

Lessons Learned from Accident Investigations

Speeds Over 60 mph Pose Safety Threats on Some Sections of Nation's Interstate Highways

A crash on a rain-soaked interstate highway in Texas that claimed seven lives has pinpointed a safety deficiency that exists on numerous sections of interstates throughout the country, the National Transportation Safety Board (NTSB) warns.

Many of the safety problems may date back to as early as 1955 with the birth of the interstate system and the integration into the system of previously constructed highways that were designed for maximum speed limits of 60 mph, the NTSB said.

The problem was discovered when the NTSB investigated an accident in which a motorcoach traveling on Interstate 35 near Hewitt, Texas, ran off the road, crossed the median, and collided with a van traveling in the oncoming lane. Heavy rain, fog, and haze in the area had reduced visibility at the time of the February 2003 accident.

As the motorcoach driver approached the crest of a hill, he noticed that traffic was stopping ahead because of a previous accident. He began to brake and move from the right lane to the left lane to avoid the stopped cars, but another car moving into the left lane at the same time forced the bus driver to brake hard. The rear of the bus skidded and the driver lost control. Five motorcoach passengers, the van driver, and one van passenger were killed in the accident.

The recently released final report of the investigation determined that the wet pavement at the accident site, combined with Interstate 35's roadway geometry and a speed limit of 70 mph that exceeded the road's design speed, did not provide drivers with enough time to react and stop their vehicles, or avoid a collision.

NTSB highway investigators said the problem of speed limits exceeding original road design may be common, prompting the Safety Board to urge the Federal Highway Administration (FHWA) to work with the States to put together an inventory of stretches of interstate that were not designed for current speeds. The next step, the NTSB said, is for the FHWA to work with the States to correct the problem.

"First we need an accurate inventory of stretches of interstates. Then we need action from Federal and State highway officials to improve safety on these roads by upgrading them or adding safety precautions to handle posted speeds," said NTSB Acting Chairman Mark V. Rosenker.

In addition to redesigning and reconstructing the highways, which is costly, the NTSB also recommended that the FHWA issue guidance to its field offices describing the inadequate stopping sight distance that can occur on roadways where poor vertical geometries exist along with low coefficients of friction and speeds higher than the design speed. The NTSB also recommended the use of variable speed limit signs in wet weather at locations where the

operating speed exceeds the design speed and the stopping distance exceeds the available sight distance.

The stretch of I-35 was first constructed in 1917 as Highway 2, was renamed U.S. 81 in 1932, was expanded to a four-lane divided highway in 1955, and was renamed I-35 in 1959. The horizontal alignment and vertical profile of the roadway have not changed since 1955, when the design speed was 60 mph. The current speed limit on I-35 is 70 mph during the day and 65 mph at night.

A synopsis of the report, including a complete list of conclusions and recommendations to Federal and State highway officials, can be found on the NTSB's website, www.nts.gov.