



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: August 30, 2004

In reply refer to: H-04-25

Honorable Mary E. Peters
Administrator
Federal Highway Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

On July 16, 2003, about 1:46 p.m. Pacific daylight time, a 1992 Buick LeSabre, driven by an 86-year-old male, was westbound on Arizona Avenue, approaching the intersection of Fourth Street, in Santa Monica, Los Angeles County, California. At the same time, a 2003 Mercedes Benz S430 sedan, occupied by a driver and front-seat passenger, was also westbound on Arizona Avenue and had stopped for pedestrians in a crosswalk on Fourth Street at the intersection with Arizona Avenue. The Buick struck the left rear corner of the Mercedes, continued through the intersection, and drove through a farmers' market, striking pedestrians and vendor displays before coming to rest. As a result of the accident, 10 people were fatally injured, and 63 people received injuries ranging from minor to serious. The Buick driver and both Mercedes occupants were uninjured.¹

The National Transportation Safety Board determined that the probable cause of this accident was the failure of the Buick driver to maintain control of his vehicle due to his unintended acceleration. Contributing to the severity of the accident was the lack of a barrier system to protect pedestrians in the Santa Monica Certified Farmers' Market area from errant vehicles.

The city of Santa Monica organizes and manages two certified farmers' markets, the Wednesday Market and the Saturday Downtown Market, which operate on a temporarily closed portion of Arizona Avenue between Fourth Street and Ocean Avenue, where the accident occurred. The accident took place at the Wednesday Market. The city estimates that the Wednesday Market draws about 9,000 visitors per week.

Segregating pedestrian from vehicular traffic is a key element in pedestrian safety. Positive barriers between pedestrians and vehicles, although not always viable, are the best method of ensuring this segregation. During temporary road closures, the nature, frequency, and duration of the closure does not always allow for durable positive barriers. However, in

¹For additional information, read National Transportation Safety Board, *Rear-End Collision and Subsequent Vehicle Intrusion Into Pedestrian Space at Certified Farmers' Market, Santa Monica, California, July 16, 2003*, Highway Accident Report NTSB/HAR-04/04 (Washington, DC: NTSB, 2004).

situations such as the Santa Monica Certified Farmers' Market, the temporary closure was scheduled, recurring, and of sufficient duration to warrant use of positive barriers. A positive rigid barrier system would very likely have prevented the accident vehicle from intruding into the pedestrian area.

Currently, the *Manual on Uniform Traffic Control Devices* (MUTCD) provides guidance on the use of additional countermeasures, such as concrete traffic barriers or crash cushions, to protect pedestrians. Additionally, the *Roadside Design Guide*, referenced in the MUTCD, discusses the design and application of such countermeasures. However, the majority of the information presented in both the MUTCD and the *Roadside Design Guide* focuses on work zones. While the countermeasures in question may also be deployed for other types of street closures, the references and information in the guides have a strong enough emphasis on work zones that users may have difficulty recognizing their applicability to other situations. For example, the *Roadside Design Guide's* section on traffic barriers specifies "work-zone traffic barriers" as it begins its discussion of the subject. Similarly, chapter 6B.01 of the MUTCD states: "The control of road users through a temporary traffic control zone shall be an essential part of highway construction, utility work, maintenance operations, and incident management."

Although the principles of incident management set forth in the MUTCD and related guidance are intended to apply equally to road closures for events such as the Santa Monica Certified Farmers' Market, parades, and similar activities, that intent is not highlighted and may be overlooked. Therefore, the Safety Board concluded that the MUTCD's guidance on temporary traffic control is insufficiently clear to ensure that users will apply it to road closures not associated with highway construction or maintenance.

Therefore, the National Transportation Safety Board recommends that the Federal Highway Administration:

Revise the *Manual on Uniform Traffic Control Devices*, Chapter 6, "Temporary Traffic Control," to provide specific references and guidance on the use of barricades, barriers, crash cushions, and other devices, as appropriate, for road closure situations other than highway construction or maintenance. (H-04-25)

The Safety Board also issued safety recommendations to the National Highway Traffic Safety Administration and the city of Santa Monica, California.

Please refer to Safety Recommendation H-04-25 in your reply. If you need additional information, you may call (202) 314-6177.

Chairman ENGLEMAN CONNERS, Vice Chairman ROSENKER, and Members CARMODY, HEALING, and HERSMAN concurred in this recommendation.

By: Ellen Engleman Connors
Chairman