



U.S. Department
of Transportation

**Federal Highway
Administration**

Memorandum

Subject: **ACTION:** NTSB Safety Recommendations

Date: APR 12 1995

From: Chief, Bridge Division
Office of Engineering

Reply to
Attn. of: HNG-33

To: Regional Federal Highway Administrators
Federal Lands Highway Program Administrator

The National Transportation Safety Board (NTSB) conducted an investigation of a bridge collapse occurring on Interstate 65 near Evergreen, Alabama on May 19, 1993, that was caused by a truck collision with one column of a two-column bridge pier. The collision caused two spans of the bridge to fall onto the roadway below and resulted in two fatalities.

As a result of this incident, the NTSB made the following recommendations for action by the FHWA:

1. Request States to identify and assess bridges that are vulnerable to collapse from a high-speed heavy-vehicle collision with their bridge columns and develop and implement countermeasures to protect the structures.
2. In cooperation with the American Association of State Highway and Transportation Officials (AASHTO), ensure that the bridge management program guidelines include information on evaluating which bridges are vulnerable to high-speed heavy-vehicle collision and subsequent collapse.

We share the NTSB's concern for the potentially serious consequences as a result of high-speed heavy-vehicle collisions with bridge columns. However a program to retrofit all existing structures that may be vulnerable, or slightly vulnerable, to high-speed heavy-vehicle collisions with bridge piers should not be undertaken at the expense of other safety programs that may be more effective and efficient in terms of reducing accidents. Rather, the actions should be evaluated as a part of a comprehensive program to improve bridge safety and serviceability.

With respect to the second recommendation, we believe that States have the essential information and experience to determine bridge vulnerability to high-speed heavy-vehicle collisions and to design countermeasures. Existing publications such as the Transportation Research Board Special Report 214, Designing Safer Roads, Practices for Resurfacing, Restoration, and Rehabilitation provide guidance and methodologies for estimating the frequency of roadside encroachments and for design of countermeasures. Additional guidance is also included in AASHTO's Roadside Design Guide. There is not

sufficient accident data on high-speed heavy-vehicle collisions with bridge piers to justify the development of separate evaluation guidelines for this type of accident.

In response to the above NTSB recommendations, please request the Divisions to alert the States of the potential hazard of high-speed heavy-vehicle collisions with bridge piers and request that they assess the hazard of such accidents site by site using available guidance. The priority of mitigative actions may then be determined by each State through their bridge management process.



Stanley Gordon

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