

- (i) Is operating under the Federal license;
- (ii) Holds a license issued by the State of Alaska; and
- (iii) Is not a member of the crew of the vessel.

(2) Navigate with either two licensed deck officers on the bridge or a federally licensed pilot when operating South of 60°49' North latitude and in the approaches through Hinchinbrook Entrance and in the area bounded:

- (i) On the West by a line one mile west of the western boundary of the Traffic Separation Scheme;
- (ii) On the East by 146°00' West longitude;
- (iii) On the North by 60°49' North latitude; and
- (iv) On the South by that area of Hinchinbrook Entrance within the territorial sea bounded by 60° 07' North latitude and 146°31.5' West longitude.

Dated: March 17, 1995.

Robert E. Kramek,

Admiral, U.S. Coast Guard Commandant.

[FR Doc. 95-10231 Filed 4-26-95; 8:45 am]

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Federal Railroad Administration

49 CFR Part 213

[Docket No. RST-94-3, Notice No. 1]

Policy on the Safety of Railroad Bridges

AGENCY: Federal Railroad Administration (FRA), DOT.

ACTION: Interim statement of policy.

SUMMARY: FRA issues an interim statement of policy for the safety of railroad bridges. FRA establishes suggested criteria for railroads to use to ensure the structural integrity of bridges that carry railroad tracks. FRA will subsequently make the interim statement of policy part of the final rule amending 49 CFR part 213 (See 57 FR 54038, November 16, 1992). This final rule will reflect any changes that appear necessary following public comment on the interim statement of policy.

DATES: *Effective Date:* The interim statement of policy is effective May 30, 1995. Written comments must be received no later than June 26, 1995. Comments received after that date will be considered to the extent possible without incurring additional delay or expense.

ADDRESSES: Written comments on this policy should be submitted to the Docket Clerk (RCC-30), Office of Chief Counsel, FRA, 400 Seventh Street, SW., Washington, DC 20590. Persons desiring

to be notified that their written comments have been received by FRA should submit a stamped, self-addressed postcard with their comments. The Docket Clerk will indicate on the postcard the date the comments were received and return the postcard to the addressee. Written comments will be available for examination, both before and after the closing date for comments, during regular business hours in Room 8201 of the Nassif Building at the above address.

FOR FURTHER INFORMATION CONTACT:

Gordon A. Davids, P.E., Bridge Engineer, Office of Safety Enforcement, Federal Railroad Administration, 400 Seventh Street, SW., Washington, DC 20590, (Telephone: 202-366-0507), or Nancy Lummen Lewis, Trial Attorney, Office of Chief Counsel, Federal Railroad Administration, 400 Seventh Street, SW., Washington, DC 20590, (Telephone 202-366-0635).

SUPPLEMENTARY INFORMATION: Beginning in 1991, FRA conducted a review of the safety of railroad bridges. The review was prompted by the agency's perception that the bridge population was aging, traffic density and loads were increasing on many routes, and the consequences of a bridge failure could be catastrophic.

I. Bridge Safety Survey

FRA counted the approximate number of bridges that carry railroad track in the United States, and then surveyed the safety of those bridges. The count revealed that

- a. Approximately 100,700 bridges carried railroad tracks in 1991,
- b. Approximately 10 bridges exist for every 14 miles of railroad, and
- c. Approximately 120 feet of track per mile is located on a bridge.

The safety survey accomplished several objectives. It determined whether the condition of railroad bridges posed a significant hazard to the safety of the public. It documented the methods used by the railroad industry for the inspection, management and assurance of safety of those bridges. It provided information with which FRA could evaluate the need for federal action to improve the safety of railroad bridges.

The survey assessed the policies and practices used by 80 railroads to ensure the integrity of their bridges. The railroads surveyed included 21 major railroads (including 14 class I railroads and seven major passenger or commuter railroads), 20 class II regional railroads, and 39 class III shortline railroads. The 21 class I and passenger railroads are termed "major railroads" because they

own most of the railroad bridges and handle the majority of freight and passenger traffic. In the course of the survey, FRA inspectors observed railroad inspections of more than 8,000 bridges.

The survey showed that all of the 21 major railroads have conducted comprehensive, effective bridge inspection programs for several decades. The survey demonstrated that these railroads are acting to safeguard the integrity of their bridges. The railroad managers know the condition of their bridges, and they are taking appropriate action to prevent structural failure. The findings for the 20 regional railroads were similar to those of the major railroads.

