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NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: July 8, 1985

Forwarded to:

Mr. R. W. Wyckoff
President
Florida East Coast Railway Company
1 Malaga Street
Post Office Drawer 1048
St. Augustine, Florida 32084

SAFETY RECOMMENDATION(S)
R-85-74

About 6:55 a.m., on September 27, 1984, a northbound Florida East Coast Railway Company freight train struck a westbound Indian River Academy schoolbus stalled at a grade crossing on Walton Road in Port St. Lucie, Florida. The grade crossing was a two-lane, asphalt-paved, county road intersecting a single railroad track with automatic flashing signals and gates. The 1968 Bluebird/Chevrolet 66-passenger schoolbus was occupied by the driver and four students. Two of the students fled the stopped schoolbus before impact and were not injured. In the collision, the schoolbus body separated from the chassis, and the three remaining occupants were ejected. The two students were killed, and the busdriver was injured seriously. Neither of the two train crewmembers was injured. 1/

Northbound FEC freight train Extra 412 North was approaching the crossing at a reported speed of 38 miles per hour with its locomotive headlight illuminated. The engineer was operating the locomotive unit from the right side. The conductor was seated on the left side opposite the engineer. The engineer said he began sounding the standard whistle signal at the Riverview grade crossing, 2,688 feet south of Walton Road. According to the engineer, the schoolbus was in his view at that moment and the warning devices at the crossing were activated. The whistle post was located 2,620 feet south of the crossing at Walton Road.

The busdriver believed that the front of the schoolbus was too close to the track and attempted to shift the manual transmission into reverse gear in order to back up. One student said he believed the busdriver got the transmission into gear and stalled the engine. Another student said the schoolbus "lurched" forward toward the track. According to the busdriver, the engine stalled and the schoolbus rolled forward. The parking brake was not applied.

1/ For more detailed information, read Railroad/Highway Accident Report—"Grade Crossing Collision of Florida East Coast Railway Company Freight Train and Indian River Academy Schoolbus, Port St. Lucie, Florida, September 27, 1984" (NTSB/RHR-85/01).

The driver of a pickup truck behind the schoolbus stated that the schoolbus was stopped for 4 or 5 seconds as he approached it and that about the time he stopped to its rear and observed the approaching train, the schoolbus "lurched" forward an estimated 6 or 7 feet and stopped with the front bumper near the east rail. About 2 or 3 seconds later, the schoolbus "jerked" forward for a short distance and stopped for a third time. The front wheels were over the west rail and the schoolbus blocked the track. The pickup driver said the lights of the crossing warning device began flashing while the schoolbus was at its second stop or just as it moved forward to the third stop.

The crossing gate descended onto and came to rest upon the right roofline of the schoolbus 18 feet 9 inches from the front bumper. According to the pickup driver, the gate arm came to rest about the time the schoolbus reached its third stop. The train conductor stated that he saw the schoolbus move forward and appear to veer around the automatic gate arm as it descended. He said also that he was reaching for the emergency brake valve on his side of the locomotive cab when the engineer made an emergency application of the train brakes. After placing the automatic brake valve handle in the emergency position, the engineer immediately released the locomotive brake. Sand from the locomotive sanders was found on the track 628 feet from the center of the crossing. Placement of the automatic brake valve handle in the emergency position provides automatic power cutoff and instantaneous sanding.

The engineer had a clear view of the schoolbus when he first observed it from the Riverview grade crossing; the schoolbus was stopped short of the track at the Walton Road crossing at that time. Also, he observed the schoolbus move onto the track as the crossing gate descended, and he observed the schoolbus as it stopped astride the track. However, he did not place the automatic brake valve handle in the emergency position until more than 11 seconds later, and after the train had traveled another 612 feet closer to the Walton Road crossing. If the engineer had placed the automatic brake valve handle in the emergency position without hesitation when the schoolbus stopped astride the track, the severity of the accident probably would have been lessened.

The presence of the schoolbus, particularly when it moved forward from its initial stop and to a stopped position with its front bumper near the east rail of the track, should have prompted at least preparatory action by the engineer to slow the train. He had two options available: a service application of the brakes or immediate emergency application of the brakes. A service application of the train brakes would have conditioned the train for an emergency stop with reduced risk of derailment or other lading damage. A service application of the brakes would have slowed the train smoothly and set the brakes for an emergency application if it became necessary. It is reasonable to assume that if the engineer had handled the train in this manner, the velocity of the train at impact would have been reduced substantially.

An approach to a schoolbus on the highway by a motorist usually results in a heightened sense of a need to be prepared to stop. Although there are some adverse effects in braking a train which do not arise when braking a highway vehicle, observing a schoolbus stopped and blocking a track should result in an increased sense of readiness to stop by an engineer. Currently, there is little documented information about the effect of the many varying factors that may influence a train engineer's decisionmaking in such situations. The Safety Board believes that when an engineer sees that a schoolbus is blocking a track and possibly in jeopardy, there is no acceptable alternative to taking whatever action is necessary to stop short of collision. In this accident, the fact that the

schoolbus stopped momentarily with the front bumper close to the east rail should have prepared the engineer for evasive action. When the schoolbus stopped, blocking the track, evasive action should have been executed immediately.

Therefore, the National Transportation Safety Board recommends that the Florida East Coast Railway Company:

Use the results of the investigation of the accident in Port St. Lucie, Florida, on September 27, 1984, as a part of the railroad/highway grade crossing safety training given to enginecrews. (Class II, Priority Action) (R-85-74)

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "... to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is vitally interested in any actions taken as a result of its safety recommendations and would appreciate a response from you regarding action taken or contemplated with respect to the recommendation in this letter.

BURNETT, Chairman, GOLDMAN, Vice Chairman, and BURSLEY, Member, concurred in this recommendation.

By: 
Jim Burnett
Chairman