

prediction value for that crossing must be recalculated for the new warning device. Determine the new risk index for the upgraded crossing by using the new accident prediction value in the severity risk index formula. This new risk index is then used to compute the new Quiet Zone Risk Index. (Remember that FRA's web-based Quiet zone Calculator will be able to do the actual computations.) Once the Quiet Zone Risk Index has been reduced to equal to, or less than, either the Nationwide Significant Risk Threshold or the Risk Index with Horns, the quiet zone has qualified for the Public Authority Designation method, and notification may take place once all the necessary improvements have been installed. If quiet zone is established by reducing the Quiet Zone Risk Index to equal to, or less than, the Nationwide Significant Risk Threshold, FRA will annually recalculate the Nationwide Significant Risk Threshold and the Quiet Zone Risk Index. If the Quiet Zone Risk Index for the quiet zone is above the Nationwide Significant Risk Threshold, FRA will notify the public authority so that appropriate measures can be taken (See § 222.51(a)).

Note: The provisions stated above for crossing closures, grade separations, and wayside horns apply for Public Authority Designation.

D. Pre-Rule Quiet Zones—Public Authority Application to FRA

The following discussion is meant to provide guidance in the steps necessary to establish a Pre-Rule Quiet zone using the Public Authority Application to FRA method.

1. All of the items listed in "Requirements for both Public Authority Designation and Public Authority Application—Pre-Rule Quiet Zones" previously mentioned are to be accomplished. Remember that a Pre-Rule Quiet Zone may be less than one-half mile in length if that was its length as of October 9, 1996. Also, a Pre-Rule Quiet Zone does not have to have automatic warning devices consisting of flashing lights and gates at every public crossing.

2. Calculate the risk index for each public crossing within the quiet zone (See Appendix D. FRA's web-based Quiet Zone Calculator may be used to simplify the calculation process). If the inventory record does not reflect the actual conditions at the crossing, be sure to use the conditions that currently exist when calculating the risk index.

3. The Crossing Corridor Risk Index is then calculated by averaging the risk index for each public crossing within the proposed quiet zone. Since train horns are not being sounded for crossings, this value is actually the initial Quiet Zone Risk Index.

4. Calculate Risk Index with Horns by the following:

a. For each public crossing, divide its risk index that was calculated in Step 2 by the appropriate value in Table 1. This produces the risk index that would have existed had the train horn been sounded.

b. Average these reduced risk indices together. The resulting average is the Risk Index with Horns.

c. Begin to reduce the Quiet Zone Risk Index through the use of ASMs and/or SSMS.

Follow the procedure the provided in Step 6—Public Authority Designation until the Quiet Zone Risk Index has been reduced to a level equal to, or less than, either the Nationwide Significant Risk Threshold or the Risk Index with Horns. A public authority may elect to upgrade an existing warning device as part of its Pre-Rule Quiet Zone plan. When upgrading a warning device, the accident prediction value for that crossing must be re-calculated for the new warning device. Determine the new risk index for the upgraded crossing by using the new accident prediction value in the severity risk index formula. (Remember that FRA's web-based quiet zone risk calculator will be able to do the actual computations.) This new risk index is then used to compute the new Quiet Zone Risk Index. Effectiveness rates for ASMs should be provided as follows:

a. Modified SSMS—Estimates of effectiveness for modified SSMS may be proposed based upon adjustments from the benchmark levels provided in Appendix A or from actual field data derived from the crossing sites. The application should provide an estimated effectiveness rate and the rationale for the estimate.

b. Non-engineering ASMs—Effectiveness rates are to be calculated in accordance with the provisions of appendix B, paragraph 2(b).

