

VI. RECOMMENDATIONS

The National Transportation Safety Board hereby recommends that:

16 1. The Federal Highway Administration expedite a study of hazard-warning and speed-limit signing systems, similar in purpose to those used on the New Jersey Turnpike, toward maximizing the effectiveness of a total system, and testing it on selected highways which have accident problems related to adverse weather and visibility conditions, such testing to include expansion of tests of fog-alert devices and methods to improve the communication of pertinent weather information to and from field patrols. (The Board is aware of fog-sensor testing in progress in the State of Oregon, but believes this program is not of the scope needed for total systems design or improvement.)

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17 2. The National Highway Traffic Safety Administration initiate (through an appropriate demonstration project) a program and procedures for minimizing the likelihood of catastrophic chain-reaction collisions on high-speed, multilaned highways in adverse weather or visibility conditions; such program to consider, among others, requirements to: (1) segregate heavy vehicles from light vehicles by assigned use of lanes whenever safe speed is below posted speed; (2) forbid overtaking and passing by heavy vehicles; (3) use of four-way flashers by all vehicles; (4) prohibit stopping on the traveled portion of highways (unless conditions will not permit otherwise); and (5) evacuate stopped vehicles under certain conditions.

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18 3. The National Highway Traffic Safety Administration set a high priority on establishing performance requirements for new buses, trucks, trailers, and combinations in regard to: (1) improved braking capabilities with balanced skid resistance, reduced "fade," and shorter stopping with maximum load; (2) the use of energy-absorbing underride and override barriers to reduce passenger-car impact decelerations through controlled yielding; and (3) minimum limits on stability factors for loaded vehicles. (Stability factor is defined as one-half the tread width between centers of outside tire footprints, divided by the height of the center of gravity of a loaded vehicle.)

19 4. The Bureau of Motor Carrier Safety, Federal Highway Administration, consider the promulgation of regulations to require improved braking capabilities of regulated vehicles, and inclusion of a numerical statement of the stability factor (value) on the identification plate of all tank trailers which transport hazardous materials, in implementing Recommendation 3, above.

20 5. That the National Highway Traffic Safety Administration and the Automobile Manufacturers' Association initiate programs leading to the development of automotive fuel-tank systems which will minimize the escape of fuel in collisions, including the prevention of escape of liquid or vaporous fuel into any compartment of the vehicle. These programs should incorporate revisions to existing test methods and standards to more nearly approximate conditions likely to be encountered in collisions, including rear end impacts at substantial speed differentials, with the tested vehicle in a braking attitude, and subjecting pertinent components to varying angles of impact, from straight rear end to 90° right and left.

Test standards should consider exposure of the fuel-tank system to fire without loss of structural integrity or the release of vapors into the vehicle or any of its compartments.

21 6. The New Jersey Turnpike Authority and the New Jersey State Police take steps to provide more frequent patrols on affected Turnpike sections when fog or other weather conditions are forecast to reduce visibility, so that earliest practical warning may be available when conditions warrant the activation of hazard-warning and reduced speed-limit signs. Increasing patrol frequency should take priority over routine police matters, if necessary, during periods of potentially hazardous weather or visibility conditions.

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

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Chairman

/s/ OSCAR M. LAUREL
Member

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Member

/s/ LOUIS M. THAYER
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