

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: January 8, 1975

Forwarded to:

Greater New Orleans Expressway
Commission
Post Office Box 7645
Metairie, Louisiana 70011

SAFETY RECOMMENDATION(S)

H-74-40 thru 42

On August 1, 1974, a tug boat pushing four barges (two abreast) struck the east span of the Lake Pontchartrain Causeway in New Orleans, Louisiana, and 252 feet of the bridge collapsed into the water. Two motor vehicles plunged into the lake through the void created by the collapsed deck. Three persons were killed.

During its preliminary investigation into the highway aspects of the accident, the National Transportation Safety Board became aware of additional traffic safety hazards which exist on the Causeway.

Marine collisions with the bridge began before construction was complete. In October 1955, a tug struck a piling and caused sections of the bridge deck to collapse into the lake. Since then, 14 other marine vessels have struck various parts of the bridge. In six of the collisions, spans of the bridge collapsed into the lake below, and as a result, nine persons died.

Highway-related factors which probably combined to contribute to property damage and loss of life in these collisions are: (1) A bridge structure which is not physically protected against impact by an errant marine vessel; (2) a bridge structure which tends to collapse when struck by errant marine vessels of a type which use the lake; and (3) the lack of any provision for warning motorists.

The reconstruction of bridges to withstand impacts by errant marine vessels would require considerable time and money. However, 14 collisions and 6 span collapses have shown that this type of accident will likely recur.

The Safety Board is particularly concerned about the traffic history of the west span. Numerous accidents on its roadway have produced much property damage, and, during the past 3 years, 12 persons have died when their vehicles plunged over or through the bridge barrier.

Causeway records show at least 195 bridge-barrier collisions during which the metal railing on top of the concrete parapet was damaged. Significantly, no vehicles have plunged over or through the newer, 32-inch-high concrete barrier on the east span.

In its review of records, the Safety Board noted that there is no systematic program by which to review individual accidents and their causes. Such a program might have identified deficiencies and brought about the correction of the bridge-curb and barrier-railing systems on the west span.

The Safety Board's preliminary investigation further revealed that on August 14, 1974, the Greater New Orleans Expressway Commission tentatively approved a proposal calling for a comprehensive, unbiased examination of the physical plant of the Causeway and its operations. The study, approved by the Commission on August 27, 1974, will be conducted by an independent engineering firm, which will report and make recommendations for safety improvements in both the physical plant and its operations. The Safety Board commends the Greater New Orleans Expressway Commission for its prompt action.

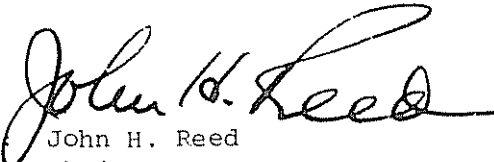
The National Transportation Safety Board recommends that the Greater New Orleans Expressway Commission take the following measures in addition to the study:

1. Establish a systematic program to identify and survey high accident locations on the Lake Pontchartrain Causeway. (The program should require a review of individual accidents.) Guidelines for such a program can be found in Federal Highway Safety Program Standard No. 9 "Identification and Surveillance of Accident Locations." (Recommendation H-74-40)
2. Evaluate the present bridge barrier rail system on the west span of the Lake Pontchartrain Causeway to determine improvements which will assure a barrier system that will:
 - (a) prevent errant vehicles from penetrating or vaulting over the barrier, and

(b) provide safe redirection of errant vehicles with a minimum effect on the vehicle and its occupants. (Recommendation H-74-41)

3. Install a warning system on those sections of the Lake Pontchartrain Causeway that are vulnerable to impact by errant marine vessels. The system should activate automatically to warn motorists of danger ahead when a Causeway span collapses. (Recommendation H-74-42)

REED, Chairman, McADAMS, THAYER, BURGESS, and HALEY, Members, concurred in the above recommendations.


By: John H. Reed
Chairman

(The Safety Board has also made a recommendation to the Louisiana Wildlife and Fisheries Commission suggesting measures which could be practical solutions to the safety needs of both errant marine vehicles and Causeway motorists.)

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