6. Once it has been determined through analysis that the Quiet Zone Risk Index has been reduced to a level equal to, or less than, either the Nationwide Significant Risk Threshold or the Risk Index with Horns, the public authority may make application to FRA for a quiet zone under § 222.39(b). FRA will review the application to determine the appropriateness of the proposed effectiveness rates, and whether or not the proposed application demonstrates that the quiet zone meets the requirements of the rule. When submitting the application to FRA for approval, it should be remembered that the application must contain the following (§ 222.39(b)(1)):

a. Sufficient detail concerning the present safety measures at the public crossings within the proposed quiet zone. This includes current and accurate crossing inventory forms.

b. Detailed information on the SSMS's, ASM's, or upgraded warning devices that are proposed to be implemented and at which public crossings within the proposed quiet zone.

c. Membership and recommendations of the diagnostic team (if any) that reviewed the proposed quiet zone.

d. A commitment to implement the proposed safety measures.

e. Demonstrate through data and analysis that the proposed measures will reduce the Quiet Zone Risk Index to, or below, either the Nationwide Significant Risk Threshold or the Risk Index with Horns.

f. A copy of the application must be provided to the parties listed under Required Notifications.

7. Upon receiving written approval from FRA of the quiet zone application, the public authority may then proceed with notifications and implementation of the quiet zone. If the quiet zone is established by reducing the Quiet Zone Risk Index to a level

equal to, or less than, the Nationwide Significant Risk Threshold, FRA will annually recalculate the Nationwide Significant Risk Threshold and the Quiet Zone Risk. If the Quiet Zone Risk Index for the quiet zone is above the Nationwide Significant Risk Threshold, FRA will notify the public authority so that appropriate measures can be taken (See § 222.51(a)).

Note: The provisions stated above for crossing closures, grade separations, and wayside horns apply for Public Authority Application to FRA as well.

Section IV—Required Notifications

A. The public authority responsible for the creation of a New Quiet Zone or the continuation of a Pre-Rule Quiet Zone, is required to provide notification to parties that will be affected by the quiet zone. The notification process is to ensure that interested parties are made aware in a timely manner of the establishment or continuation of quiet zones. Specific information is to be provided so that the crossings in the quiet zone can be identified. The method used to qualify or continue the quiet zone is to be given. The notification process also includes additional information that must be provided to FRA. Once the rule becomes effective, railroads will be obligated to sound train horns when approaching all public crossings unless notified in accordance with the rule that a New Quiet Zone has been established or that a Pre-Rule Quiet Zone is being continued.

The time frames for the notification process is as follows:

- New Quiet Zones—Notification of the establishment of a New Quiet Zone under § 222.39 must be mailed at least 21 days before the routine sounding of train horns for public crossings is to cease (§ 222.43(a)(2)(i)). The routine use of train horns at public crossings will not cease unless the proper notification has been given.
- Pre-Rule Quiet Zones—Notification of the continuation of a Pre-Rule Quiet Zone under § 222.41 must be served no later than December 18, 2004 (§ 222.43(a)(2)(ii)). Failure to provide the required notice will result in the commencement of the sounding of train horns at public crossings on this date.

B. Parties To Be Notified

The public authority that is implementing a New Quiet Zone or is continuing a Pre-Rule Quiet Zone must provide notification of the quiet zone by certified mail, return receipt requested, to the following (see § 222.43(a)(1)):

- All railroads operating over the crossings within the quiet zone.
- The highway or traffic control authority, or law enforcement authority having control over vehicular traffic at crossings within the quiet zone.
- The State agency responsible for highway and road safety.
- All landowners owning a private crossing within the quiet zone.
- The Associate Administrator.

C. Required Information

The quiet zone implementation notification should contain the following information (§ 222.43(a)(3)):

1. A list all grade crossings within the quiet zone by both the U.S. DOT crossing number the street or highway name. This includes public, private and grade separated crossings.

2. The specific date upon which routine use of the train horn will cease at crossings within the quiet zone. The date for New Quiet Zones shall be no earlier than 21 days after mailing of written notification.

3. The notice should state which section contained in the rule is used as the basis for establishment or continuation of the quiet zone.

4. Reference to § 222.39(a)(1), (2), or (3) shall include a copy of the FRA web page containing the quiet zone data upon which the public authority relies.

5. Reference to § 222.39(b) shall include a copy of FRA's notification of approval.

6. Reference to § 222.41 shall include a statement as to how the quiet zone is in compliance with that section. If appropriate, it shall include a copy of the FRA web page containing the quiet zone data upon which the public authority relies.

