions, decide to not sound the locomotive horn at a crossing if the locomotive speed is 15 miles per hour or less and train crew members or equipped flaggers flag the crossing to provide warning of the approaching train to motorists.

5. Creation of a Quiet Zone in Lieu of Sounding Horns.

- a) Definition of a Quiet Zone. A *quiet zone* means a segment of rail line containing one or more consecutive highway-rail grade crossings at which locomotive horns are not routinely sounded. The rule distinguishes between two types of quiet zones. A Pre-Rule Quiet Zone refers to crossings at which local ordinances restricted the routine sounding of locomotive horns, or at which locomotive horns did not sound due to formal or informal agreements between the community and railroads, enforced or observed as of both October 9, 1996 and the date of publication of the interim final rule. A New Quiet Zone refers to crossings at which routine sounding of locomotive horns would be restricted pursuant to provisions of FRA's locomotive horn rule and which does not qualify as a Pre-Rule Quiet Zone.
- b) Methods For Establishing Quiet Zones.

**Method 1: Public Authority Designation** allows communities to establish quiet zones without formal application to FRA, provided one of three conditions is met:

- 1) One or more supplementary safety measures (SSMs) are applied to every public grade crossing within the proposed quiet zone; or
- 2) The Quiet Zone Risk Index is at, or below the Nationwide Significant Risk Threshold. Additional safety measures beyond the minimum quiet zone requirements discussed in item c) below are not required; or
- 3) SSMs are implemented that are sufficient to reduce the Quiet Zone Risk Index either to a level at, or below the Nationwide Significant Risk Threshold or to the risk level which would exist if locomotive horns sounded at all crossings within the quiet zone. The public authority

has discretion as to how the Quiet Zone Risk Index is reduced, and may choose the type of SSMs to be applied and the crossings at which they are to be applied.

**Method 2: Public Authority Application to FRA** is a flexible method that uses SSMs and alternative safety measures (ASMs) to deal with problem crossings. The public authority has discretion as to the type of SSMs and ASMs to apply and the crossings at which they are to be applied. If, in response to an application from a public authority, FRA determines that safety improvements will compensate for the absence of the locomotive horn or that safety improvements will reduce risk with respect to loss of life or serious injury to a level at, or below the Nationwide Significant Risk Threshold, a quiet zone may be established.

If Method 2 is selected by the public authority, it must demonstrate, in an application to FRA, through data and analysis that implementation of the proposed measures will reduce the Quiet Zone Risk Index to either the risk level that would exist if locomotive horns sounded at all crossings in the quiet zone or to a risk level below the Nationwide Significant Risk Threshold.

- c) Minimum Length of Quiet Zone. The minimum length of a New Quiet Zone shall be one-half mile (2,640 feet or 805 meters) along the length of railroad right-of-way, while the length of a Pre-Rule Quiet Zone may continue unchanged. The addition of any crossing to a Pre-Rule Quiet Zone ends the grandfathered status of the quiet zone, resulting in the requirement that the zone be at least one-half mile in length. The deletion of any crossing from a Pre-Rule Quiet Zone, with the exception of a grade separation or crossing closure, must result in a quiet zone of at least one-half mile in order to retain Pre-Rule Quiet Zone status.
  - d) Requirement For Active Grade Crossing Warning Devices. Except for those situations defined in the rule, each public highway-rail grade crossing in a New Quiet Zone must be equipped with active grade crossing warning devices comprising both flashing lights and gates that control traffic over the crossing and that conform to the standards contained in the Manual on Uniform Traffic Control Devices (MUTCD). Such warning devices must be equipped with power out indicators and constant warning time devices. Pre-Rule Quiet Zones may retain, but not downgrade, the grade crossing safety warning devices that exist as of the date of publication of the interim final rule.
  - e) Requirement For Advance Warning Signs. Each highway approach to each public and private highway-rail crossing within a Pre-Rule Quiet Zone or a New Quiet Zone shall be equipped with an advance warning sign advising the motorist that locomotive horns are not sounded at the crossing. Signs must conform to the standards contained in the MUTCD. Such signs must be installed at crossings in Pre-Rule Quiet Zones within three years of publication of the interim final rule.
6. Supplementary and Alternative Safety Measures. Section 222.41 of the rule discusses those measures that can be employed by public authorities to designate a quiet zone. Appendix A: Supplementary Safety Measures and Appendix B: Alternative Safety Measures are included as appendices to 49 CFR 222. These SSMs and ASMs represent mitigation strategies and are

described in Chapter 4. Implementation of these measures in accordance with the procedures outlined by FRA would constitute mitigation of potential impacts resulting from adoption of the rule.