The survey showed the major and regional railroads use a variety of methods to inspect and manage their bridges. The degree to which inspectors are supervised, the levels at which certain decisions are made, and the methods used to record and report inspections vary considerably among railroads. Nevertheless, these programs share certain basic principles that characterize effective bridge management practices.

The consistency of findings among the Class I and II railroads, passenger operators, and many smaller railroads indicates that railroads are following a course of action that corresponds with the public interest in prevention of bridge failures. The railroads' actions are driven by a need to prevent the significant economic harm that result from the loss of a valuable bridge and the cost of associated casualties.

On shortline railroads, however, FRA found considerable variation in the quality of bridge management programs and bridge conditions. Many shortlines have exemplary programs, well-suited to their size and the nature of their structures and traffic. A few, however, did not address all of their responsibilities for the safety of their bridges.

These smaller railroads with minimal bridge management programs typically move low levels of traffic over a small number of bridges. Nevertheless, the consequences of a bridge failure on one of these railroads could be as severe as a failure occurring anywhere. The risk of human casualty or environmental damage would be the same for each, and the cost of the failure could be ruinous to a railroad with limited resources. This finding indicates a situation that FRA must address.

II. The Safety Record of Railroad Bridges

During the past five decades, not one fatality has been caused by the structural failure of a railroad bridge. Train accidents caused by the structural failure of railroad bridges have been extremely rare.

Although the average construction date of railroad bridges predates most highway bridges by several decades, the older railroad bridges were designed to carry heavy steam locomotives. Design factors were generally conservative, and the bridges' functional designs permit repairs and reinforcements when necessary to maintain their viability.

Railroad bridges are most often privately, rather than publicly, owned. Their owners seem to recognize the economic consequences of neglecting important maintenance. Private ownership enables the railroads to control the loads that operate over their bridges. Cars and locomotives exceeding the nominal capacity of a bridge are not operated without permission from the responsible bridge engineers, and then only under restrictions and conditions that protect the integrity of the bridge.

Many railroad bridges display superficial signs of deterioration but still retain the capacity to safely carry their loads. Corrosion on a bridge is not a safety issue unless a critical area sees significant loss of material. Routine inspections are prescribed to detect this condition, but determination of its effect requires a detailed inspection and analysis of the bridge. In general, timber bridges continue to function safely, and masonry structures built as early as the 1830's remain functional and safe for their traffic.

Of the few train accidents that involved bridges, most have not been caused by structural failure. FRA accident records for 1982 through 1993 show 15 train accidents that were caused by bridge structural failures, including three that involved improper repair procedures. These accidents caused no reportable injuries and a reported \$856,046 damage to railroad facilities, cars and locomotives.

During the same period, 29 train accidents on or near bridges were caused by track conditions on the bridge or its approaches. These accidents caused no reportable injuries, and a reported \$4,596,733 damage to railroad facilities, cars and locomotives.

The same time period saw 19 train accidents on bridges caused by external damage to the bridge, including three fires, 11 floods or washouts, four bridges struck by motor vehicles, and one bridge struck by a marine vessel. The accident

at Mobile, Alabama on September 22, 1993 alone caused 47 fatalities, 102 non-fatal injuries, and over \$10,000,000 in property damage. The losses from these 19 accidents totaled 47 fatalities, 124 non-fatal injuries, and \$22,150,865 damage to railroad facilities, cars and locomotives.

IV. Bridge Safety Policy

The severity of a train accident is usually compounded when a bridge is involved, regardless of the cause of the accident. FRA must retain its capability to deal effectively with any safety problems involving the structural integrity of railroad bridges. At the same time, FRA must assure that private and public resources are not diverted unnecessarily from other programs that are also critical to railroad safety.

At one extreme, FRA could respond to bridge issues only when accidents occur or when someone contacts the agency about particular concerns. However, such a reactive policy would inhibit FRA's ability to detect impending problems with railroad bridges. At the other extreme, FRA could regulate all aspects of railroad bridge management, including inspection, rating, construction and maintenance. The expense to the railroad industry of such a policy is not justified by the findings of the safety survey.

Because the industry has no apparent systemic bridge safety problem, FRA chooses to adopt a policy, rather than issue regulations, to carry out its responsibility of protecting bridge safety. The policy includes non-regulatory guidelines to inform railroad managers and all concerned about current good practices related to bridge inspection and management. The guidelines accommodate a wide variety of effective bridge inspection and management methods.