7. A certificate of service showing to whom and by what means the notice was provided.

D. In addition to the above required information, the notification to the Associate Administrator also must include the following (§ 222.43(b)):

1. An accurate and complete Grade Crossing Inventory Form for each public and private highway-rail grade crossing within the quiet zone, dated within six months prior to designation or approval by FRA of the quiet zone. Copies of the inventory forms

may be obtain on FRA Web site (www.fra.dot.gov).

2. An accurate, complete and current Grade Crossing Inventory Form reflecting SSMs or ASMs in place upon establishment of the quiet zone. SSMs or ASMs that cannot be fully described on the inventory form must be fully described in writing.

3. The name and title of the person responsible for monitoring compliance with the requirements of this part, and the manner in which that person can be contacted.

4. A list of all parties that received notification of the establishment or continuation of the quiet zone together with copies of the certificates of service showing to whom and by what means the notice was provided.

5. A statement signed by the CEO of each public authority establishing or continuing a quiet zone that certifies that responsible officials of the public authority have reviewed documentation provided by FRA sufficient to make an informed decision regarding the advisability of establishing the quiet zone.

Section V—Examples of Quiet Zone Implementations

Example 1—New Quiet Zone

A public authority wishes to create a New Quiet Zone over four public crossings. All of the crossings are equipped with flashing lights and gates, and the length of the quiet zone is 0.75 mile. There are no private crossings within the proposed zone.

The tables that follow show the street name in the first column, and the existing risk index for each crossing with the horn sounding ("Crossing Risk Index w/Horns") in the second. The third column, "Crossing Risk Index w/o Horns", is the risk index for each crossing after it has been inflated by 66.8% to account for the lack of train horns. The fourth column, "SSM Eff", is the effectiveness of the SSM at the crossing. A zero indicates that no SSM has been applied. The last column, "Crossing Risk Index w/o Horns Plus SSM", is the inflated risk index for the crossing after being reduced by the implementation of the SSM. At the bottom of the table are two values. The first is the Risk Index with Horns ("RIWH") which represents the average initial amount of risk in the proposed quiet zone with the train horn sounding. The second is the Quiet Zone Risk Index ("QZRI") and is the average risk in the proposed quiet zone taking into consideration the increased risk caused by the lack of train horns and reductions in risk attributable to the installation of SSMs. For this example it is assumed that the Nationwide Significant Risk Threshold is 15,424. In order for the proposed quiet zone to qualify under the rule, the Quiet Zone Risk Index must be reduced to at least either the Nationwide Significant Risk Threshold (15,424) or to the Risk Index with Horns.

Table 1 shows the existing conditions in the proposed quiet zone. SSMs have not yet been installed. The Risk Index with Horns for the proposed quiet zone is 11,250. The Quiet Zone Risk Index without any SSMs is 18,765.

TABLE 1

Street	Crossing risk index w/horns	Crossing risk index w/o horns	SSM EFF	Crossing risk index w/o horns, plus SSM
A	12000	20016	0	20016
B	10000	16680	0	16680
C	8000	13344	0	13344
D	15000	25020	0	25020
	RIWH 11250			QZRI 18765

The public authority decides to install traffic channelization devices at D Street. Reducing the risk at the crossing that has the highest severity risk index will provide the greatest reduction in risk. The effectiveness

of traffic channelization devices is 0.75. Table 2 shows the changes in the proposed quiet zone corridor that would occur when traffic channelization devices are installed at D Street. The Quiet Zone Risk Index has been

reduced to 14,073.75. This reduction in risk would qualify the quiet zone as the risk has been reduced lower than the Nationwide Significant Risk Threshold which is 15,424.

TABLE 2

Street	Crossing risk index w/ horns	Crossing risk index w/o horns	SSM EFF	Crossing risk index w/o horns plus SSM
A	12000	20016	0	20016
B	10000	16680	0	16680
C	8000	13344	0	13344
D	15000	25020	0.75	6255
	RIWH 11250			QZRI 14073.75