7. Communities With Pre-Existing Restrictions on the Use of Locomotive Horns. Section 20153(i)(1) requires that FRA take into account the interests of communities that “have in effect restrictions on the sounding of a locomotive horn at highway-rail grade crossings, or have not been subject to routine sounding of a locomotive horn at highway-rail grade crossings.” FRA is taking the following measures to address the interests of these communities:
  - a) A Pre-Rule Quiet Zone will be considered approved and may remain in effect if (1) the Pre-Rule Quiet Zone is in compliance with the requirements for Method 1; or (2) if there have been no relevant collisions at any public grade crossing within the quiet zone for the five years preceding the date of publication of the interim final rule and the Quiet Zone Risk Index was less than twice the Nationwide Significant Risk Threshold as last published by FRA.
  - b) If a Pre-Rule Quiet Zone cannot qualify for approval under 7(a)(1) or 7(a)(2) above, the restrictions may remain in place on an interim basis. Such restrictions may continue for a period of five years if, within three years from the date of publication of the interim final rule, the public authority files with FRA a detailed plan for maintaining the Pre-Rule, or establishing a New Quiet Zone. Locomotive horn restrictions may continue for an additional three years beyond the five-year period if, prior to the date three years after publication of the interim final rule, the appropriate state agency provides FRA a comprehensive statewide implementation plan and makes physical improvements within the quiet zone, or in a quiet zone elsewhere within the State, within three years and four years after publication respectively.
8. Wayside Horns. Section 222.59 of the interim final rule provides for the use of wayside horns to be used in lieu of locomotive horns at individual or multiple at-grade crossings, including those within quiet zones. Certain requirements must be met by the wayside horn system and the crossing must be equipped with flashing lights, gates, a constant warning device and a power out indicator. Wayside horns have not yet been classified by FHWA as a traffic control device. If FHWA does classify them as a traffic control device, the wayside horn must also be approved in the Manual of Uniform Traffic Controls Devices or FHWA must issue an exemption before it may be used.

FRA will annually calculate the Quiet Zone Risk Index for New Quiet Zones created by having Quiet Zone Risk Indices less than the Nationwide Significant Risk Threshold, versus compensating for the effectiveness of the horn. FRA will notify each public authority of the Quiet Zone Risk Index for the preceding calendar year for each quiet zone in its jurisdiction. If the Quiet Zone Index is above the Nationwide Significant Risk Threshold, the quiet zone will terminate six months from the date of notification from FRA, unless the public authority (a) provides FRA with a written commitment to lower the potential risk at crossings within the quiet

zone to below the Nationwide Significant Risk Threshold, or to a level fully compensating for the absence of a locomotive horn, and (b) completes within three years implementation of SSMs or ASMs sufficient to reduce the Quiet Zone Risk Index to a level below the Nationwide Significant Risk Threshold, or to a level fully compensating for the absence of a locomotive horn.

FRA will annually calculate the Quiet Zone Risk Index for each Pre-Rule Quiet Zone. FRA will notify each public authority of the Quiet Zone Risk Index for the preceding calendar year for each quiet zone in its jurisdiction, and if a relevant collision occurred at a grade crossing within one of its quiet zones during that year. If the Pre-Rule Quiet Zone was created with a Quiet Zone Risk Index of less than the National Significant Risk Threshold and if the newly calculated Quiet Zone Risk Index exceeds a value equal to the National Significant Risk Threshold, the quiet zone will terminate six months from the date of notification from FRA, unless the public authority within three years implements SSMs or ASMs in accordance with Section 222.39(b) of the rule. If the Pre-Rule Quiet Zone was created with a Quiet Zone Risk Index of less than twice the National Significant Risk Threshold with no relevant collisions, and if the newly calculated Quiet Zone Risk Index exceeds a value equal to twice the National Significant Risk Threshold, or if a relevant collision occurred at a grade crossing within the quiet zone during the preceding year, the quiet zone will terminate six months from the date of notification from FRA, unless the public authority within three years implements SSMs or ASMs in accordance with Section 222.39(b) of the rule.