Even without specific bridge safety regulations, FRA maintains authority under 49 U.S.C. 20101 *et seq.* (formerly the Federal Railroad Safety Act of 1970) to inspect any railroad facility that affects safety and, if necessary, to remove it from service. The guidelines represent the general criteria against which FRA will evaluate each railroad's bridge inspection and management program.

FRA does not expect that its policy will unnecessarily divert resources away from the functional work of bridge management by forcing railroads to change effective bridge management programs. Likewise, the policy should not require FRA to divert public resources to employ a large staff of bridge specialists.

FRA will revise the guidelines as necessary to accomplish the objectives of the bridge safety program. To that end, FRA will continue to monitor and evaluate the railroads' bridge inspection and management programs to guarantee that those responsible for the safety of bridges continue to meet their responsibilities. FRA will make its findings available to the public upon request, excluding any proprietary information received and identified as such. Should FRA find through its monitoring that widespread bridge structural problems have developed, it may use the information it has gathered to commence a rulemaking proceeding.

Effect of This Interim Statement of Policy

The purpose of this notice is to issue an interim statement of policy containing guidelines for the proper maintenance of bridge structures. It is meant to be advisory in nature; it does not have the force of regulations under which FRA ordinarily issues violations and assesses civil penalties.

However, FRA maintains emergency authority to issue emergency, compliance, and disqualification orders, as well as authority to seek injunctive relief in federal district court, under 49 U.S.C. 20104 (formerly known as the Federal Rail Safety Act of 1970) and 49 CFR part 209. FRA will exercise this authority when an unsafe condition or improper maintenance of a railroad bridge creates an imminent hazard of death or injury to persons. Furthermore, should FRA, in the future, find the need to address bridge integrity in a regulatory proceeding, it will do so.

Following the comment period, FRA will issue any necessary changes to the interim statement of policy. The notice of changes will appear simultaneously with the Notice of Final Rule for the proceeding amending the track safety standards in 49 CFR part 213, begun in November, 1992. (See 57 FR 54038, November 16, 1992.) Except as modified in response to the comments, this interim statement of policy will become a final statement of policy at that time.

Public Participation

Because the interim statement of policy is advisory in nature, notice and public participation are not required. However, the public is invited to submit comments within 30 days following its publication.

FRA would appreciate comments about its plan to issue a statement of policy rather than regulations governing railroad bridge maintenance. FRA would also welcome comments about the value of permanently placing the

statement of policy in a new appendix to 49 CFR part 213. Finally, FRA would like comments about the guidelines themselves and their value as criteria in deciding whether stronger enforcement action on particular railroad bridges is warranted.

Comments received after the 30-day deadline will be considered if it is possible to do so without incurring additional delay or expense.

Regulatory Impact

Executive Order 12866 and DOT Regulatory Policies

This interim statement of policy has been evaluated in accordance with existing regulatory policies. The regulatory document is considered to be a nonsignificant regulatory action under E.O. 12866 and is a nonsignificant rule under section 5(a)(4) of DOT Regulatory Policies and Procedures (44 FR. 11034, February 26, 1979) because it is advisory only and does not carry with it the force of law or regulation. For nonsignificant rules, the DOT Regulatory Policies and Procedures ordinarily require an economic evaluation to be placed in the public docket. This evaluation should include an analysis of the economic consequences of the rule, including (if possible) an estimation of the cost and benefits of the rule to the private sector, consumers, and all levels of government. However, such an evaluation is not required if the expected impact of a rule is deemed minimal. Because this interim statement of policy offers only guidelines to be followed and does not mandate any actions or establish any recordkeeping requirements, the need for a regulatory evaluation is not indicated.

Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq.*) requires a review of rules to assess their impact on small entities. In reviewing the economic impact of this interim statement of policy, FRA concluded that it will not have any measurable impact on small entities. There are no direct or indirect economic impacts for small units of government, businesses, or other organizations. Therefore, it is certified that this rule will not have a significant economic impact on a very substantial number of small entities under the provisions of the Regulatory Flexibility Act.

Paperwork Reduction Act

There are no information collection requirements contained in this interim statement of policy.

