

resolution of questions of their qualifications and fitness to drive.

23. The medical examination form used by NJDMV was inadequate in that it failed to require a report of past medical conditions or a detailed statement of current medical shortcomings affecting driving safety.
24. The NJDMV (driver-licensing authority) does not conform to the Federal Highway Safety Program Standards insofar as performance of the following is concerned:
  - a. The "single license" concept (instead, having separate licenses for regular operation and for busdriving, both held concurrently);
  - b. Rapid communication of data (which was on the records, but not transmitted to the point of need); and
  - c. Professional interview for "points" traffic violators or drivers with high accident experience.
25. The operation of the bus on this trip was without Interstate Commerce Commission authority.

#### V. PROBABLE CAUSE

The National Transportation Safety Board determines that the probable cause of this accident was either dynamic or viscous hydroplaning of the front wheels of the bus which initiated a skid from which the driver could not recover. Contributing factors included low basic skid resistance of the pavement in wet weather, and the probable presence of water draining across the pavement in an abnormal manner. The fatalities and injuries were caused by an ineffective highway guardrail which failed to prevent the bus from rolling down an embankment, by bus windows which failed to prevent ejection of some passengers, and in

some cases, by the absence of occupant restraints.

#### VI. RECOMMENDATIONS

The National Transportation Safety Board has directed recommendations to the State of Pennsylvania, dated July 22, 1970, which are shown in Appendix F. The Safety Board further recommends that:

1. The Federal Highway Administration (FHWA) initiate a program to standardize the determination of wet-highway skid resistance criteria, and to define a specific "skid number" below which surface (and other needed) improvement must be made, to prevent accidents at locations having substandard skid numbers; or use of the highway be suspended; or specific speed controls be instituted. FHWA-approved remedies should be made available to the States in conjunction with FHWA financial assistance in their implementation. 71-80
2. The FHWA, in conjunction with the American Association of State Highway Officials (AASHO), initiate a program of testing highway guardrails with a view to establishing standards for guardrails to contain or deflect large or heavy vehicles, such as trucks or buses, under a defined range of accident-impact conditions. 71-81
3. The Department of Transportation, in full recognition of the existing limitations on the scope of services renderable by the Bureau of Motor Carrier Safety, FHWA, because of manpower limitations, seek authorization and appropriations from the Congress to expand the strength and operations of said Bureau to enable it to provide the level of supervisory and inspectional

service over interstate chartered buses and charter-bus operations necessary to assure a level of safety commensurate with the public's right to safe travel in chartered vehicles. Notwithstanding any extended delay in attaining a level of greater manpower and service capabilities, the Bureau should take all immediate steps necessary to serve copies of existing Motor Carrier Safety Regulations on all known interstate charter-bus operators and companies, including those operating in the so-called "commercial zones" and municipalities. 71-72

4. The several States with the assistance of the Bureau of Motor Carrier Safety (BMCS), of FHWA, and the National Association of Motor Bus Owners (NAMBO) jointly develop and institute programs to establish uniform guides and procedures for promoting safety in intrastate chartered buses and charter bus operations, including the designation of State oversight responsibility. 71-83
5. The New Jersey Department of Motor Vehicles (and all States not now doing so) expedite action to bring State driver licensing requirements and procedures into full conformance with the Highway Safety Program Standards promulgated by the National Highway Traffic Safety Administration. 71-84
6. The Pennsylvania Department of Transportation (Penn-DOT) review the priority status of the extraordinarily effective highway improvements made after this accident to U.S. Route 22 (I-78), to determine whether some or all of those methods should not be given higher status in relation to other possible highway improvements. 71-85
7. The American Association of State Highway Officials recognizing the importance of proper highway drainage

in preventing or minimizing the opportunities for vehicle "hydroplaning," emphasize to all its members the need to provide aggressive inspection and maintenance of median and shoulder drainage systems, and to keep debris, vegetation, and erosion from rendering drainage systems ineffective. 71-86

8. FHWA take positive steps toward making available to the bus-traveling public convenient restraints against being ejected from their seats in a crash or rollover, such as are available to motorists and to airline passengers, so that bus passengers will not be denied their rightful opportunity to employ them whenever they so desire. (This recommendation, with similar intent but varying in language, has been made in four prior interstate bus crash reports issued by the Safety Board.). 71-87
9. The National Highway Traffic Safety Administration expedite its rulemaking procedures relating to Docket 2-10, "Bus Window Retention and Release," advance notice of proposed rulemaking of which was first issued October 14, 1967, in order to make its contents a mandatory standard at the earliest possible date. 71-88
10. The National Highway Traffic Review Administration and the Bureau of Motor Carrier Safety, FHWA, review the Safety Board's Recommendation No. 6 in its Highway Accident Report SS-H-5, "Chartered Interstate Bus Crash Interstate Route I-80S, near Beaver Falls, Pennsylvania, December 26, 1968," which recommendation the Board now reiterates, relating to the question of whether there is need for an indicator to show the direction of heading of the front wheels, and necessary steering-wheel movement, in recovering from emergency situations. 71-89

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

/s/ JOHN H. REED  
Chairman

/s/ OSCAR M. LAUREL  
Member

/s/ FRANCIS H. McADAMS  
Member

/s/ LOUIS M. THAYER

Isabel A. Burgess, Member, was absent, not voting.