



**National Transportation Safety Board  
Office of Highway Safety  
Washington, D.C. 20594**

**September 28, 2008**

**FIELD INVESTIGATION FACTUAL REPORT**

**Cottonwood, MN**

**HWY-08-FH-014**

(5 Pages)



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**A. Accident Identification Information**

**Location:** Minnesota Highway 23 at its intersection with County Road 24, Cottonwood, MN  
**Date:** February 19, 2008  
**Time:** 3:45 p.m.  
**Vehicle(s):** 1999 International School bus, 1998 Plymouth Voyager, 2007 Chevrolet Silverado Pickup truck  
**NTSB Number:** HWY-08-FH-014

**B. Accident Summary**

On February 19, 2008, at approximately 3:45 p.m. local time a 52 passenger, 1999 International School Bus occupied by the bus driver and 26 middle and high school students traveling south on MN Highway 23 approaching its intersection with County Road 24 was struck on its right side by a 1998 Plymouth Voyager minivan that failed to stop for a stop sign. The impact forces from the minivan were sufficient to push the school bus across the north bound lane of Highway 23 into a 2007 Chevrolet Silverado pickup truck. Four of the school bus passengers were fatally injured and 15 school bus passengers received injuries; two passengers received serious injuries and 13 passengers received minor injuries. The drivers of the minivan and pickup truck received minor injuries.



Figure 1, – Accident location

**C. Details of the Investigation**

The inquiry into the facts and circumstances of this accident were prompted by the Safety Board's ongoing interest in schoolbus crashworthiness related safety issues. The primary investigating agency was the Minnesota Highway Patrol/Minnesota Department of Public Safety.

#### D. Injury Information

As a result of the impact forces the four of the school buses passengers were fatally injured and 15 school bus passengers received serious to minor injuries. Of the four fatally injured passengers three were seated on in the right side window seats. The fourth passenger was seated on the left side window seat. All of the fatally injured passengers were seated in window seats near the middle and rear of the school bus.

Injury Chart

Severity of Injury	Mini Van	School Bus	Chevrolet Pickup Truck	Total
Fatal		4		4
Serious		2		2
Minor	1	13	1	15
None		7		7

\* Title 49 *Code of Federal Regulations* 830.2 defines fatal injury as "any injury which results in death within 30 days of the accident" and serious injury as "an injury which: (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, or tendon damage; (4) involves any internal organ; or (5) involves second- or third-degree burns, or any burn affecting more than 5 percent of the body surface."

#### E. Vehicle, Highway, and Weather Information

A post crash examination of the accident vehicles was conducted by investigators of the Minnesota Department of Public Safety. Special emphasis was placed on the 1998 Plymouth, Mini van and the 1999 International school bus. No pre-accident mechanical or structural defects were noted on either the minivan, pickup truck, or the school bus.

The dynamics of this impact as well as the intrusion of the pickup truck into the occupant compartment of the school bus were documented. Of particular note was the impact damage to the school bus on the left side. As a result of the rotation of the school bus after being struck by the minivan the pickup truck struck the left side of the school bus approximately 4 ½ feet above road level, above the school buses frame. The pickup truck intruded about five feet into the occupant compartment of the school bus.

The roadway near the accident site is generally level and the view from the approaches to the intersection on County Road 24 and Highway 23 were clear and unobstructed. The traffic control at this intersection consisted of stop signs on County Road 24 with Highway 23 having the right of way.

At the time of the accident 3:45 PM the weather was clear, cold, and partly cloudy.

## **F. Disposition**

The circumstances of this accident and, in particular, the location and severity of the damage to the school bus and personal injury are unique. The incidence of a similar accident scenario is very remote. The primary issue of concern to the Safety Board is protection of the school bus occupants during side impact and rollover events. The Safety Board has addressed these concerns in past recommendations to the National Highway Traffic Safety Administration (NHTSA) which has conducted new test as well as issued a Notice of Proposed Rule Making (NPRM) to address school bus occupant protection.