

declination of revenues has affected the level of maintenance and safety of the systems.

10. Safety personnel within the rail rapid transit industry are not used to the extent of their potential.

11. There is an apparent relationship between the economic health of the rail rapid transit industry, the quality of the operating procedures, and the morale of the employees.

12. In spite of the inherent safety of the rail rapid transit mode of operation, the existence of inconsistent, ambiguous, and unenforceable operating rules creates an atmosphere in which effective risk management is difficult.

13. There has been a noticeable lack of research and exchange of information in the rapid transit field, resulting in perpetuation of errors in design of components and systems.

14. In spite of the apparent problems, rail rapid transit passengers have been relatively secure from serious accidents while on board. Rail rapid transit, in a systematically planned urban transportation system, is desirable from a passenger safety standpoint, and should be encouraged.

15. The Urban Mass Transportation Administration is granting funds for construction of new systems, upgrading of existing systems, demonstrations, and research and development without instituting procedures to provide for achievement of safe transportation.

16. The Urban Mass Transportation Administration could implement its mission to achieve a condition of safe mass transportation by the use of contract or grant provisions to require advanced practices in safety by grantees. Actions also are possible which would be consistent with the use of industries hurt by cutbacks in other areas of Federal spending.

17. The safety results of Urban Mass Transportation Administration funding could be coordinated with future safety regulatory actions of the Federal Railroad Administration in the rail rapid transit field.

V. RECOMMENDATIONS

The Safety Board recommends that:

(R-71-15)

1. The Urban Mass Transportation Administration require that all rail rapid transit applications for capital improvement, demonstration, and research and development grants include a system safety plan for the project for which funds are being requested. This plan might include, but not be limited to, such items as:

- a. A description of the safety organization and its position in the total organization.
- b. Identification of the tasks to be accomplished by the safety organization.
- c. The technical methods to be used for accomplishment of these tasks.
- d. A schedule for task completion, keyed to major program milestones.
- e. A description of the output from the safety effort.
- f. The methods for applying this output to identify the hazards, to evaluate the risks, and to determine the alternatives to assumption of these risks.
- g. The documentation to be developed.

(R-71-16)

2. The Urban Mass Transportation Administration evaluate comparatively the system safety plans submitted by applicants for rail rapid transit funding assistance, and employ such evaluations as a partial basis for selecting applicant to be funded. In addition, UMTA develop, or obtain through cooperation with other agencies, a permanent system safety engineering capability to evaluate the safety plan of each project for which funds are requested.

(R-71-17)

3. The Urban Mass Transportation Administration include safety considerations in

its study of the feasibility of providing Federal assistance to help defray operating costs of mass transportation companies, insofar as rail rapid transit is concerned.

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RS-71-18

4. The Urban Mass Transportation Administration undertake a study of selected rail rapid transit systems in the planning stage to determine the feasibility of separating passengers from tracks, in underground and above-grade stations.

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5. The Federal Railroad Administration establish, by regulation, a uniform system of data gathering and accident reporting encompassing all the rail rapid transit operations in the United States from which statistics can be compiled to determine the status of safety in rail rapid transit operations. The Safety Board is aware that FRA is studying the existing accident reporting system for railroad accidents under the Accident Reports Act, and recommends that the rail rapid transit accident reporting requirements be included in any new system of accident reporting.

RS-71-20

6. The Federal Railroad Administration give particular consideration to the different conditions of rail rapid transit operations when establishing methods of pedestrian

RS-71-21

and highway grade crossing protection, as required by the Federal Railroad Safety Act of 1970.

7. The Federal Railroad Administration, with the cooperation of the Urban Mass Transportation Administration, provide a continuing review of the study now underway involving the effects of vandalism and assault on rail rapid transit vehicles and passengers. This review should include scrutiny of existing laws and regulations to determine their adequacy, with recommendations for appropriate Federal action.

RS-71-22

8. The Federal Highway Administration, Department of Housing and Urban Development, and Urban Mass Transportation Administration cooperatively evaluate highway planning in urban areas with regard to the potential for joint corridor accommodation of rail rapid transit lines, and establish criteria for proper and safe accommodation of such lines.

RS-71-23

9. The Federal Highway Administration establish criteria aimed at protecting rail rapid transit lines from potential vandalism resulting from the construction of adjacent or bisecting Federal-Aid highways.

10. The individual systems of the rail rapid transit industry review the responsibilities, capabilities, and authorities of each of their own respective safety organizations with a view toward instituting a more systematic and authoritative approach to safety, not only in new proj-

ects, but in day-to-day operation and maintenance. R-71-24

11. The individual systems of the rail rapid transit industry review their emergency procedures to ensure that employees, passengers, and others involved are prepared adequately to cope with emergency situations. R-71-25

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

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Member

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