

Log H-105

NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.

ISSUED: August 11, 1977

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Forwarded to:

Honorable Cecil D. Andrus  
Secretary  
U.S. Department of Interior  
18th and C Streets, N.W.  
Washington, D.C. 20240  
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SAFETY RECOMMENDATION(S)

H-77-7 and 8

In 1971, the National Transportation Safety Board made recommendations to the National Park Service (NPS) regarding the need for traffic barriers that would prevent errant vehicles from penetrating bridge rails on the George Washington Memorial Parkway in Virginia. Smooth-faced concrete barriers were constructed later on several of the bridges. Marks on these barriers clearly show that they have successfully deflected vehicles.

The NPS recently repaired an earth retaining wall that also serves as a traffic barrier on the parkway about one-half mile north of the Key Bridge. The surface of the barrier on the traffic side has been faced with rough and irregular stone. The stone facing was completely removed during the repair and subsequently replaced. The face contains snags of heavy stone that are as much as 6 inches deep and which would contact the side or bumpers of any car which moves 5 feet beyond the normal path of travel. (See photographs) There are other locations with similar barriers. The Board believes that these snags are a hazard not consistent with accepted standards and guidelines for barrier faces, such as those adopted by the Federal Highway Administration (FHWA). Also, measurements of the barrier indicate that its finished height might not comply with minimum FHWA requirements.

A rough surface can increase substantially the severity of an impact between a vehicle and barrier by either causing the vehicle to snag and spinout or by substantially increasing vehicle property damage with a potentially hazardous result to vehicle occupants. The rough surface also enhances the ability of a vehicle to override the barrier; this is particularly true for larger vehicles such as buses. There was no apparent effort made to update the barrier to improve its safety performance.

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The Board understands the NPS's desire for maintaining the attractive environment of the parkway, and its view that the parkway was not intended to be a major highway. We believe, however, that a safe barrier design does not necessarily require an unattractive appearance and that the actual type of traffic use of the parkway must be considered. The parkway carries commuter traffic at highway speeds and the parkway is the primary route for buses between Dulles International Airport and downtown Washington, D.C. It seems unreasonable to expose this traffic to the risks presented by the rough surface of the barrier when it is highly probable that a barrier equally as attractive can be developed that will perform well with the actual traffic.

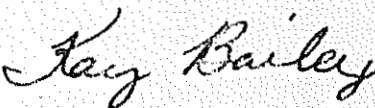
The FHWA has a highly qualified research staff working in the field of traffic barrier performance which the NPS could work with to produce an attractive and safe barrier design for areas with environmental priorities.

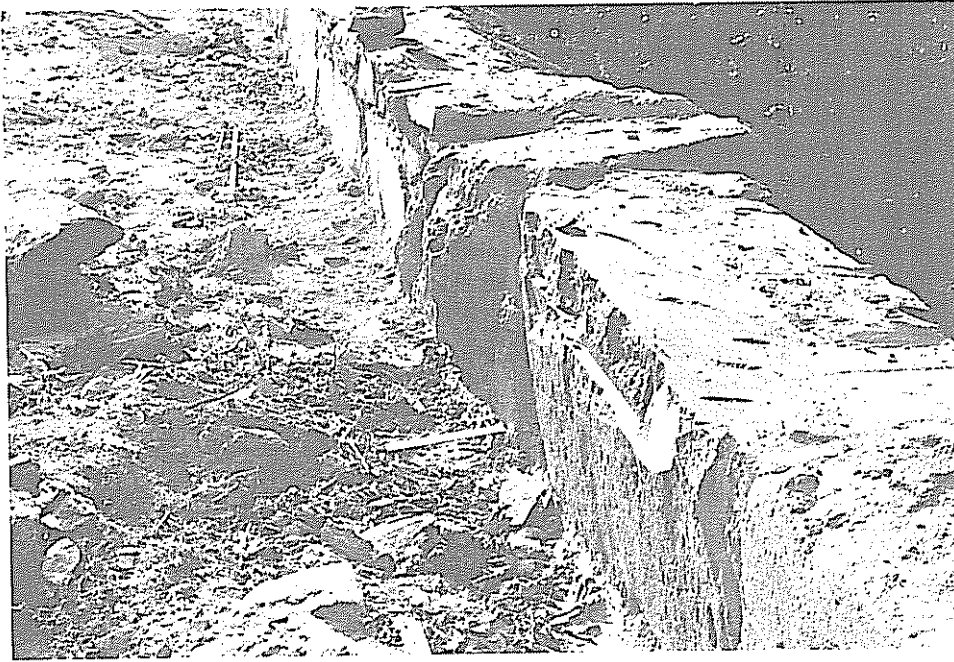
Therefore, the National Transportation Safety Board recommends that the National Park Service:

Request the assistance of the Federal Highway Administration in developing attractive and performance-designed and evaluated traffic barriers that minimize hazards to vehicle occupants when the barriers are struck by passenger vehicles or buses. (Class II, Priority Followup) (H-77-7)

Upon completion of the traffic barrier research, implement a program to improve existing and future roadside barriers under jurisdiction of the National Park Service consistent with the newly developed designs. (Class II, Priority Followup) (H-77-8)

TODD, Chairman, BAILEY, Vice Chairman, McADAMS, HOGUE, and HALEY, Members, concurred in the above recommendations.

  
for By: Webster B. Todd, Jr.  
Chairman



Views of stone barrier on the George Washington Memorial Parkway.

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