



MOVING THE
**AMERICAN
ECONOMY**

Federal Railroad Administration Railroad Bridge Safety Fact Sheet

Background on the FRA Railroad Bridge Safety Policy

The structural integrity of the nation's railroad bridges is critically important to the flow of commerce and to the safety of railroad employees, rail passengers, communities and the public. In August 2000, the Federal Railroad Administration (FRA) published a final [Statement of Agency Policy on the Safety of Railroad Bridges](#). The policy is used to ascertain whether a railroad has implemented an adequate program of bridge inspection and management.

The FRA policy statement includes non-regulatory guidelines and accommodates a wide variety of effective railroad bridge inspection and management methods and practices. In addition, FRA has authority to perform safety inspections on all railroad bridges and can issue emergency orders to remove from service, or restrict operations on, any bridge which poses a serious hazard or risk to railroad operations, employees, passengers or the public at-large.

Essential Elements of a Railroad Bridge Management Program

In September 2008, the [FRA Railroad Safety Advisory Committee \(RSAC\)](#) approved the first ever agreement within and between the railroad industry and FRA on the key inspection and maintenance practices that should be included in every railroad bridge management program. The [Essential Elements of a Railroad Bridge Management Program](#) applies to both large and small railroads, passenger and freight operators, and is a major step forward in providing transparency within the industry and for the public about how rail bridges are safely maintained. It includes the following nine (9) provisions:

- Assign responsibility for decisions affecting the integrity of bridge structures;
- Maintain bridge inventory that indicates the party responsible for management of each bridge;
- Record the capacity of each bridge as rated by a competent engineer or by design documents;
- Establish procedures for safely controlling the movement of high, wide, or heavy loads exceeding the nominal capacity of bridges;
- Maintain permanent records of bridge design, construction, modification and repair;
- Adhere to railroad specific procedures for the design and rating of bridges;
- Establish an inspection program for bridges;
- Provide protection for train operations following a bridge inspection noting a critical deficiency, repair, modification or adverse event; and
- Institute bridge management program audit procedures.

FRA intends to formally incorporate the Essential Elements into its existing federal rail bridge safety policy by the end of 2008.

Responsibility for Railroad Bridge Safety / Number of Railroad Bridges

Responsibility for railroad bridge safety rests with the owner of the track carried by the structure. The owner ensures the bridge is capable of safely accommodating all rail traffic operated over the track and specifies the maximum weight the structure can support.

The FRA does not maintain an inventory of rail bridges. However, a September 2008 Bridge Survey conducted by the Association of American Railroads found that the large and small freight railroads (plus Amtrak) own and maintain approximately 77,000 rail bridges. In addition, an undetermined number of rail bridges are owned by commuter railroads.

Role of the FRA

- FRA inspectors conduct regular evaluations of railroad bridge management practices to evaluate a railroad's bridge safety program and to identify potential weaknesses that could affect the safety of railroad operations, rail employees, rail passengers or the public.
- In assessing a railroad bridge's structural condition, FRA focuses on the present safety of the structure, rather than its appearance or long-term utility or lifespan.
- FRA cooperates with states to resolve railroad bridge safety problems, including: training inspectors from state railroad safety agencies, performing joint investigations and evaluations of bridge conditions, and using FRA enforcement authority as warranted.

Key Provisions of the FRA Railroad Bridge Safety Policy

- Rail bridge owners should, at a minimum, follow the recommended specifications for the design and rating of bridges found in the *Manual for Railway Engineering* published by the American Railway Engineering and Maintenance-of-Way Association (AREMA). It incorporates widely-accepted principles of structural design and analysis to provide for the safe and economic utilization of rail bridges during their expected useful lives.
- Railroad bridge owners should perform periodic bridge inspections, at least annually, using competent inspectors to determine whether a structure conforms to its design or rating condition. More frequent inspections may be appropriate based on the condition of the bridge and the volume of rail traffic it accommodates.
- Railroad bridge inspectors should have training and experience that enable them to detect and record indications of distress on a bridge. Inspectors should provide accurate measurements and other information about the condition of the bridge in enough detail so that an engineer can make a proper evaluation of the bridge's safety.

- The operating instructions for each railroad operating trains over bridges should include provisions to restrict the movement of rail cars and locomotives whose weight or configuration exceed the its nominal capacity. This may include speed restrictions, restriction of rail traffic on adjacent multiple tracks, and weight limitations on adjacent rail cars within the same train.
- An effective railroad bridge safety program should include provisions for: inspection of bridge structures located underwater, consideration of the risks arising from bridges located in earthquake zones, and performance of special inspections of bridges involved in floods, train accidents, and unusual impacts.

Additional Actions to Improve Railroad Bridge Safety

- In June 2007, the FRA initiated a Railroad Bridge Safety Roundtable to begin a long-term discussion on several issues, including: a strategic assessment looking ahead 30 years on what will be demanded of railroad bridges and whether the industry has the personnel, technology and funds needed for their proper maintenance and replacement.
- In September 2007, FRA issued [Safety Advisory 2007-03](#) to further explain and amplify important aspects of the agency's bridge safety policy and to re-emphasize the need for railroads to adopt and implement safe maintenance practices to prevent bridge failures.
- In July 2008, AREMA published the first ever railroad bridge inspection handbook.
- In August 2008, FRA purchased and distributed copies of the AREMA railroad bridge inspection handbook to each of the more than 700 railroads in the United States.

In addition, FRA is currently working to complete development of risk-based criteria for use in selecting which of the smaller railroads will receive an FRA evaluation of their rail bridge management programs. FRA expects to implement this new process in 2009.

Further, the American Short Line and Regional Railroad Association (ASLRRA) is developing a model rail bridge management program for use by railroads of various sizes based upon the Essential Elements and FRA bridge safety policy.

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