Environmental Impact

FRA has evaluated this interim statement of policy in accordance with its procedures for ensuring full consideration of the potential environmental impacts of FRA actions, as required by the National Environmental Policy Act and related directives. This notice meets the criteria that establish this as a non-major action for environmental purposes.

Federalism Implications

Implementation of this interim statement of policy could result in a judicial determination that it constitutes FRA's occupation of the field of railroad bridge safety regulation. Under 49 U.S.C. 20106, a state may enforce its own statute or regulation related to railroad safety until the Secretary of Transportation issues an order or regulation "covering the subject matter" of the state's law. A state may adopt or enforce a more stringent law relevant to the subject matter as long as it "(1) is necessary to eliminate or reduce a local safety hazard; (2) is not incompatible with a law, regulation, or order of the United States Government; and (3) does not unreasonably burden interstate commerce."

At this time, FRA is aware of only one state that could be affected by a court's determination that the Secretary of Transportation, through FRA, has covered the subject matter of railroad bridge safety by issuing this policy statement. FRA has prepared a Federalism Assessment, pursuant to Executive Order 12612 and placed it in the docket reserved for this proceeding, to address the federalism implications this interim policy could have on that state or any other state seeking to regulate railroad bridge safety.

List of Subjects in 49 CFR Part 213

Penalties, Railroad safety, Railroads.

Therefore, in consideration of the foregoing, the Federal Railroad Administration issues the following:

Interim Statement of Agency Policy on the Structural Integrity of Railroad Bridges

The structural integrity of bridges that carry railroad tracks is important to the safety of railroad employees and that the public. The responsibility for the safety of railroad bridges rests with the owner of the track carried by the bridge, together with any other party to whom that responsibility has been assigned by the track owner.

The capacity of a bridge to safely support its traffic can only be determined by intelligent application of

engineering principles and the laws of physics. Bridge owners should use, as FRA will, those principles to assess the integrity of railroad bridges.

The long term ability of a structure to perform its function is an economic issue beyond the intent of this policy. In assessing a bridge's structural condition, FRA will focus on the present safety of the structure, rather than its appearance or long term usefulness.

FRA inspectors will conduct regular evaluations of railroad bridge inspection and management practices. The objective of these evaluations will be to document the practices of the evaluated railroad and to disclose any program weaknesses that could affect the safety of the public. Should problems be disclosed, FRA will seek a cooperative resolution. If public safety is jeopardized by failure to resolve a problem, or by the incompetence or dishonorable intentions of any bridge owner, FRA will use available legal means, including issuance of emergency orders, to protect the safety of railroad employees and the public.

This policy statement addresses the integrity of bridges that carry railroad tracks. It does not address the integrity of other types of structures on railroad property, *i.e.*, tunnels, or bridges carrying highways or other features over railroads, except to the extent that position and condition of these structures affects the safe passage of trains. Likewise, this policy statement extends its reach beyond the narrow issue of bridges carrying railroad tracks only where it is necessary to do so for the protection of highway users, pedestrians and others lawfully occupying the space under a railroad bridge.

The guidelines published in this statement are advisory, rather than regulatory, in nature. They indicate those elements FRA deems essential to successful bridge management programs. FRA will use the guidelines when evaluating bridge inspection and management practices.

Guidelines

1. Responsibility for safety of bridges.

(a) *Track owner.* The owner of the track carried by a bridge is responsible for ensuring that the bridge will safely support the trains which operate over it and the loads imposed upon it.

(b) *Operating railroad.* The operating railroad that authorizes train movements over a bridge should take whatever steps are necessary to verify that the maintenance responsibility for the bridge is being fulfilled so as to safeguard trains operated under its authority.

(c) *Assignment of responsibility.* The owner of the track carried by a bridge may assign responsibility for maintenance of the bridge to another party as long as the assignment ensures that responsibility for the safety of the bridge is not diminished.

2. Capacity of bridges.

(a) *Determination.* The safe capacity of bridges should be determined by competent engineers using accepted principles of structural design and analysis.

(b) *Analysis.* Proper analysis of a bridge requires knowledge of the actual dimensions, materials and properties of the structural members of the bridge, their condition, and the stresses imposed in those members by the service loads.

(c) *Rating.* The factors which were used for the design of a bridge can generally be used to determine and rate the load capacity of a bridge provided:

- (i) The condition of the bridge has not changed significantly, and
- (ii) The stresses resulting from the service loads can be correlated to the stresses for which the bridge was designed or rated.

