



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Log H-586

Date: MAR. 13 1996

In reply refer to: H-96-1 through -4

Honorable Federico Peña
Secretary
U.S. Department of Transportation
Washington, D.C. 20590

About 2:35 a.m. on May 2, 1995, National Railroad Passenger Corporation (Amtrak) train No. 81, the Silver Star, on its southbound run from New York, New York, to Tampa, Florida, struck an O&J Gordon Trucking Company tractor-lowbed semitrailer combination that had been lodged for 30 to 35 minutes on a rural, high-vertical-profile (hump)¹, passive² grade crossing about 1 mile north of Sycamore, South Carolina. At the time of the accident, the train was using a single main line track belonging to CSX Transportation, Inc. (CSXT). The two locomotive units and 14 cars of the 16-car consist derailed. The tractor and semitrailer were substantially damaged. No fire ensued.³

The train was carrying 279 passengers, 9 service crew members, and 5 operating crew members. Thirty-three persons sustained minor injuries. Combined property damage to the train and truck exceeded \$1 million.

The Safety Board looked at several potential countermeasures that would improve driver awareness of hump crossings and possibly reduce the likelihood of collisions between trains and lowbed trucks. The only countermeasures that would be totally effective in preventing hump crossing accidents in the future would be to permanently close, correct, or eliminate (through such means as overpasses or tunnels) all hump crossings.

Currently, no national data base identifies hump crossings. A review of the DOT/AAR inventory on grade crossings revealed that it does not include vertical profile information, nor is

¹ A grade crossing where the railroad tracks are significantly elevated above the approaching roadway, creating a "hump" profile.

² A grade crossing with passive devices such as signs but lacking other visual or audible signaling devices or gates that automatically activate when a train approaches.

³ For more detailed information, read Highway Accident Report--Highway/Rail Grade Crossing Collision Near Sycamore, South Carolina, May 2, 1995 (NTSB/HAR-96/01).

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this information documented in any other existing data base. The Safety Board believes that the DOT/AAR inventory can be expanded in a cost-effective manner to include vertical profile data. The survey teams that currently collect state grade crossing data for inclusion into the DOT/AAR inventory could easily be trained to make vertical profile measurements and record this information. This would allow the identification of existing crossings that do not meet the AASHTO standards for highway vertical profiles. If a grade crossing has a high vertical profile and there are no immediate plans to close or correct the crossing, then advisory warning signs are warranted as an interim measure until a permanent solution is available.

Recent interviews and previous accident investigations conducted by the Safety Board have revealed that the degree of communication and cooperation between railroads and public entities regarding grade crossing activities varies widely. Railroad and public officials tend to communicate more on activities that involve funding of active crossings or the installation and maintenance of active warning devices, or that are likely to generate public complaints. The same level of communication does not exist when it comes to other crossing maintenance activities, particularly as they relate to passive crossings. CSXT, which operates more than 20,000 miles of track, performs crossing profile maintenance to ensure track vertical and horizontal alignment and adequate drainage, while State, local, and sometimes private entities are responsible for maintaining the alignment of the crossing approaches. When crossing maintenance is performed, CSXT does not always advise respective entities of these activities. By the same token, in some cases local entities perform work to realign crossing approaches without informing the railroads. Thus, the Safety Board concludes that railroads and public entities do not routinely communicate with each other on grade crossing maintenance activities.

This is an important issue, since the Safety Board believes that when tracks and/or roadway approaches are realigned, adjacent roadway approaches and/or tracks also should be realigned (raised) commensurately; otherwise, a hump crossing is created. The Safety Board believes that railroads and public entities should work more closely with each other on crossing maintenance activities to prevent the creation of hump crossings. When problem crossings are identified, railroad and highway entities should coordinate efforts to close or take appropriate corrective action to eliminate those crossings. Until that can be achieved, those entities should post warning signs and provide emergency information at all hump crossings.

Therefore, the National Transportation Safety Board recommends that the Secretary of Transportation:

Amend the Department of Transportation/Association of American Railroads Grade Crossing Inventory data base to include vertical profile information on all highway/rail grade crossings in the United States. (Class II, Priority Action) (H-96-1)

Encourage and coordinate efforts between the railroad industry and State and local highway transportation officials to identify substandard grade crossing profiles (hump crossings) and close or take appropriate corrective action to eliminate them. (Class II, Priority Action) (H-96-2)

Encourage States to post warning notices at hump crossings where high profiles present potential hazards for highway vehicles and where such hazardous profiles cannot be corrected in a timely manner. (Class II, Priority Action) (H-96-3)

Develop procedures and processes that will facilitate improved communication and coordination between the railroad industry and State and local highway transportation officials regarding crossing maintenance activities so as to prevent the creation of hump crossings. (Class II, Priority Action) (H-96-4)

Also, the Safety Board issued Safety Recommendations H-96-5 to the Federal Highway Administration; R-96-1 to the American Public Transit Association; H-96-6 and -7 to the American Association of Motor Vehicle Administrators; H-96-8 to the American Trucking Associations, Inc.; R-96-2 to the American Short Line Railroad Association; H-96-9 and -10 to Operation Lifesaver, Inc.; R-96-3 to Class I railroads and railroad systems; and H-96-11 and -12 to O&J Gordon Trucking Company. If you need additional information, you may call (202) 382-6208.

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in these recommendations.

By:


Jim Hall
Chairman