3. Bridge loads.

(a) *Control of loads.* The operating instructions for each railroad operating over bridges should include provisions to restrict the movement of cars and locomotives whose weight or configuration exceed the nominal capacity of the bridges.

(b) *Authority for exceptions.* Equipment exceeding the nominal weight restriction on a bridge should be operated only under conditions determined by a competent engineer who has properly analyzed the stresses resulting from the proposed loads.

(c) *Operating conditions.* Operating conditions for exceptional loads may include speed restrictions, restriction of traffic from adjacent multiple tracks, and weight limitations on adjacent cars in the same train.

4. Bridge records.

(a) The organization responsible for the safety of a bridge should keep design, construction, maintenance and repair records readily accessible to permit the determination of safe loads. Having design or rating drawings and calculations that conform to the actual structure greatly simplifies the process of making accurate determinations of safe bridge loads.

(b) Organizations acquiring railroad property should obtain original or usable copies of all bridge records and drawings, and protect or maintain knowledge of the location of the original records.

5. Specifications for design and rating.

(a) The recommended specifications for the design and rating of bridges are those found in the "Manual for Railway Engineering" published by the American Railway Engineering Association (AREA). These specifications incorporate recognized principles of structural design and analysis. They are continually reviewed and revised by committees of competent engineers. Other specifications for design and rating, however, have been successfully used by some railroads and may also be suitable now.

(b) A bridge can be rated for capacity according to current specifications regardless of the specification to which it was originally designed.

6. Periodic inspections.

(a) Periodic bridge inspections by competent inspectors are necessary to determine whether a structure conforms to its design or rating condition and, if not, or the degree of nonconformity.

(b) The prevailing practice throughout the railroad industry is to inspect railroad bridges at least annually. Inspections at more frequent intervals may be indicated by the nature or condition of a structure or intensive traffic levels.

7. Underwater inspections.

(a) Inspections of bridges should include measuring and recording the condition of substructure support at locations subject to erosion from moving water.

(b) Stream beds are often not visible to the inspector. Indirect measurements by sounding, probing, or any other appropriate means are necessary in those cases. A series of records of those readings will provide the best information should unexpected changes suddenly occur. Where such indirect measurements do not provide the necessary assurance of foundation integrity, diving inspections should be performed as prescribed by a competent engineer.

8. Special inspections.

(a) A special bridge inspection should be performed after an occurrence that might have reduced the capacity of the bridge, such as a flood, a derailment, or an unusual impact.

(b) When a railroad learns that a bridge might have suffered damage through an unusual occurrence, it should restrict train operation over the bridge until the bridge can be inspected and evaluated.

9. Inspection records.

(a) Bridge inspections should be recorded. Records should identify the structure inspected, the date of the inspection, the name of the inspector,

the components inspected, and their condition.

(b) Information from bridge inspection reports should be incorporated into a bridge management program to ensure that exceptions on the reports are corrected or accounted for. A series of inspection reports over time should be maintained so as to provide a valuable record of trends and rates of degradation of bridge components. The reports should be structured to promote comprehensive inspections and effective communication between an inspector and an engineer who performs an analysis of a bridge.

(c) An inspection report should be comprehensible to a competent person without interpretation by the reporting inspector.

10. Bridge inspectors and engineers.

(a) Bridge inspections should be performed by technicians whose training and experience enable them to detect and record indications of distress on a bridge. Inspectors must provide accurate measurements and other information about the condition of the bridge in enough detail for an engineer to make a proper evaluation of the safety of the bridge.

(b) Accurate information about the condition of a bridge should be evaluated by an engineer who is competent to determine the capacity of the bridge. The inspector and the evaluator are often not the same individual. The quality of the bridge evaluation depends on the quality of the communication between them.

11. Scheduling inspections.

(a) A bridge management program should include a means to ensure that each bridge under the program is inspected at the frequency prescribed for that bridge by a competent engineer.

(b) Bridge inspections should be scheduled from an accurate bridge inventory list that includes the due date of the next inspection.

12. Special considerations for railroad bridges.

Railroad bridges differ from other types of bridges in the types of loads they carry, in their modes of failure and indications of distress, and in their construction details and components. Proper inspection and analysis of railroad bridges requires familiarity with the loads, details and indications of distress that are unique to this class of structure.

Issued at Washington, DC., on April 21, 1995.

Jolene M. Molitoris,
Administrator.

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